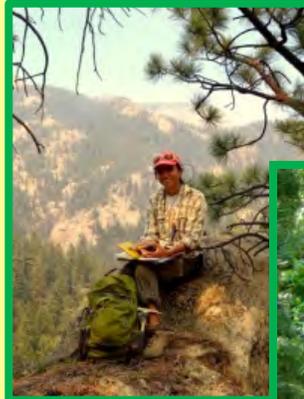
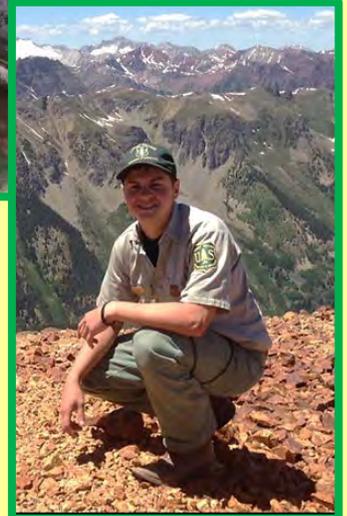


Hispanic Serving Institutions Collaboration Yearbook Spring 2014

United State Department of Agriculture
National Institute of Food and Agriculture



The Hispanic-Serving Institutions Education Grants Program Collaboration Projects

2014 Yearbook

The National Institute of Food and Agriculture's (NIFA) Hispanic-Serving Institutions (HSI) Education Collaboration Grants is publishing in FY 2014, for the second time, the HSIs Collaboration Projects Student Yearbook. This yearbook showcases students participating in collaboration projects funded by the HSIs Education Grants Program as authorized by section 815 of the Federal Agriculture Improvement and Reform (FAIR) Act of 1996 (7 USC 3241). This competitive grant program is designed to promote and strengthen the ability of HSIs carry out education programs that attract, retain, and graduate outstanding students capable of enhancing the nation's food and agricultural scientific and professional work force. Projects represented are collaboration initiatives between four or more HSIs or with other colleges and universities working with units of government or the private sector.

The HSIs Collaboration 2014 Yearbook showcases the students participating in seven collaboration projects from forty institutions. Fifty-five percent of the students are female and 46.9 percent are first generation college students. Together, participant students speak 14 languages in addition to English, which about 98 percent reported that they speak well or very well.

These collaboration projects focus on:

- Increasing the number of underrepresented groups to reflect the nation's population demographics and to attain post-secondary and post graduate degrees in the food, agricultural, and natural resource sciences;
- Enhancing the quality of postsecondary instruction within these disciplines at Hispanic-Serving Institutions;
- Facilitating the skill and competency development of underrepresented minority students in order to be competitive for jobs in the food and agriculture sector and at the United States Department of Agriculture (USDA) and other federal agencies;
- Providing opportunities and access to food and agricultural careers in the civil service;

and;

- Aligning the efforts of HSIs and other non-profit organizations in support of the academic development and career attainment of underrepresented groups.

Contacts:

Dr. Irma A. Lawrence
National Institute of Food and Agriculture
National Program Leader
202-720-2082 ilawrence@nifa.usda.gov <<mailto:ilawrence@nifa.usda.gov>>

Dr. Josue Lopez
National Institute of Food and Agriculture
Program Specialist
202-720-8282 jlopez@nifa.usda.gov <<mailto:jlopez@nifa.usda.gov>>

Shirley Pilus
USDA Grant Secretary
sp05@txstate.edu <<mailto:sp05@txstate.edu>> 512-245-3319
208 Agriculture Building
Texas State University
San Marcos, Texas 78666

Table of Contents

California State University Project Page	5
Watershed Management Experimental Learning for USDA	5
California State University - Bakersfield Undergraduate Student.....	6
California State University - Bakersfield Graduate Students	7
California State University - California State Polytechnic University, Pomona Undergraduate Students....	10
California State University - Channel Islands Graduated Student	12
California State University - Fresno Undergraduate Students.....	13
California State University - Fresno Graduate Student	16
California State University - Los Angeles Undergraduate Student.....	17
California State University - Monterey Bay Graduate Students.....	18
California State University - Northridge Undergraduate Student.....	29
California State University - Northridge Graduate Student.....	30
California State University - San Bernardino Undergraduate Student	31
California State University - San Bernardino Graduate Student	32
California State University - San Bernardino Graduated Student	33
California State University - San Diego State University Undergraduate Student.....	34
California State University - San Diego State University Graduate Students	35
California State University - San Marcos Undergraduate Student	38
California State University - San Marcos Graduate Students.....	39
California State University - Stanislaus Undergraduate Students	41
California State University - Stanislaus Graduate Students	44
Florida International University Project Page	47
Florida-Caribbean Consortium for Agriculture Education and Hispanic Workforce Development	
(FCCAgE	47
FCCAgE - Florida International University Undergraduate Students	48
FCCAgE - Florida International University Graduate Students	61
FCCAgE - Florida International University Graduated Students	63
FCCAgE - Florida International University Students Who Have Left the Program	65
FCCAgE - Inter-American University of Puerto Rico Undergraduate Students	66
FCCAgE - Miami Dade College Undergraduate Students	73
FCCAgE - Miami Dade College Undergraduate Students Not Pictured.....	85
FCCAgE - Miami Dade College Former Students	86
FCCAgE - St. Thomas University Undergraduate Students.....	87
FCCAgE - St. Thomas University Graduated Students.....	96
New Mexico State University Project Page	98
New Mexico/Puerto Rico Natural Resource Career Track NRCT	98
NM-PR NRCT New Mexico State University - Eastern NM University Undergraduate Student	99
NM-PR NRCT New Mexico State University - Highlands University Undergraduate Students	100
NM-PR NRCT New Mexico State University - Highlands University Graduate Students	110
NM-PR NRCT New Mexico State University - Inter-American University of Puerto Rico Bayamon	
Undergraduate Students	116
NM-PR NRCT New Mexico State University - Inter-American University of Puerto Rico Bayamon	
Graduate Student	119
NM-PR NRCT New Mexico State University - Las Cruces Undergraduate Students	120
NM-PR NRCT New Mexico State University - Las Cruces Graduate Students	140
NM-PR NRCT New Mexico State University - Polytechnic University of Puerto Rico Undergraduate	
Student	145
NM-PR NRCT New Mexico State University - University of NM Undergraduate Students	146

NM-PR NRCT New Mexico State University - University of Puerto Rico Bayamon Undergraduate Student	148
NM-PR NRCT New Mexico State University - University of Puerto Rico Cayey Undergraduate Student	149
NM-PR NRCT New Mexico State University - University of Puerto Rico Humacao Undergraduate Student	150
NM-PR NRCT New Mexico State University - University of Puerto Rico Humacao Graduate Student	151
NM-PR NRCT New Mexico State University - University of Puerto Rico Mayaguez Undergraduate Students	152
NM-PR NRCT New Mexico State University - University of Puerto Rico Rio Piedras Undergraduate Students	160
NM-PR NRCT New Mexico State University - University of Puerto Rico Rio Piedras Graduate Students	167

Texas A & M University – Kingsville Project Page173

Science, Technology and Environmental Programs for Undergraduate Preparation (STEP UP) to

USDA Career Success.173

Texas A & M University STEP-UP - Del Mar College Undergraduate Students	174
Texas A & M University STEP-UP - Kingsville Undergraduate Students	182
Texas A & M University STEP-UP - Kingsville Graduate Student	204
Texas A & M University STEP-UP - South Texas College Undergraduate Students	205
Texas A & M University STEP-UP - Texas State Technical College Undergraduate Students	207
Texas A & M University STEP-UP - University of Texas Pan American Undergraduate Students	211
Texas A & M University STEP-UP - University of Texas Pan American Graduate Students	222

Texas State University Project Page225

USDA FATE Grant Food Safety and Agroterrorism Training: Educating Our Future Workforce.....225

Texas State University FATE Undergraduate Students	226
Texas State University FATE Graduate Students	268

University of Puerto Rico Project Page270

Mayaguez Center for Education and Training in Agriculture and Related Sciences (CETARS)

Coordinating the Pipeline in Agriculture and Related Sciences.....270

University of Puerto Rico CETARS - Aguadilla Undergraduate Students	271
University of Puerto Rico CETARS - Humacao Undergraduate Students	277
University of Puerto Rico CETARS - Mayaguez Undergraduate Students	285
University of Puerto Rico CETARS - Mayaguez Graduate Students	307
University of Puerto Rico CETARS - San German Undergraduate Students	315
University of Puerto Rico CETARS - San German Graduate Students	318
University of Puerto Rico CETARS - University of Texas at El Paso Graduate Student	320

University of Texas at El Paso Program Page.....321

BGREEN - Building a Regional Energy and Educational Network: A Partnership to Integrate

Efforts and Collaboration to Shape Tomorrow’s Hispanic Sustainable Energy Leaders.....321

University of Texas at El Paso BGREEN - New Mexico State University Undergraduate Students	322
University of Texas at El Paso BGREEN - New Mexico State University Graduate Students	326
University of Texas at El Paso BGREEN - Texas A & M University Kingsville Undergraduate Students	332
University of Texas at El Paso BGREEN - Texas State University Undergraduate Students	338

University of Texas at El Paso BGREEN - Texas State University Graduate Students	347
University of Texas at El Paso BGREEN University of El Paso Undergraduate Student.....	350
University of Texas at El Paso BGREEN University of El Paso Graduate Students	351
Index.....	357
Appendix A.....	360
University of Texas at El Paso	360
BGREEN - Building a Regional Energy and Educational Network: A Partnership to Integrate	
Efforts and Collaboration to Shape Tomorrow’s Hispanic Sustainable Energy Leaders.....	360
University of Texas at El Paso BGREEN - Texas A & M University Graduate Students	360

California State University Project Page

Watershed Management Experiential Learning for USDA Careers

PI: Julie Lappin, J.D.

Water Resources and Policy Initiatives, CSU San Bernardino

jlappin@csusb.edu

909-537-3687

Co-PI: Dr. David Zoldoske

Water Resources and Policy Initiatives, CSU Fresno

davidzo@csufresno.edu

559-278-2066

Bilingual Coordinator: Laura Ramos

Water Resources and Policy Initiatives, CSU Fresno

lramos@csufresno.edu

559-278-2066

The primary objective of the Watershed Management Experiential Learning for USDA Careers project is to measurably increase the awareness, retention, and graduation rate of qualified underrepresented California State University (CSU) students, leading towards USDA career attainment. This USDA/NIFA Regional Collaboration project was awarded to CSU's Water Resources and Policy Initiatives (WRPI) and is managed by the Water Resources Institute at California State University, San Bernardino. It is a collaboration between the fourteen Hispanic Serving Institution CSU campuses.

The strategic goal of this project is to measurably increase student research skills that ensure our national forests and private working lands are conserved, restored, and made more resilient to climate change, while simultaneously enhancing the sustainability of the Nation's water resources.

This project provides funding for 50 paid Watershed Management Internships per year for a total of 200 internships over four years. The internships provide an experiential approach to learning in the field of watershed management, which helps students gain real-world experience in natural resource protection while developing new knowledge, skills, and abilities in problem-solving from a watershed perspective. The total salary paid to each Watershed Management Intern is \$4,500. The project also provides up to \$560 per student for the purchase of approved supplies and materials and mileage reimbursement. Competitive interns may be eligible for \$40,000 scholarships in furtherance of their Doctorate-level degree in a natural resources or water related discipline.

California State University - Bakersfield Undergraduate Student

Name: **James Mark Wilson**
Hometown: **Bakersfield, California**
Institution: **California State University**
Campus: **Bakersfield**
Rank: **Senior**
Double Major: **Geology and Psychology**
Expected date of graduation: **June 2014**
Degree: **Bachelor's of Science in Geology and Bachelor's of Science in Psychology**
USDA Agency of interest: **United States Forest Service USFS**
Email: **j2wilson730@gmail.com**



Career experience/location: Watershed Management Experiential Learning for USDA Careers Internship Program, California State University, Bakersfield, Department of Geological Sciences.

Description of career experience (what I learned): Desalination of lake sediment samples via dilution, determination of total inorganic carbon content via acidification followed by carbon coulometry, physical grain-size measurement via laser particle size analysis, correlation and interpretation of resultant lake sediment proxy estimates to regional records.

What is your perception of agriculture now: It is impressive how agriculture drives an incredible amount of scientific inquiry from so many different fields of study. The underlying importance of research regarding agriculture is pertinent to the continuity and progression of our way of life.

How has this career experience broadened your employment opportunities: This internship experience has given me the opportunity and connections to seek future employment with USDA agencies and other related agencies such as the USFS through several research interests.

It is impressive how agriculture drives an incredible amount of scientific inquiry from so many different fields of study. The underlying importance of research regarding agriculture is pertinent to the continuity and progression of our way of life.

Career and research aspirations:

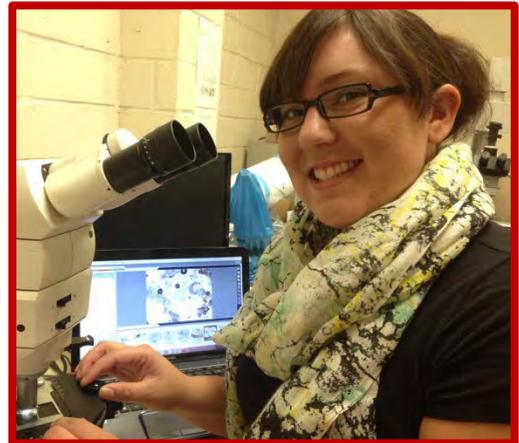
During the 2013-2014 academic year, I plan to devote my time at CSU Bakersfield to learn more about the geological sciences, participate in research, and graduate with a BS in Geology and a BS in Psychology. Next year I intend on pursuing an MS. in Geology. In five years, I hope to be either pursuing my PhD, teaching geology, or working in a geology-related career.

Skill Set: -Laser particle size analysis -carbon coulometry analysis -elemental analysis -data management and analysis -geologic trenching techniques -Petra -lake core sampling and analysis -Microsoft Office Excel, Word, and PowerPoint -laboratory safety/skills

The impact of my career experience: For the past two years, my involvement and interest with research regarding lake studies has grown and continues to do so. Having been a part of this career experience has pushed me to pursue an MS in Geology next year. In the years to come, I hope to develop further interest in pursuing a PhD program after the MS program. My pursuit for a higher education is also due to my desire to help others through academic outlets and this experience did just that for me. Not only has my experience increased my desire to pursue a higher education, but it has also raised my attentions to several environmentally important questions regarding our watershed management in the near future, which deserves more invested research. Because of the importance of these questions, after graduate school I'd like to one day work in a setting that helps answer these questions or other environmentally important problems. My interests and connection to the USDA and other related agencies allow for several different career pathways to open up after graduate school.

California State University - Bakersfield Graduate Students

Name: **Kelsey Padilla**
Hometown: **Bakersfield, California**
Institution: **California State University**
Campus: **Bakersfield**
Rank: **Graduate**
Major: **Geology**
Expected date
of graduation: **June 2015**
Degree: **Master's of Science in Geology**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **kelpad91@aol.com**



Career experience/location: I am currently interning as a student researcher for the geological sciences department at the Center for Research Excellence in Science and Technology (CREST) located at California State University Bakersfield. I am studying Sierran discharge into the southern San Joaquin Valley in order to acquire a record of the past 20,000 years and forecast future water sources coming into the valley.

Description of career experience (what I learned): I was able to learn several skills, including handling and sampling from delicate cores that had to be preserved for future study, using laboratory geochemical and geophysical analysis that impacts paleo-lake level estimates, and analyzing numerical and statistical laboratory data. I also improved my oral and poster presentation skills by attending conferences and symposiums.

What is your perception of agriculture now: I have grown up around agriculture from a very young age, stemming from my involvement in 4-H, but since the completion of this internship, I am now more aware of the water problems the agriculture industry is facing and how the USDA is working to improve water resources.

How has this career experience broadened your employment opportunities: This internship has influenced my future employment opportunities by giving me research experience within my field of study and allowing me to practice real life skills. I have also been given the opportunity to network with numerous people within the industry, including those from the USDA.

Career and research aspirations: My current career aspiration is to receive an MS degree in geology by June 2015 and continue on to a PhD program by the following year after I graduate. I would then like to work as a geologist for a USDA agency, studying and improving water resources.

Skill Set: -Sampling and handling sediment cores -geochemical and geophysical analyses -preparing and analyzing smear slides under a petrographic microscope -numerical and statistical analysis of laboratory data -poster and oral presentation skills -proficiency with Microsoft Excel, Word, and PowerPoint

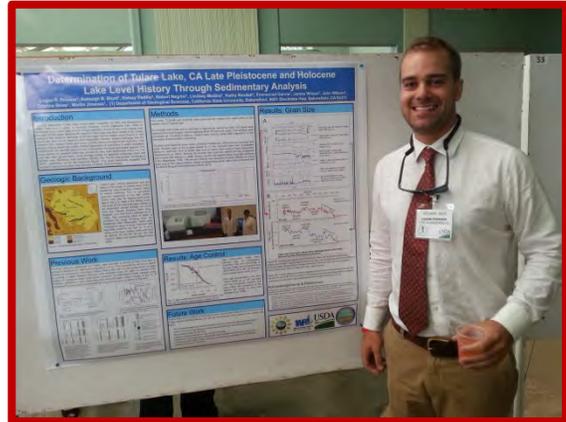
I have grown up around agriculture from a very young age, stemming from my involvement in 4-H, but since the completion of this internship, I am now more aware of the water problems the agriculture industry is facing and how the USDA is working to improve water resources.

The impact of my career experience: My internship has inspired me to continue with my education by moving on to a graduate degree at CSU Bakersfield. I have also been motivated to eventually pursue a PhD in the geological sciences. My goal is to continue interning with the USDA and gain a position within a USDA-related agency, preferably working as a geologist for the US Forest Service. I want to continue working with water resources in order to keep improving agriculture in all of California. My long term objective is to continue educating myself and others about the world's water needs and develop solutions to meet our growing population.

Name: **Logan Prosser**
Hometown: **Bakersfield, California**
Institution: **California State University**
Campus: **Bakersfield**
Rank: **Master's**
Major: **Geology**
Expected date
of graduation: **Spring 2015**
Degree: **Master's of Science**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **LProsser1337@gmail.com**

Career experience/location: I am a research student at California State University-Bakersfield. My internship is through the Water Resources Institute at CSU San Bernardino. I am currently studying watersheds in the San Joaquin Valley in order to predict future water resources for the central valley.

Description of career experience (what I learned): Through this experience, I have learned how to prepare and analyze sediment samples through different geochemical techniques. In addition to lab skills, I have learned how to compile, evaluate, and present my data at professional conferences.



What is your perception of agriculture now: After this summer's trip to the CETARS Symposium in Puerto Rico, I now have a larger respect for the soil and animal sciences. I am now aware of how important it is to study topics related to agriculture in order to advance knowledge of water and food sources.

How has this career experience broadened your employment opportunities: Through this experience I have learned applicable skills and made professional connections that will one day lead to a career with the USDA I have been given the opportunity to network with people within the industry, which has influenced me to further my education in order to be ready to join the workforce.

Career and research aspirations: My current aspirations are to finish my Master's degree in geology by June 2015. After that, I plan to start working. My focus is on a USDA career with the US Forest Service as a geologist. In 10 years I see myself working for the USFS, driving along trails in my Jeep.

Skill Set: -Geochemical analysis -geophysical analysis -data processing -sediment sampling -presentation skills -computer skills

The impact of my career experience: This experience has not only increased my lab skills, but it has affected my education and potential career goals. I began this program while still working on my undergraduate degree. By obtaining the knowledge and skills granted to me through my research project, I was inspired to continue on to getting my Master's degree in geology at CSU Bakersfield. With this Master's degree, I will have more opportunities with future employers. My ambition is to receive a job with the US Forest Service working as a geologist and continue working with water resources.

After this summer's trip to the CETARS Symposium in Puerto Rico, I now have a larger respect for the soil and animal sciences. I am now aware of how important it is to study topics related to agriculture in order to advance knowledge of water and food sources.

Name: ***Cristina Rivas***
Hometown: **Bakersfield, California**
Institution: **California State University**
Campus: **Bakersfield**
Rank: **Graduate**
Major: **Geology**
Expected date
of graduation: **June 2015**
Degree: **Master's of Science in Geology**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **cristi61882@sbcglobal.net**

Career experience/location: Attaining a San Joaquin Valley Paleoriver Discharge Record. Samples taken from Tulare Lake, California. Lab work completed at California State University, Bakersfield.

Description of career experience (what I learned): I learned how geochemical and geophysical proxies can be used to indicate past lake level changes. Proxies used during the internship include grain size analysis, total inorganic carbon, ostracode and pollen analysis.

What is your perception of agriculture now: That predicting future water resources is important in maintaining the sustainability of agricultural practices in our area.

How has this career experience broadened your employment opportunities: This internship has broadened my future employment opportunities by giving me hands-on experience in the lab. Additionally, I gained experience in collecting and analyzing data. This internship has furthered my career goal in becoming a geologist by allowing me to learn and apply skills commonly used by geologists.



Career and research aspirations: For the next two years, my goal is to complete my MS in Geology. My future career aspiration is to become a geologist.

Skill Set: -Knowledge of computer programs: Petra, Microsoft Word, Excel, and PowerPoint -knowledge of lab equipment such as Malvern Mastersizer 2000, x-ray diffractometer, coulometer CM 135, MS2 magnetic susceptibility meter -ostracode and pollen analysis

The impact of my career experience: This internship has impacted my future education because the research experience gained through this internship has helped me develop new conceptual and technical skills that can be applied to future research work while in the graduate program. I have also learned skills used by geologists during this internship which will help me with my future employment and career goal in becoming a geologist.

This internship has broadened my future employment opportunities by giving me hands-on experience in the lab. Additionally, I gained experience in collecting and analyzing data. This internship has furthered my career goal in becoming a geologist by allowing me to learn and apply skills commonly used by geologists.

California State University - California State Polytechnic University, Pomona
Undergraduate Students

Name: **Richard Alcala**
Hometown: **West Covina, California**
Institution: **California State University**
Campus: **California State Polytechnic University, Pomona**
Rank: **Senior**
Major: **Civil Engineering, Emphasis: Environmental**
Expected date of graduation: **July 2014**
Degree: **Bachelor's of Science**
USDA Agency of interest: **United States Forest Service USFS**
Email: **rwalcala91@hotmail.com**

Career experience/location: Currently working for the Army Corps of Engineers in Los Angeles as an Engineering student trainee in the Hydrology and Hydraulics Branch.

Description of career experience (what I learned): Through this experience my overall knowledge of river hydraulics and watershed hydrology has increased.

What is your perception of agriculture now: Agriculture is a very important part of our nation's natural resources.

How has this career experience broadened your employment opportunities: It has lead me to my current job with the Army Corps of Engineers which will be my long term career path at the moment.

Career and research aspirations: In five years I hope to continue working at my current job and have my Professional Engineering License and Masters of Science in Water Resources Engineering. In 10 years I hope to possibly have my PhD

Skill Set: -ArcGIS -AutoCAD -HEC -RAS -HEC-HMS -Microsoft Suite

The impact of my career experience: This experience has been very beneficial to me in many ways. It has allowed me to broaden my experience with a research project that I am very passionate about. I have also been able to apply the knowledge and skills I have gained to my classes and also my current career position. This entire experience has truly been a blessing and stepping stone for me with my career path and pursuit for a graduate degree.



This experience has been very beneficial to me in many ways. It has allowed me to broaden my experience with a research project that I am very passionate about. This entire experience has truly been a blessing and stepping stone for me with my career path and pursuit for a graduate degree.

Name: **Rari Marks**
Hometown: **Huntington Beach and Big Bear Lake, California**
Institution: **California State University**
Campus: **California State Polytechnic University, Pomona**
Rank: **Senior**
Major: **Environmental Biology**
Expected date of graduation: **June 2014**
Degree: **Bachelor's**
USDA Agency of interest: **United States Forest Service USFS**
Email: **vegibutter@yahoo.com**

Career experience/location: I am currently conducting research with native and invasive California grasses to compare their mycorrhizae infection rates.

Description of career experience (what I learned): The ability to carry out an experiment from beginning to end is one of the most important lessons that I have taken from this internship. Developing an experimental design is something that can only be learned by doing it first-hand.

What is your perception of agriculture now: The US Forest Service is an entity that I would love to work for; I have a great perception of the USDA.

How has this career experience broadened your employment opportunities: I have not seen the direct effects of future employment yet, but this project is my first research project that I have been in charge of, so this may lead to future research opportunities.

Career and research aspirations: I want to be a restoration and wildlife biologist who is in charge of projects. I would prefer to avoid private consulting.

Skill Set: -Field research experience -familiarity with laboratory environment -ability to identify many native and exotic California flora -experience with NRIS -familiarity with Forest Service protocols in regards to some protected reptiles, amphibians, and birds

The impact of my career experience: My career experience so far has only confirmed that this is the career path I want to pursue for the rest of my life. Experience in the field before graduation has proved to be absolutely invaluable in my decision making for my education. As a student, you assume that you will enjoy certain careers but only through first-hand experience do you learn about the reality of the career. Once exposed to these realities, you can make more realistic choices. I have so much more clarity and understanding of what a restorationist, wildlife biologist and researcher do after experiencing these things first hand. I do not intend to go directly to grad school. I would like to gain some field experience for a few years and then I may decide to attend grad school. I enjoy working with the Forest Service and would entertain employment with other government entities and nonprofits. I have spent time with private consulting firms and I would rather not get into that line of work.



Experience in the field before graduation has proved to be absolutely invaluable in my decision making for my education. As a student, you assume that you will enjoy certain careers but only through first-hand experience do you learn about the reality of the career. Once exposed to these realities, you can make more realistic choices.

California State University - Channel Islands Graduated Student

Name: **Gloria Stephanie Ramirez**
Hometown: **Riverside, California**
Institution: **California State University**
Campus: **Channel Islands**
Rank: **Graduated**
Major: **Environmental Science and Resource Management
Emphasis in Environmental Science**
Date of graduation: **May 2013**
Degree: **Bachelor's of Science**
USDA Agency
of interest: **National Resource Conservation Service NRCS**
Email: **gloriaram2012@gmail.com**

Career experience/location: In my internship with the Wishtoyo Foundation's Ventura Coastkeeper Program I did water quality testing on impaired waterways. The foundation is located in Ventura, California.

Description of career experience (what I learned): During my internship the thing I learned was to conduct testing on impaired waterways. The testing I did were phosphate, nitrate, pH and conductivity, also did surveying on the use of the Santa Clara River.

What is your perception of agriculture now: My perception of agriculture is that it is an important part of society, but the waste produced from it needs more regulations.

How has this career experience broadened your employment opportunities: The internship has given me more of a focus on employment type. The internship has made a connection, helping me have a step up from the other applicants, based on the hands-on experience.

Career and research aspirations: Within five years I see myself working for an environmental lab for those five years as a laboratory technician, and also I will be working on my paralegal degree. This is because I have an inspiration of fighting for the rights of the precious wilderness. That is why I see myself in ten years as an accomplished environmental lawyer for a well-known company or governmental agency.

Skill Set: -Computer skills: Microsoft System -English native speaker -Spanish native speaker -Geographic Information System -water quality testing -database management -organizing files -analyzing data

The impact of my career experience: Since I have ended my internship I have been looking for jobs in water management or quality field. As of yet I have not been able to find a job in that field, but I am still hopeful that with my degree and hands-on experience I received in my internship, I will. The time that I had in my internship narrowed my focus from the whole environmental spectrum to just the aspect of water management/quality. Water has an impact on animals and humans alike, and needs the protection from harmful encounters. I want to be that person who protects the watersheds so that future generations that will live on the earth will have enough clean water. This internship has really impacted my thoughts about my future and I like that it has because it is for the good.



My perception of agriculture is that it is an important part of society, but the waste produced from it needs more regulations.

California State University - Fresno Undergraduate Students

Name: **Steffany Aguilar Loeb**
Hometown: **Newark, California**
Institution: **California State University**
Campus: **Fresno**
Rank: **Senior**
Major: **Geology**
Expected date
of graduation: **May 2014**
Degree: **Bachelor's of Science**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **aguilar007@mail.fresnostate.edu**

Career experience/location: During the spring and summer of 2013 I worked as an intern for Alan Gallegos, lead geologist of the Sierra National Forest.

Description of career experience (what I learned): I gained valuable experience while interning at the Sierra National Forest. I learned how to use and execute erdas Imagine, ArcGIS, leica photogrammetry suite, as well as the proper techniques and procedures out in the field and in the office.

What is your perception of agriculture now: Agriculture plays a significant role in the U.S. Forest Service. In my research I analyzed conifer encroachment and its relation to the forest, and the importance meadows play in the overall structure of the forest.

How has this career experience broadened your employment opportunities: While working at the Forest Service, I learned how to use several programs while doing independent research; applications that I can add on to my resume while looking for jobs. I also learned to network and work under various people.

Career and research aspirations: I am graduating this spring 2014, and plan to attend graduate school in fall of 2014 to pursue a degree in geomorphology. Upon completion of my graduate degree, I plan to work for a government agency (such as the Forest Service), and within ten years get into petroleum geology.

Skill Set: -Bilingual -first aid/CPR certified -ArcGIS -erdas imagine -data base mgmt. -field mapping
- Microsoft Office -Adobe Illustrator -field sampling



I gained valuable experience while interning at the Sierra National Forest. I learned how to use and execute erdas Imagine, ArcGIS, leica photogrammetry suite, as well as the proper techniques and procedures out in the field and in the office

Name: **Andrew Mokhtar**
Hometown: **Madera, California**
Institution: **California State University**
Campus: **Fresno**
Rank: **Senior**
Major: **Civil Engineering**
Expected date of graduation: **December 2014**
Degree: **Bachelor's of Science**
USDA Agency of interest: **Natural Resources Conservation Service NRCS**
Email: **mokhtar559@mail.fresnostate.edu**

Career experience/location: I am currently working from the Fresno State campus. I am conducting water distribution analysis as well as water well analysis using Epanet and Excel.

Description of career experience (what I learned): I have been given the opportunity to obtain the knowledge needed to analyze water distribution systems using Epanet, as well as create models that illustrate the pollution rate of water wells within Fresno County. The internship is still in progress.

What is your perception of agriculture now: Agriculture is very sensitive and prone to human activities. It is up to us to help preserve the resources that are needed to for our very own survival.

How has this career experience broadened your employment opportunities: I recently received an employment opportunity with the Department of Water Resources, where I've been given the opportunity to work with professional engineers in the River Restoration Division.

Career and research aspirations: I hold a strong passion for engineering. My emphasis in both water and transportation has driven me to work for a public agency and promote sustainability within the region of the natural habitat. I am striving to work along other professional engineers in the next 10 years on environmental restoration or for City Hall.

Skill Set: -Microsoft Office -AutoCAD -MATLAB -Mathematica -Paver -Epanet -C++ -Vissim -Flowmaster -surveying -analyzed pavement conditions -water consumption analysis

The impact of my career experience: This internship has given me the opportunity to experience a research-based environment. By also interning for the City Hall of Tehachapi and the California Department of Resources, I have become excited and hopeful to work for a public agency in the near future as a full time employee. I enjoy the opportunity to work on multiple projects at a time that involve both technical and design work. I currently hold my E.I.T. certification, and I plan on receiving my P.E. license by 2016. My long-term objective involves the transition to a Project Manager level position, where I can be given the opportunity to utilize my leadership skills.



Agriculture is very sensitive and prone to human activities. It is up to us to help preserve the resources that are needed to for our very own survival.

Name: **Annabel Rodriguez**
Institution: **California State University**
Campus: **Fresno**
Rank: **Senior**
Major: **Plant Science**
Expected date
of graduation: **December 2013**
Degree: **Bachelor's of Science in Plant Science**
USDA Agency
of interest: **Agricultural Research Service ARS**
Email: **annarod318@yahoo.com**

Career experience/location: More than five years' experience in the research field, and two years' experience calibrating sprayers and spraying field plots with pesticides

Career and research aspirations: My career goals are to obtain a PhD in Weed Science or Nematology and attain a permanent position in the USDA-ARS. My research aspirations are to focus on weed resistance of pesticides, as well as do research on developing more nematode management strategies. My hobbies include gardening and reading a good book.

Skill Set: -Proficient in elemental analysis including but not limited to: EC, pH, and chloride analyses -extracting plant and soil samples for amino acid analysis
-running an HPLC for vitamin analysis -running total phenolics and ABTS analysis on a plate reader for grape and cactus samples
-knowledgeable in using Microsoft Word, Excel, PowerPoint, and Sigmaplot.



My career goals are to obtain a PhD in Weed Science or Nematology and attain a permanent position in the USDA-ARS.

California State University - Fresno Graduate Student

Name: **Walter K. Griffiths**
Hometown: **Pacifica, California**
Institution: **California State University**
Campus: **Fresno**
Rank: **Graduate**
Major: **Biology**
Expected date
of graduation: **June 2014**
Degree: **Master's of Science**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **kgriffiths41@gmail.com**



Career experience/location: I am an intern in the Watershed Management Experiential Learning for USDA Careers program, in Dr. Steve Blumenshine's Aquatic Ecology Lab at CSU Fresno.

Description of career experience (what I learned): I am practicing professional communication, data management, and project management. I am acquiring the skills to analyze fish diet samples, such as keying invertebrates. I am learning analytical tools such as multivariate statistics, stable isotope analysis, and bioenergetic modeling to analyze diet sample data.

What is your perception of agriculture now: Working on a project with a dual mission to support restoration while protecting agriculture, I now appreciate the need to balance restoration with agriculture.

How has this career experience broadened your employment opportunities: My enhanced skill set will make me a more attractive candidate for Fish Biologist positions. I have made contacts within the aquatic ecology/restoration field that will assist my career search when I finish school.

Career and research aspirations: I wish to work in the natural sciences/conservation field. Federal and state agencies are the largest employers of aquatic biologists and this is where I am directing my efforts. I've been introduced to many private consultants in fisheries biology – companies that perform skilled, targeted projects to accomplish goals for their employers, are also an option. I'd also like to use my education background if possible.

Skill Set: -General statistics - multivariate statistics - stable isotope analysis - diet analysis - fish and invertebrate identification - GIS - computer skills - sampling - beach seining - setting trammel nets - writing reports - making presentations - data management

The impact of my career experience: My career experience at Fresno State has completely

My enhanced skill set will make me a more attractive candidate for Fish Biologist positions. I have made contacts within the aquatic ecology/restoration field that will assist my career search when I finish school.

revolutionized my expectations for my future career and life trajectory. Entering my graduate program I was planning on focusing on public outreach and education in a museum as a career. Before completing my first semester, I knew my career plans would have to be adjusted to allow me to continue participating in research. I find the practice of science to be endlessly fascinating-much more so than my undergraduate training led me to believe. Ironically, I believe I had to mature enough in my time management and project management skills to succeed as a scientist. Because of my mid-career decision to return to science, I accept that I may not advance to the highest level of academic status, i.e., a PhD. However, I believe I will be able to bring together the management and communication skills I gained in previous positions to have a satisfying career. Through my thesis research, supported by the WRI Experiential Learning internship, I have come into contact with federal and state agency employees engaged in field research and reporting, as well as employees of private companies who perform field work under contract to state and federal government agencies. The Watershed Management Experiential Learning for USDA Careers internship has enabled me to imagine a future filled with my favorite subject: aquatic biology.

California State University - Los Angeles Undergraduate Student

Name: **Sk Mamun**
Hometown: **Los Angeles, California**
Institution: **California State University**
Campus: **Los Angeles**
Rank: **Junior**
Major: **Environmental Engineering**
Expected date of graduation: **Spring 2014**
Degree: **Master's of Science**
USDA Agency of interest: **United States Forest Service USFS**
Email: **asad_es@yahoo.com**

Career experience/location: Nutrient runoff and TMDL in lower Santa Ana Watershed, California State University, Los Angeles.

Description of career experience (what I learned): I learned lab works. I am trained in many GIS tools to analyze the watershed. Now I am trying to get some training on modeling.

What is your perception of agriculture now: Since my participation in this internship, I found agriculture (non-point) source of nutrient pollution is well managed.

How has this career experience broadened your employment opportunities: Now I am little bit experienced in laboratory testing environment as well as GIS software. This will be helpful in pursuing my career.

Career and research aspirations: My career goal is to see myself as one of the water management specialists. Now I am researching on pollutant movement through preferential flow path in unsaturated zone.

Skill Set: -Microsoft Office -ground water modeling Matlab and GMS -surface water modeling HEC-RAS -GIS -ArcMap-10.1 -SPSS

My career experience has helped me to get a student intern engineer position at the Bureau of Sanitation, in the City of Los Angeles. Now I am working with many experienced water/wastewater managers. This internship program has made confident in achieving my desired position as an environmental engineer or in a water resource-related job.

The impact of my career experience: My career experience has helped me to get a student intern engineer position at the Bureau of Sanitation, in the City of Los Angeles. Now I am working with many experienced water/wastewater managers. This internship program has made confident in achieving my desired position as an environmental engineer or in a water resource-related job.



California State University - Monterey Bay Graduate Students

Name: **Emily Beck**
Hometown: **Placentia, California**
Institution: **California State University**
Campus: **Monterey Bay**
Rank: **Graduate Student**
Major: **Coastal and Watershed Science & Policy**
Expected date
of graduation: **May 2014**
Degree: **Master's**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS
United States Forest Service USFS**
Email: **ebeck@csumb.edu**

Career experience/location: My current internship is with the Elkhorn Slough Tidal Wetland Project in Elkhorn, California, assisting with planning, project management tasks and marine mammal monitoring for the Minhoto Marsh restoration project. Previous career experience includes nursery management, volunteer coordination and public outreach for the Orange Coast River Park/Huntington Beach Wetlands Conservancy salt marsh restoration project in Huntington Beach, California.

Description of career experience (what I learned): In the course of my career, including my most recent internship, I have developed many skills. These include project management, marine mammal monitoring, native plant propagation, data collection and analysis and public outreach and education.

What is your perception of agriculture now: Agriculture is an important part of the economy of California, with complex issues that require the cooperation of farmers and state and federal agencies.

How has this career experience broadened your employment opportunities: Through my USDA internship I have learned project management skills, marine mammal monitoring, monitoring design, data collection and analysis skills, and have expanded my GIS skills. All of this experience will allow me to more effectively pursue a career in coastal resource management and protection.

Career and research aspirations: I hope to use my degree and internship experiences to build a career in coastal resource management and protection in California.

Skill Set: -Project management -data collection and analysis -ArcGIS
-watershed systems -marine mammal monitoring -native plant
propagation -hydrology -ecology -R -Hec -HMS -Miradi
-ecological modeling -watershed management -natural resource
planning

Through my USDA internship I have learned project management skills, marine mammal monitoring, monitoring design, data collection and analysis skills, and have expanded my GIS skills. All of this experience will allow me to more effectively pursue a career in coastal resource management and protection.

The impact of my career experience: My career experience at the Elkhorn Slough through the USDA internship will build on my previous experience and help me find a job in coastal resource management.



Name: **Scott Blanco**
Hometown: **Berkeley, California**
Institution: **California State University**
Campus: **Monterey Bay**
Rank: **Graduate**
Major: **Applied Marine and Watershed Science**
Expected date
of graduation: **May 2014**
Degree: **Master's of Science**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS**
Email: **sblanco@csumb.edu**



Career experience/location: Monitoring toxic cyanobacterial blooms in Pinto Lake in Watsonville, California using watershed science with molecular tools with the Public Works Department of the City of Watsonville.

Description of career experience (what I learned): I refined our watershed sciences approach to follow movement of water and nutrients through the Pinto Lake sub-watershed, measuring parameters through the water column, using DNA amplification/visualization, to elucidate factors promoting toxic cyanobacterial aggregation. I also learned to communicate my results to a wide audience.

What is your perception of agriculture now: I now have a deeper appreciation for the complex nature of water quality and supply issues in an important agricultural region of Central California.

How has this career experience broadened your employment opportunities: I've gained experience in a wide range of laboratory and field-based analytical tools, and developed a strong ability to "figure things out" when answering a question. Producing and communicating information will be vital skills necessary to finding employment at an appropriate agency.

Career and research aspirations: My current career aspirations are to publish my research on a model which can incorporate the contribution of surface-water nutrients and sediments and internally-cycled nutrients to eutrophication of lakes and reservoirs in California. I would ideally continue similar water quality research in a doctoral program, government agency, or the private sector, working to identify sources, sinks, and solutions for water quality issues.

I now have a deeper appreciation for the complex nature of water quality and supply issues in an important agricultural region of Central California.

Skill Set: -Database management -microbiological techniques -pathogen analysis -nutrient determination -statistical analysis -molecular biology -immunoassay -PCR/qPCR -limnology -hydrological modeling -CRAM and wetlands delineation familiarity -sediment/soil analysis -ArcGIS -ERDAS -HEC-RAS & HEC-HMS

The impact of my career experience: My career experience has greatly guided my future educational and career goals and long-term plans. I have gained an important perspective on what performing watershed assessment and analysis involves, and significant experience in the collection, analysis, and management of data to perform statistical analyses. Because of my experience, I understand how to design a research project and to adapt and address the various challenges which arise. Having gone through the research process from start to finish, I have learned to perform water quality and sediments analysis at a high standard and with an understanding of principles underlying these analyses. I also honed technical skills in molecular biology, developing a quantitative PCR (qPCR) and cyanobacterial culture protocol for our lab. Additionally, I've gained experience in GIS analysis and land-use classification. The USDA Water Resources Internship helped fund laboratory analyses, and allowed me to produce research which I have presented at a research conference. I have also had the opportunity to work directly with the utilities department of the City of Watsonville, and learn about the interface between the city, the public, and regional and state agencies. I have gained insight into the funding, grant-writing, and report preparation processes. I will apply these invaluable skills and lessons in future work, where I hope to produce publishable-quality research aimed at pressing issues of water quality and supply.

Name: **Cherie Crawford**
Hometown: **San Antonio, Texas**
Institution: **California State University**
Campus: **Monterey Bay**
Rank: **Graduate**
Major: **Coastal and Watershed Science & Policy**
Date of graduation: **May 2013**
Degree: **Bachelor's of Science in Marine Biology;**
Master's of Science in Coastal Watershed Science & Policy, watershed emphasis

USDA Agency
of interest: **Natural Resources Conservation Service NRCS**
Email: **ccrawford@csumb.edu**

Career experience/location: The title of my internship project is: Applied Science to inform conservation and restoration of a threatened habitat type, the ecotone between salt marshes and adjacent uplands. This internship is conducted at the Elkhorn Slough National Estuarine Research Reserve (ESNERR) in Watsonville, California.

Description of career experience (what I learned): During the course of this internship I learned how to distinguish the ecotone habitat from upland and salt marsh habitat and its value to terrestrial mammals. This internship has allowed me to improve as a student and scientist.

What is your perception of agriculture now: Before this internship, I did not know how much of the land surrounding ESNERR is used for agriculture, but after traveling to and from my internship for over a year, I have a greater understanding of agriculture on the central California coast.

How has this career experience broadened your employment opportunities: This internship has allowed me to create contacts that I otherwise would not have made. I also was able to contribute to a long term study that will hopefully be used to determine the value of the ecotone habitat.

Career and research aspirations: Currently, I hope to begin working for a state agency in either California or along the Gulf Coast, interacting with the public and promoting wetland and coastal conservation. Eventually, I want to teach either in middle school or high school, or work at a company using my GIS skills.

Skill Set: -GIS -soil sample analysis -plant propagation -water quality analysis -native plant identification

The impact of my career experience: After I graduate from my program at CSUMB, I would like to obtain a job with the Natural Resources Conservation Service. I enjoyed working at the Elkhorn Slough National Estuarine Research Reserve, learning more about wildlife corridors, and informing the public about our research. Working with other scientists at the interface between science and applied conservation is very exciting because there is always a new project or help needed with ongoing projects. I'm still pursuing a job in the marine/aquatic science, but as a result of this program, I've broadened my interests in wetlands and estuaries and hope to contribute more to this area of study.



During the course of this internship I learned how to distinguish the ecotone habitat from upland and salt marsh habitat and its value to terrestrial mammals. This internship has allowed me to improve as a student and scientist.

Name: **Christina David**
Hometown: **San Anselmo, California**
Institution: **Cal State University**
Campus: **Monterey Bay**
Rank: **Graduate**
Major: **Coastal and Watershed Science & Policy**
Expected date
of graduation: **May 2014**
Degree: **Master's of Science**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS**
Email: **cdavid@csumb.edu**

Career experience/location: My internship is my Master's thesis project examining the internal dynamics of a woodchip denitrification bed, or bioreactor, which removes nitrate from agricultural runoff water. I am using a tracer test to model uniformity of flow in the system and nitrate removal, measuring surface and dissolved nitrous oxide emissions, and assessing nitrate and carbon concentrations at intervals within the bioreactor.

Description of career experience: I have improvised field tools such as building my own monitoring wells out of PVC pipe, improved my independent thinking and get-it-done abilities, and have had the pleasure of teaching undergraduate's field and lab skills and getting the benefit of their existing skill sets.

What is your perception of agriculture now: My perception of agriculture is that water management is a crucial issue right now in locations such as the Delta and Westlands, and farming practices vary widely in utilization of resources.



How has this career experience broadened your employment opportunities: This opportunity made me think about the future by doing a career worksheet; I also work with an organization that I would like to consider a potential employer, the University of California Cooperative Extension.

Career and research aspirations: In the immediate future I hope to work for a farm and learn more about general farming practices. In two to five years I hope to work more specifically on agricultural resource management and promoting sustainable agriculture.

Skill Set: -BA in Integrative Biology -GIS mapping -R statistical package -grant writing -running specialized lab machinery (Shimadzu Total Carbon Analyzer, Gas Chromatograph, Ion Chromatograph) -lots of field work experience, including endangered species work

The impact of my career experience: I studied biology as an undergraduate, where I gained an appreciation of human and non-human ecosystem interactions. I was employed first with the USGS Western Ecological Research Center and then the Department of Pesticide Regulation, in the two years following getting my Bachelor's degree. I started graduate school at CSU Monterey Bay two and a half years ago in hopes of expediting an increase in job responsibilities once I go back on the market and also to glean a deeper understanding of a particular resource, water. After acquiring my Master's degree, I hope to find work that relates to such pressing local and regional environmental issues as groundwater depletion and contamination from practices such as fracking and agricultural pollutants. Of the USDA agencies, I am most interested in working for the NRCS.

My perception of agriculture is that water management is a crucial issue right now in locations such as the Delta and Westlands, and farming practices vary widely in utilization of resources.

Name: **Shaelyn Hession**
Hometown: **South Lake Tahoe, California**
Institution: **California State University**
Campus: **Monterey Bay**
Rank: **Graduated**
Major: **Coastal and Watershed Science & Policy**
Date of graduation: **May 2013**
Degree: **Master's of Science**
USDA Agency
of interest: **United States Forest Service USFS**
Natural Resources Conservation Service NRCS
Email: **shession@csumb.edu**

Career experience/location: Nitrous Oxide Emissions from Aquatic Systems on the California Central Coast, at California State University Monterey Bay.

Description of career experience (what I learned): Experience managing a research project; Practical field experience, including operation of a variety of technical equipment; Applied laboratory skills, including good laboratory practices; Managed and maintained a Gas Chromatograph; Efficient data management and sample processing

What is your perception of agriculture now: I appreciate growers and the challenges they face. I see the importance of scientists and growers working together to address environmental concerns.

How has this career experience broadened your employment opportunities: This internship has provided an opportunity to gain experience in a field and laboratory setting. The skills gained during this internship are abilities I can include in my repertoire when pursuing employment.

Career and research aspirations: My professional interests are in natural resource conservation and water quality. When I graduate I will be seeking a position with government agencies, including the USDA. My career goals include working with an agency where I can contribute to the improvement of environmental issues.

Skill Set: -Proficient in Microsoft Word, Excel, and PowerPoint -GIS/GPS -ArcMap -experienced with ERDAS Imagine -HEC-RAS -HEC-HMS -practical field experience, including operation of a variety of technical equipment -laboratory experience -data management

The impact of my career experience: Participating in this program provided me with skills and experience to help prepare me for future employment opportunities. I am aspiring to acquire a position with an agency where I can contribute to the improvement of environmental quality. To accomplish this goal, I seek to gain a variety of skills and experiences from which I can draw on during my career. This internship afforded an opportunity to gain exposure and experience beyond those provided within the classroom. I am currently seeking employment.



I am aspiring to acquire a position with an agency where I can contribute to the improvement of environmental quality. To accomplish this goal, I seek to gain a variety of skills and experiences from which I can draw on during my career. This internship afforded an opportunity to gain exposure and experience beyond those provided within the classroom.

Name: **Gwen Miller**
Hometown: **Pismo Beach, California**
Institution: **California State University**
Campus: **Monterey Bay**
Rank: **Graduate**
Major: **Coastal and Watershed Science & Policy**
Expected date of graduation: **June 2014**
Degree: **Master's of Science**
USDA Agency of interest: **United States Forest Service USFS
Natural Resources Conservation Service NRCS**
Email: **gmiller@csumb.edu**

Career experience/location: Analyzing agriculturally impaired water within the Molera Treatment wetland, located in Castroville, California.

Description of career experience (what I learned): I have learned how to use various instruments such as a Total Organic Carbon Analyzer, Flow Injection Analyzer and Hydrolab. I also have developed my skills in research design and statistical analysis.

What is your perception of agriculture now: In the realms of water quality, agriculture growers have to find ways to reduce negative impacts on water quality, but there are so many confounding factors influencing the choices they must make.

How has this career experience broadened your employment opportunities: I have gained experience in both the field and the laboratory. My skills directing others have improved as well as my organizational and problem solving skills.

Career and research aspirations: I hope to go into a career related to environmental restoration and possibly education. I would like to learn more about ways to naturally improve water quality and reduce humans' negative impacts on the environment. I am particularly interested in coastal systems and areas of anoxia.

Skill Set: -Computer skills -data base management -water quality
-R computer programming language -laboratory skills

The impact of my career experience: I am unsure of any future education I will receive after completing my Master's program but the experience I gained from this internship helped prepare me for a PhD. program. I enjoy working both in the field and in the lab and hope to have a career that allows me to do both.



In the realms of water quality, agriculture growers have to find ways to reduce negative impacts on water quality, but there are so many confounding factors influencing the choices they must make.

Name: **Kenneth Norberg**
Hometown: **San Lorenzo, California**
Institution: **California State University**
Campus: **Monterey Bay**
Rank: **Graduate**
Major: **Biology**
Date of graduation: **May 2013**
Degree: **Bachelor's of Science in Biology**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **knorberg@csumb.edu**



Career experience/location: I served as a fisheries aide intern for the Monterey Peninsula Water Management District from May 2012 to September 2012.

Description of career experience (what I learned): As a fisheries aide intern I assisted in the capture, transport, and rearing of endangered steelhead as well as valuable aquaculture techniques used to keep steelhead alive and healthy. Capture of steelhead was performed with sein nets and a backpack electroshocker, and captured fish were transported in a water truck to the fish rearing facility.

What is your perception of agriculture now: Since completing my internship I have learned that agriculture includes farming, forestry, animal sciences, water and food quality, and many other fields I would have not thought of without performing my internship.

How has this career experience broadened your employment opportunities: My internship has added lots of skills and techniques that I can use to pursue work as a field biologist. The skills I have acquired make me viable for more opportunities involving outdoor work, endangered species, and animals.

Career and research aspirations: My current plans are to work for a few years and decide if I want to keep working, apply for graduate school, or try to become a Department of Fish and Wildlife warden. I am uncertain of where I see myself in the future; I would like to believe that I will have picked a path and have started off being in a career involving my degree and the ability to work outdoors.

Since completing my internship I have learned that agriculture includes farming, forestry, animal sciences, water and food quality, and many other fields I would have not thought of without performing my internship.

Skill Set: -Endangered species handling -animal care -animal capture -species identification/differentiation -aquaculture -equipment maintenance -database management -water quality measurements -habitat survey -habitat restoration -animal population surveys -invertebrate studies -invasive species removal

The impact of my career experience: My career experience with the Monterey Peninsula Water Management District as a fisheries aide intern has impacted me by making me want to continue my education to attain a Master's degree to be better qualified to work as a field biologist. My internship has helped me for future employment opportunities by supplying me with experience used in fisheries biology, animal care, water measurement skills, habitat rehabilitation, and environmental impacts; furthermore my internship helped me acquire my current job with the same agency that is adding more skills and building on the ones developed with my internship. My career goals are still the same as they were before my internship- I want to work outdoors with animals doing some sort of field biology. My internship has slightly altered my educational plans, leaning more towards continuing my education and receiving a Master's degree as opposed to just my Bachelor's degree. Although my education plans may get altered, my career goals and long-term goals are still the same. I have been employed by the Monterey Peninsula Water Management District since April of 2013 as a water resources assistant. Since starting I have gained more responsibilities in steelhead rearing and other riparian data collection and management. The work I currently do is further building my skills for field biology as well as adding more skills that will make me more valuable, such as DIDSON sonar reading, PIT tagging, and completing the electroshocking certificate course.

Name: **Daniel Ontiveros**
Hometown: **San Jose, California**
Institution: **California State University**
Campus: **Monterey Bay**
Rank: **Graduate**
Major: **General Biology**
Date of graduation: **May 2013**
Degree: **Bachelor's**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS**
Email: **dontiveros@csumb.edu**

Career experience/location: Working with Denise Duffy & Associates, I opened, maintained, checked, and removed traps and silt nets in order to study breeding population and movement of California Tiger Salamanders in Carmel Valley.

Description of career experience (what I learned): During the course of this internship I learned how to interact professionally with managers and clients who wanted tasks done correctly and on time. I learned identification skills for both amphibians and plants and how to record their presence accurately. Finally, I learned the different techniques used to capture amphibians and aquatic insects and practiced them in the field.



What is your perception of agriculture now: Open range cow farming is beneficial for the continued success of the California tiger salamander. Seasonal watering holes provide ponds of water ideal for California tiger salamander and other amphibian breeding. The trampling of vegetation around watering holes helps the young of the year to successfully vacate the ponds. Planning these pools of water to benefit naturally occurring species is a way to help this protected species.

How has this career experience broadened your employment opportunities: This internship helped me to understand the benefits of working in nature. I focused on lab science the first few years of my studies, and ended my college career taking environmental science courses to strengthen my ability to work in nature.

Career and research aspirations: In a perfect world, I would continue to study California tiger salamanders. But I would be happy to work with any threatened species. I enjoy working with people as much as animals, so being able to interact and expose nature as something to treasure among people would make me happy in a career as well. In five years I would want to be working as a park ranger or be an environmental consultant at a private company. Within ten years I would like to return to school and get a master's degree in natural resource management to allow me to continue to help conserve California's biodiversity.

Skill Set: -Basic computer skills -GPS/GIS -northern California amphibian identification -central California plant identification -data entry

The impact of my career experience: My internship has helped me to decide what jobs I would be interested in attaining in the future. It helped me decide that I would want to return and get a master's once I have paid off my current student loans, while teaching me valuable lessons on how to work in the field. Currently, I am working at McDonald's to pay my student loans while I continue to apply and go to interviews at different environmental companies in the state of California.

During the course of this internship I learned how to interact professionally with managers and clients who wanted tasks done correctly and on time. I learned identification skills for both amphibians and plants and how to record their presence accurately. Finally, I learned the different techniques used to capture amphibians and aquatic insects and practiced them in the field.

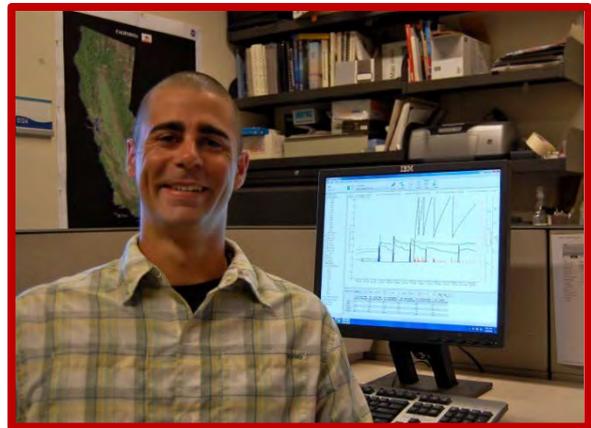
Name: **Kirk Matthew Post**
Hometown: **Hemet, California**
Institution: **California State University**
Campus: **Monterey Bay**
Major: **Watershed Sciences**
Date of graduation: **May 2013**
Degree: **Master's of Science in Coastal and Watershed Science & Policy**
USDA Agency
of interest: **Agricultural Research Service ARS, United States Forest Service USFS**
Email: **kpost@csumb.edu**

Career experience/location: Hydraulic modeling technician at Monterey County Water Resources Agency located in Salinas, California. My position focuses on Salinas River Channel Maintenance Program, specifically flood modeling and regulatory compliance for the purpose of flood protection and Salinas Valley watershed management.

Description of career experience: During my time at MCWRA I acquired advanced GIS analysis and presentation techniques, modeled geomorphological change resulting from storm events and assisted with the scoping and writing of an EIR renewal.

What is your perception of agriculture now: Collaboration between land owners, growers, research scientists and industry is critical to the advancement of fundamental entities which have stock in the production of produce within the state of California.

How has this career experience broadened your employment opportunities: Working at the intersection between growers, government agencies, consultants and engineers for the purpose of managing the Salinas river watershed through the application of advanced information-rich methods while integrating industry needs has served as an invaluable experience for future work within the field of applied agriculture research.



Career and research aspirations: Currently, I work at the interface between applied research, technology and policy for the purpose of translating and assimilating precision technology information into grower practice. I hope to leverage my previous academic and current professional experiences into private, commercial and international agriculture production techniques.

Skill Set: -R statistical software -HEC RAS HEC HMS -environmental modeling -ArcGIS -irrigation management -ET based irrigation -surface renewal flux analysis -data logger programming -yield trials -irrigation hydraulics -Tetracam -PixelWrench -NEPA -CEQA

Collaboration between land owners, growers, research scientists and industry is critical to the advancement of fundamental entities which have stock in the production of produce within the state of California.

The impact of my career experience: Experience gained while working simultaneously at MCWRA and CSUMB under a NASA-Ames Cooperative agreement, has led to a rewarding career in agriculture-related applied sciences. My current work as a Field Research Scientist has expanded my knowledge in the field of precision agriculture, biometeorology, and soil science. The project focuses on the application of satellite imagery, biophysical models and on-the-ground sensor networks to estimate crop specific evapotranspiration for use in irrigation management.

Name: **Julianne Rhodes**
Hometown: **Santa Cruz, California**
Institution: **California State University**
Campus: **Monterey Bay**
Rank: **Graduate**
Major: **Coastal and Watershed Science & Policy**
Expected date
of graduation: **May 2014**
Degree: **Master's of Science**
USDA Agency
of interest: **National Resource Conservation Service NRCS**
Email: **jrhodes@csumb.edu**



Career experience/location: I measured water quality parameters and evaluated the Carmel River Lagoon's suitability for juvenile steelhead habitat for the Monterey Peninsula Water Management District (MPWMD), Monterey, California.

Description of career experience (what I learned): I gained experience measuring water quality using a YSI meter, measuring flow, collecting samples and performing laboratory analyses. I also produced monthly reports with graphics generated using GIS and R statistical software, as well as providing a qualitative summary of findings for stakeholders.

What is your perception of agriculture now: Given the challenges of a growing population and climate shifting, scientific collaboration with growers and ranchers is critical to the health of our cultivated lands.

How has this career experience broadened your employment opportunities: In addition to the direct experience gained measuring and reporting water quality conditions for the MPWMD, I participated in stakeholder meetings. The meetings demonstrated how an agency carries out proactive water management through collaborative regional planning.

Career and research aspirations: Our environment requires a steady supply of water for ecosystems to function properly, but finite water supplies can't meet the needs of farmers and residents during years of drought. I would like to be part of an organization that provides scientific and technical resources to growers, ranchers, and regional water managers to advance conservation activities that will help benefit soil, water, plants, air, and animals.

Given the challenges of a growing population and climate shifting, scientific collaboration with growers and ranchers is critical to the health of our cultivated lands.

Skill Set: -Water quality measurement using YSI meter -Sontek & Hydrolab instruments -water quality sample collection -laboratory analysis -data analysis using Excel, GIS, MS Access, MySQL, software, and Python -Perl, PHP, and R programming languages

The impact of my career experience: Working within an agency like the MPWMD, which must try to meet the needs of a diverse set of stakeholders, provided me with insider experience. I learned how to facilitate and assist with efforts to implement best management practices, provide technical information and outreach, and engage in public relations and regulatory coordination. The MPWMD's mission to promote a long-term sustainable water supply, and to manage and protect water resources for the benefit of the community and the environment, provided me with firsthand knowledge of the physical and policy-related challenges that must be met in a community where water is in short supply. My internship at the MPWMD gave me an opportunity to develop those skills. I hope to obtain a position coordinating with partners to encourage information sharing on agricultural water quality issues for multiple agencies and help foster an interagency network of shared technical assistance for farmers and ranchers. My primary goal is to assist in linking agricultural water quality monitoring data and water supply issues with implementation activities. Please check my LinkedIn page for more information about my work experience and skill set: <http://www.linkedin.com/pub/julianne-rhodes/36/3a7/5a8>.

Name: *Aimee Elizabeth Teaby*
Hometown: **Sonora, California**
Institution: **California State University**
Campus: **Monterey Bay**
Rank: **Second year graduate**
Major: **Coastal and Watershed Science & Policy**
Expected date
of graduation: **June 2014**
Degree: **Master's of Science**
USDA Agency
of interest: **Natural Resource Conservation Service NRCS**
Email: **ateaby@csumb.edu**

Career experience/location: I worked with a team of students at the NASA Ames Research Center to customize a hydrologic model for Yosemite National Park.

Description of career experience (what I learned): This experience gave me the opportunity to work with a diverse group of students on complex hydrologic model that necessitated advanced use of ArcGIS, Python scripting and Excel. We were also required to produce a short video, PowerPoint, technical paper and poster. I have given several presentations on this project.

What is your perception of agriculture now: There are many opportunities to improve agricultural practices through sustainable and environmentally friendly methods with remote sensing, GIS and modeling.

How has this career experience broadened your employment opportunities: This experience gave me an insight to the type of organizations in which I would like to work. The networking opportunities available during this internship have helped direct my career path even more.

Career and research aspirations: I would like to be a part of a cohesive and eclectic resource-based think tank focused on improving water resource management through innovative and sustainable methods. I aspire to work on collaborative projects beneficial to local communities while educating the public about water conservation and watershed health. My work will most likely include storm water management, gray water systems and agriculture.



There are many opportunities to improve agricultural practices through sustainable and environmentally friendly methods with remote sensing, GIS and modeling

Skill Set: -Hydrological and climate data processing and analysis -ArcGIS -GPS (Garmin, Trimble, RTK)
-Microsoft Word & Excel -R (programming language) -hydrological field equipment -maintenance of stream gages and weather stations -water quality sampling and processing -survey equipment (total station, autolevel)

California State University - Northridge Undergraduate Student

Name: **Sean Seiki Leverance**
Hometown: **Woodland Hills, California**
Institution: **California State University**
Campus: **Northridge**
Rank: **Senior**
Major: **Mechanical Engineering**
Expected date of graduation: **May 2014**
Degree: **Bachelor's of Science**
USDA Agency of interest: **Conservation Service and Conservation District/Rural Development CSCDRD**
Email: **seanleverage@sbcglobal.net**

Career experience/location: "Increasing the Efficiency of Wind Turbines Using a Self-Actuated, Self-Controlled Surface Roughness Mechanism." I am completing this internship at the CSU Northridge campus.

Description of career experience (what I learned): Throughout the internship I have improved my communication, time-management, and organizational skills. I have also honed my technical skills in various engineering areas.

What is your perception of agriculture now: Agriculture and our environment in general should be one of our top priorities to maintain.

How has this career experience broadened your employment opportunities: This experience has pushed me toward pursuing a career in renewable energy and energy conservation. I hope to join an organization that has these same interests.

Career and research aspirations: Once I graduate with my BS in Mechanical Engineering, I plan to build a career working with renewable energy applications, such as pursuing my Ph.D. in Mechanical Engineering with an emphasis in Renewable Energy.

Skill Set: -Comsol -LabVIEW -piezoelectric materials -spin coating -strain gage reading -wind tunnel operation -Pro/ENGINEER -SolidWorks -Microsoft Office (Word, Excel, PowerPoint) -MATLAB -Visual Basic for Applications for Excel (VBA) -machining/fabrication (mill, lathe, band saw, composite layup)

The impact of my career experience: Throughout my journey as a student, I have experienced both accomplishments and obstacles. Together, these experiences aided my growth as a person and helped create the path I am pursuing now. Being the first in my family to attend a university trained me to become independent and helped when I had to study on my own or conduct research when there was no one to guide me. Being financially independent gave me the drive to pursue an internship with USDA, which introduced me to the renewable energy industry. Volunteering for CSUN's Systems Engineering Research Laboratory taught me how to work in a team and showed me the importance of prioritizing my schedule. Additionally, being appointed as the Associated Students Senator for the College of Engineering granted me the opportunity to make a difference on my campus and in my community. Finally, becoming an LSAMP and McNair Scholar has aided me in conducting research and guided me on my path to graduate studies. Collectively, these experiences have influenced my academic and career path and demonstrated the most important thing is to be passionate about learning and committed to improving oneself as an individual.



Agriculture and our environment in general should be one of our top priorities to maintain.

California State University - Northridge Graduate Student

Name: **Marianne Jara**
Hometown: **Los Angeles, California**
Institution: **California State University**
Campus: **Northridge**
Major: **Geography/GIS**
Graduation date: **May 2013**
Degree: **Bachelor's of Arts**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **mariannejara13@gmail.com**



Career experience/location: I did GIS work at The Center of Geographical Studies, housed in California State University, Northridge. I was given the opportunity to work on various projects, ranging from checking spatial data on water quality for the California Water Board, to transcribing and mapping historical survey data of Southern California.

Description of career experience (what I learned): This internship allowed me to work for very important projects that were useful and illustrative to either the public or the institution. It allowed me to put my GIS skills to work outside of the classroom setting, and to explore other methods and capabilities that a GIS offers. The ability to work with different kinds of spatial data was very exciting; always something new with rewarding results. I had great supervisors and staff members guiding me at The Center for Geographical Studies, whom were patient and encouraged me to go forth with taking small and large-scale aspects of individual projects. It unveiled my potential in working with projects that serve of environmental and geographical significance.

What is your perception of agriculture now: On one of the projects, I helped map and give insight on historical maps that illustrated agricultural potential. I have learned that agriculture has come a long way in the United States, particularly the interpretation of land-use and priorities on how to utilize the land. Over a century ago, surveyors sought land for the purpose of agriculture. In today's age, it is not quite the same: land that was once considered for agriculture became land with urban development. This shift in land use has changed in such a short time; something that is visible in a GIS.

How has this career experience broadened your employment opportunities: Being an intern under WRI allowed me to become familiar with project-oriented GIS tasks, a skill that will come very useful when I apply for entry or mid-level jobs in my near future.

On one of the projects, I helped map and give insight on historical maps that illustrated agricultural potential. I have learned that agriculture has come a long way in the United States, particularly the interpretation of land-use and priorities on how to utilize the land.

Career and research aspirations: In the next few years, I see myself working for a public sector that allows me to utilize GIS in relative projects. Ideally, I would like to work with GIS, but I am also interested in returning to academia and pursuing a master's degree in another earth science such as Environmental Geography or Geological Sciences. Whether it's in the next five or ten years, I can see myself exploring more about earth science in an employment setting, an academic setting, or both! Regardless, it would be my greatest life adventure to extend my knowledge of earth science in every possible way. WRI definitely gave me a taste of being able to work in what I love doing.

Skill Set: -Familiar with ArcGIS -proficient in other open-source GIS applications -familiar with ERDAS -geodatabase management -environmental geospatial analysis -variety of GIS tools -digitizing -format conversions -data editing

The impact of my career experience: Being employed under WRI for an internship truly did open doors for me. It allowed me to work independently while collaborating as a team; a balance that was a great exercise for the "real world" work setting that awaits me. It gave me the grand opportunity to apply myself as an educated and skilled worker. It was a stepping stone for me to work at a center that later hired me under another contract and I am currently there. It gave me confidence in my skills as a professional, and assured me that I chose a study and career in which there is a market for. Digital maps are the future, and it is exciting to know that I can contribute to this revolution of cartography. I wish, no matter how long it will take, to continue my career and studies in earth science, to be more knowledgeable. I graduated from California State University, Northridge, and am currently employed where I began my WRI internship: Center for Geographical Studies.

California State University - San Bernardino Undergraduate Student

Name: **Brittany Garcia**
Hometown: **Rialto, California**
Institution: **California State University**
Campus: **San Bernardino**
Rank: **Senior**
Major: **Health Science-Public Health Education**
Expected date of graduation: **June 2014**
Degree: **Bachelor's of Science**
USDA Agency of interest: **Animal and Plant Health Inspection Service APHIS: Ctrs for Epidemiology and Animal Health CEAH**
Email: **garcb321@coyote.csusb.edu**



Career experience/location: For the past three years, I have been working on the WRI Historical Aerial Photo Project at CSUSB. The WRI maintains thousands of historical aerial photos from numerous collections including the USDA, Natural Resources Conservation Service (NRCS), the San Bernardino County Flood Control District (SBCFCD), Riverside County Watershed, and CalTrans. These collections of photos are being digitized and made available on the CSUSB website (<http://wri.csusb.edu/archives/HistoricalAerialPhotos.html>). The current stage of this project is to georeference these photos using GIS and create an interactive map to display them for the public. Displaying the photos in this way means that these photos will be a huge resource for researchers and agencies since they can be used for evaluation of natural and agricultural resources, land-use planning, environmental studies, and other important utilities.

Description of career experience (what I learned): My participation in this internship has provided me with a great deal of experience that is beneficial to my future career. This experience includes managing the project; learning how to use GIS; successfully working in small groups to complete tasks and solve problems; training new students to work on the project.

Since my involvement in this project, I have realized that these historical aerial photos can be a vital resource in evaluating the impact of land development on resources necessary to maintain, not only humans, but plants and animals as well.

What is your perception of agriculture now: Since my involvement in this project, I have realized that these historical aerial photos can be a vital resource in evaluating the impact of land development on resources necessary to maintain, not only humans, but plants and animals as well.

How has this career experience broadened your employment opportunities: Experience with the use of GIS technology is quickly becoming a desired skill across all career areas. This technology is desirable in that it presents a vast amount of data in a way that can be easily understood and distributed. The use of GIS will provide me with experience and an advantage in my desired career as an epidemiologist.

Career and research aspirations: I am currently applying to Ph.D programs in epidemiology. My desire is to become an epidemiologist and conduct research concentrated on infectious disease. In addition to conducting research, I would also like to become a professor and teach classes in the public health/health science field.

Skill Set: -Microsoft Office -statistical package for the social sciences (SPSS) -Geographical Information Systems (GIS) -Prezi Presentation Software -Adobe Photoshop CS6 -Photo Mechanic -Text Wrangler

The impact of my career experience: Through my experience with this internship I have utilized skills that are essential to my future in both graduate school and my career. Most importantly, I have found that I really enjoy this kind of work and the importance that the resulting products will have for many years to come. This internship has proved to be further validation that I am pursuing a career in the field that is right for me.

California State University - San Bernardino Graduate Student

Name: **Carlos Almaguer**
Hometown: **San Bernardino, California**
Institution: **California State University**
Campus: **San Bernardino**
Rank: **Graduate**
Major: **Computer Science**
Expected date
of graduation: **Spring 2015**
Degree: **Master's**
USDA Agency
of interest: **National Agricultural Statistics Service NASS**
Email: **cfrp1990@gmail.com**



Career experience/location: The project's main goal is to digitize photos from aerial photograph collections that date as far back as the 1920s. The photos were uploaded to the school's website where they could be viewed along with its respective metadata.

Description of career experience (what I learned): Storing and archiving digital photographs were a process that involved finding a method to scan thousands of historical aerial photographs at a quick rate without damaging the photos. I found an efficient way of captioning the photos that saved time when giving each picture its correct metadata. Later in the project I learned GIS in order to georeference the digital images.

What is your perception of agriculture now: During my internship I have learned that the Department of Agriculture has many different agencies that extend to many different interests, and I would be interested in a job that can match my love for math and computer science, such as engineering.

How has this career experience broadened your employment opportunities: My experience at WRI helped me get an idea of what it is like to work in a large, coordinated project. I was able to learn the importance of communicating with coworkers and supervisors. I also learned several software tools that will improve my employment opportunities such as ArcMap georeferencing, Excel sheet programming and Photoshop editing.

Career and research aspirations: As a graduate student, I feel that I would learn a lot from working full time in a project and would be interested in working for the USDA either after graduation or even now, if the project or research fits me and the subjects I am interested in researching.

Skill Set: -Computer skills -c++ programming -Verilog -labview -arcmap -Excel -Photoshop -database management -write, read and speak Spanish fluently -oral presentation -experience at scholarly conferences

The impact of my career experience: The work experience I gained from working in the WRI historical aerial photograph project helped me grow as a professional. I was able to find and improve ways of captioning large amounts of digital photographs and scanning them in a way that would not damage the old pictures, but did not take too much time either. I was able to create a database containing metadata about each photo for captioning, and later in the project that metadata was used to georeference the files and match them to an actual point in a map. During my graduate student years I plan to start looking for job opportunities in the USDA so that I can apply either before or after I am finished with school. I learned so much from working in this project and would be happy to keep working for the Department of Agriculture.

My experience at WRI helped me get an idea of what it is like to work in a large, coordinated project. I was able to learn the importance of communicating with coworkers and supervisors. I also learned several software tools that will improve my employment opportunities such as ArcMap georeferencing, Excel sheet programming and Photoshop editing.

California State University - San Bernardino Graduated Student

Name: **Michelle Maria Saltis**
Hometown: **Moreno Valley, California**
Institution: **California State University**
Campus: **San Bernardino**
Rank: **Graduated**
Major: **Environmental Health**
Expected date of graduation: **September 2013**
Degree: **Bachelor's of Science**
USDA Agency of interest: **Food Safety and Inspection Service FSIS, United States Forest Service USFS
Natural Resources Conservation Service NRCS**
Email: **Msaltis35@hotmail.com**

Career experience/location: Internship with Water Resources Institute (Watershed Management Interns). Tested potable water in Mecca, California, for arsenic contamination and researched different filtration methods for removing arsenic and other contaminations.

Description of career experience (what I learned): I have learned how to further utilize my skills in lab work, and to effectively work and communicate with the community. I have learned how to efficiently reduce arsenic contamination and other contaminants using different filtration methods. I also learned how to utilize distinctive analytical machines to present more accurate readings.

What is your perception of agriculture now: Agriculture is very imperious and there will always be some kind of environmental impact/issue involved. It is important to recognize all aspects dealing with agriculture and seeking answers that will help lead toward a better environment.

How has this career experience broadened your employment opportunities: This experience has influenced my future employment opportunities by giving me a start in the fields I would like to unite with. The skills and experience from this internship has broadened me in the ability to work with the community, utilize lab and field equipment, and much more. This internship was a small, but substantial step toward my goals in my environmental career.

Career and research aspirations: I envision myself working my way to the top; to keep reaching every goal I set for myself in each level of my career field and to never stop trying.

Skill Set: -The skills I have obtained are the ability to analyze and collect data accurately. -I communicate effectively. -I work well with others and I am able to stay focused in any circumstance. -I am open-minded and always willing to collaborate and share ideas with others.



Agriculture is very imperious and there will always be some kind of environmental impact/issue involved. It is important to recognize all aspects dealing with agriculture and seeking answers that will help lead toward a better environment.

The impact of my career experience: I am currently seeking employment that will help utilize my learned skills to the full advantage.

California State University - San Diego State University Undergraduate Student_____

Name: **Tanisha Martin-Chiles**
Hometown: **San Diego, California**
Institution: **California State University**
Campus: **San Diego**
Rank: **Senior**
Triple Major: **Geography, Sociology, and Political Science**
Expected date of graduation: **Spring 2014**
Degree: **Bachelor's of Arts**
USDA area of interest: **Agricultural Research Service ARS (Science Advisor)**
Email: **tanishajmartin@gmail.com**



Career experiences/location: The Natural Resources Conservation Service (NRCS) in San Diego, California, allowed me to promote conservationism and support environmentally-friendly farmers. Fieldwork consisted of evaluating specific land regions. Office work consisted of reception duties, compiling information packets for the public, and organizing workshops.

About my career experience (what I learned): It is important to specialize in specific areas of fieldwork, but it takes teamwork of combining all the knowledge everyone has to create the best possible outcomes. This internship allowed me to gain first-hand experience in how conservation techniques can be utilized.

What is your perception of agriculture now: Agriculture is vital to our well-being; it is important for these establishments to exist and nurture nature in the most efficient way possible to benefit both people and the environment.

How has this career experience broadened your employment opportunities: An internship of this caliber is a huge accomplishment on my resume. I am currently looking into other employment opportunities within the United States Department of Agriculture (USDA) where I can do research to promote conservation policies.

Career and Research aspirations: I'm transferring to a Ph.D graduate program. I'll do lots of researching, teaching, and eventually work within the United Nations to assist in developing strategies and policies to help those in need of support.

Skill Set: It is vital to be organized, have a friendly disposition, and enjoy the outdoors because it is required to hike through trails and vegetation to gather GIS coordinates and evaluate the terrain of the land being observed.

The impact of my career experience: Interning with the Natural Resource Conservation Service (NRCS) strengthened my desire to promote conservationism and create policies to ensure that the future continues to have establishments that provide the necessary assistance, expertise, and observation for natural resource conservation. I am not the type that wants to be outdoors for long hours on a daily basis or be in an office every moment I am clocked in at work, but this experience has shown me that some jobs can have the best of both worlds; here the technicians must go outdoors into the field and connect and observe nature, as well as use various forms of technology while outdoors that will be downloaded onto the office computer, which maximizes the positive potentials that partake a certain area of land through computer organization. I enjoy the idea of having a career where I can be both indoors and outdoors. The farmers I met were genuinely interested in using the land in a more efficient manner and preserving certain species of plants and animals. My favorite tag-along was to a butterfly farm where the farmers were making an effort to preserve the monarch butterfly's population. This experience has made me want to promote the work that is being done to benefit the land, but also become a person who uses these services on my own land in the future.

Agriculture is vital to our well-being; it is important for these establishments to exist and nurture nature in the most efficient way possible to benefit both people and the environment.

California State University - San Diego Graduate Students

Name: *Abigail Campos*
Hometown: **Brawley, California**
Institution: **California State University**
Campus: **San Diego State University-Imperial Valley Campus**
Rank: **Graduate**
Major: **Public Administration, MPA**
Expected date of graduation: **Spring 2014**
Degree: **Master's**
USDA Agency of interest: **United States Forest Service USFS**
Email: **camposa@rohan.sdsu.edu**



Career experience/location: USDA-FS/Southern California Consortium (SCC) in cooperation with the USDA-HSI & SDSU-IVCampus Partnership.

Description of career experience (what I learned): Throughout my internship experience I've learned about the various programs and services that are tied into the U.S. Forest Service. This career experience allowed me to develop effective communication and organizational skills through project management.

What is your perception of agriculture now: Prior to this career experience, I was not fully aware of the major role agriculture plays in our nation. This experience has allowed me gain a better understanding of agriculture and how it's a vital resource, in which all individuals are dependent upon.

Prior to this career experience, I was not fully aware of the major role agriculture plays in our nation. This experience has allowed me gain a better understanding of agriculture and how it's a vital resource, in which all individuals are dependent upon.

How has this career experience broadened your employment opportunities:

After graduate school, I've always envisioned entering the public sector and serving the public. Prior to this program, I was unaware of the career paths that are available with the US Forest Service in my areas of interest, public policy and outreach. The career experience with the US Forest Service will allow me to gain an understanding of the department, along with developing my professional work experience and initiate networking opportunities.

Career and research aspirations: Since being introduced to the different types of career avenues within the US Forest Service, I plan on seeking employment with the department after completing my MPA in spring 2014. Within the next five years, I plan on being employed by the US Forest Service and commencing a PhD program. Ten years down the line, I plan on having completed the PhD program and continue working for the department.

Skill Set: -Computer skills -data management and analysis -statistical package for the Social Sciences (SPSS)
-Tableau Software -Microsoft Office

The impact of my career experience: Having nearly completed my Masters in Public Administration, my career experience has made me realize the importance of higher education. Being the only one in my family pursuing a Master's degree, it's refreshing to see that education does play an important role in career success. Additionally, this career experience has allowed me to transition from a student to the professional working environment. As a participant of this program, I can say that I have become aware of the different types of employment opportunities that are available within the department. After concluding my education, I plan on entering the public sector by joining the US Forest Service. As a public administration student, my career interest fields are public policy, civil rights and outreach. However, after completing my career experience, I plan on applying to various positions of interest with the US Forest Service through the 2014 Pathways program. This career experience has given me the opportunity to learn about the department and their mission. My career objective is to gain full-time employment with the US Forest Service in my career fields of interest.

Name: **Luis De La Torre**
Hometown: **Los Angeles, California**
Institution: **California State University**
Campus: **San Diego State University**
Rank: **Graduate**
Major: **Watershed Science**
Expected date
of graduation: **May 2015**
Degree: **Master's of Science**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **luisdelatorre89@gmail.com**

Career experience/location: Water quality and quantity during low flow in urbanized watersheds: A combined fieldwork and remote sensing application in San Diego, California.

Description of career experience (what I learned): The main priority is to measure discharge and sample water quality and Oxygen-18 isotope levels in 10 different locations in the watershed. This is to determine the relationship between discharge or water quality and land use, as well as to identify the source of the San Diego River's water, whether it is local or imported.

What is your perception of agriculture now: I see agriculture as a necessary, important job that still needs some reform in practice due to high water usage, which may be accomplished with new technology or methods.

How has this career experience broadened your employment opportunities: This internship made me realize that I really want to be doing fieldwork wherever I end up working. While I enjoy doing the necessary GIS work and data entry and analysis, my favorite work is out in the field.

Career and research aspirations: Currently, I am working on my Master's degree in Watershed Science at San Diego State University and once I complete that degree in 2015, I hope to find a career where I can continue to perform water quality analysis on different streams. I would like to be able to assess the health of rivers and streams in areas around California, or on an even larger, possibly global, scale.

Skill Set: -Excel -ArcGIS -ERDAS Imagine -R -MapWindow/Basins -HSPF modelling -water sampling standards for nutrients -water sampling standards for O-18 isotopes

The impact of my career experience: Working on this internship is what made me certain that I wanted to attend grad school. I knew getting a Master's degree would help refine the skills I had obtained through this internship and that it could provide me with more skills to be a better asset to whatever organization I work for in years to come. Currently, I am also working on a project for my professor modeling streamflows with HSPF in San Diego County; a position I likely would not have been able to get if not for the work that I had done over the past year, gaining experience from my internship project. I am working toward learning all that I can to be able to find a career doing what I love. I hope that I can find a career working out in the field collecting samples that I can take back to the lab and analyze in order to determine the health of the stream. I feel that being a hydrologist for the Forest Service may be able to provide me with the ability to do both the lab work and fieldwork that I would prefer.



I see agriculture as a necessary, important job that still needs some reform in practice due to high water usage, which may be accomplished with new technology or methods.

Name: **Raymond Lee**
Hometown: **San Francisco, California**
Institution: **California State University**
Campus: **San Diego State University**
Rank: **Graduate**
Major: **Geography**
Expected date
of graduation: **December 2013**
Degree: **Master's of Science**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS**
Email: **raymond2@rohan.sdsu.edu**

Career experience/location: Thermal dynamics in a chronically eutrophied drinking water reservoir; Watershed Management Experiential Learning for USDA Careers Internship Program; San Diego, California.

Description of career experience (what I learned): Through this internship, I learned how to write computer code in R, do statistical tests (trend, correlation, multiple regression), design and execute a field sampling plan (storm sampling), and process water samples for nutrient analysis in the lab.

What is your perception of agriculture now: My perception of agriculture now is that it can have large, immediate, and long-lasting impacts on ecosystem functions.

How has this career experience broadened your employment opportunities: This experience has helped me learn both technical skills and how to think abstractly about a research problem. I also attended conferences and met people from various agencies, which will broaden my future employment opportunities.

Career and research aspirations: My current and future career aspirations are to continue doing research in earth sciences, whether I am pursuing a PhD or working for a government agency. I see myself working on research questions related to human impacts on the environment in five to ten years.



Skill Set: -R -BASINS -CE-QUAL-W2 -hydrological modeling -ERDAS -ENVI -ArcGIS -statistical analysis
-stream surveying -storm sampling

The impact of my career experience: This project has given me the opportunity to research biogeochemical processes in watersheds of varying degrees of development and receiving lakes downstream. This is a subject that interests me. Completing this project has assured me that I have chosen a field, watershed science, in which I want to have a career. This project has given me the opportunity to gain proficiency in computer programming, statistical analysis, and field work, e.g., the collection of water samples during storm events. These skills are necessary for conducting future research in my future education and employment. I will graduate in this term (Fall 2013) and am currently applying to Ph.D. programs.

This experience has helped me learn both technical skills and how to think abstractly about a research problem. I also attended conferences and met people from various agencies, which will broaden my future employment opportunities.

California State University - San Marcos Undergraduate Student

Name: **Teasha Edelman**
Hometown: **Porterville, California**
Institution: **California State University**
Campus: **San Marcos**
Rank: **Senior**
Major: **Biological Sciences with Concentration in Ecology**
Expected date of graduation: **May 2014**
Degree: **Bachelor's in Biological Sciences**
USDA Agency of interest: **United States Forest Service USFS**
Email: **teasha.edelman@gmail.com**

Career experience/location: In 2012-2013 I interned with the WRI conducting research on land cover change and management on avocado and orange groves in Southern California.

Description of career experience (what I learned): The internship provided me with the opportunity to gain experience working in the field and using lab equipment to process infinite amounts of samples. I also gained a great deal of experience analyzing and interpreting my data.

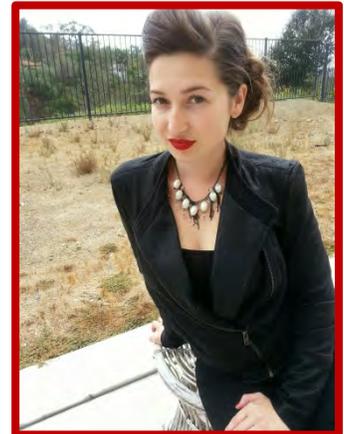
What is your perception of agriculture now: I have realized the importance of maintaining sustainable agriculture for the well-being of our country.

How has this career experience broadened your employment opportunities: This internship has provided me with real world experience in collecting and analyzing data both in the field and in the lab. In pursuing employment, the internship will have given me a solid foundation to as an entry level worker for a government position.

Career and research aspirations: My current career aspirations include obtaining a government position in any branch that relates to my degree. In the long term I plan on attending graduate school to obtain a high degree. However, I would like to gain experience working with science in the real world, to better understand the problems and issues our environment is facing, before I decide what I'd like to focus my research on.

Skill Set: -Computer skills: Excel & Word -statistical software programs (minitab, SPSS), Arc GIS -soil, water, and vegetation sampling/standard analysis -CHN analyzer -CO2 gas analyzer

The impact of my career experience: The experiences I have acquired working in the laboratory and field have provided me with a vast amount of insight and a tiny glimpse into the enormous world of science. I have gained skills and knowledge that will prepare me for any scientific career I choose to pursue and have hopefully obtained enough preparation to conquer the journey that still awaits me.



This internship has provided me with real world experience in collecting and analyzing data both in the field and in the lab. In pursuing employment, the internship will have given me a solid foundation to as an entry level worker for a government position.

California State University - San Marcos Graduate Students

Name: **Elayna Flanders**
Hometown: **San Diego, California**
Institution: **California State University**
Campus: **San Marcos**
Rank: **Graduate**
Major: **Ecology**
Expected date
of graduation: **May 2014**
Degree: **Bachelor's of Science in Biology**
Email: **bryan011@csusm.edu**



Career experience/location: Characterization of urban runoff treatment ponds within San Dieguito River Park (SDRP).

Description of career experience (what I learned): This research project directly focuses on urban and agricultural runoff and its effect on water quality involving the San Dieguito River Park's watershed region. Volunteering for the River Park over the past few years has allowed me to truly understand the importance of preserving, restoring, and maintaining good water quality of this natural resource. This internship has allowed me to take my understanding and passion for wildlife biology to the next level. It has given me the opportunity to apply my knowledge and skills learned at the graduate level toward creating and implementing a research project regarding water quality at the River Park.

What is your perception of agriculture now: This research allowed me to observe the amount of pollutants being carried into the lagoon due to agricultural and urban runoff. The skills acquired through this internship allowed me to understand how agricultural runoff needs to be monitored and filtered before entering our local watersheds.

How has this career experience broadened your employment opportunities: The skills I have learned from this experience are invaluable and will be used toward future research projects in various career paths. This internship taught me how to design and implement a large-scale field research project. I now feel confident in setting up statistically accurate, non-bias monitoring and management plans for ecological reserves.

Career and research aspirations: I am currently working as the Education Coordinator at the San Elijo Lagoon. I see myself growing with this organization and furthering my career in the education, interpretation and outreach field.

Skill Set: -GIS -GPS -experimental design & statistical analysis with R -biological data analysis -linear models -principles of ecology -landscape ecology -genetics -conservation biology -research method -vertebrate biology -animal physiology -California Invasive Plant Council Trained Wildland Manager -environmental leadership -Academy Certificate of Completion -San Dieguito River Valley Conservancy (SDRVC) & San Dieguito River Park (SDRP) 2012 Volunteer of the Year -President of the CSUSM Ecology Club

The impact of my career experience: I am extremely passionate about wildlife monitoring, habitat restoration, and educational outreach programs. I have volunteered for the past two years with the San Dieguito River Park and San Dieguito River Valley Conservancy. With these organizations I have lead nature hikes, created interpretive panels including an interpretive walk with interactive app, and conducted research analysis on high salinity soil. Through my volunteer work and this internship experience I have gained vital skills that will carry over into my professional career. I am still finishing up my graduate degree but have recently been hired by the San Elijo Lagoon Conservancy as their Education Coordinator.

This research allowed me to observe the amount of pollutants being carried into the lagoon due to agricultural and urban runoff. The skills acquired through this internship allowed me to understand how agricultural runoff needs to be monitored and filtered before entering our local watersheds.

Name: **Zarela Guerrero**
Hometown: **Oceanside, California**
Institution: **California State University**
Campus: **San Marcos**
Rank: **Graduate**
Major: **Biological Sciences**
Expected date
of graduation: **May 2014**
Degree: **Master's of Science**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **Zarela.Guerrero@gmail.com**



Career experience/location: My internship was titled “From shrub lands to avocados: Effects of land use and land cover change on soil carbon storage and fertility in Southern California.” The experiment took place at the Santa Margarita Ecological Reserve while the samples were processed and analyzed at CSU San Marcos.

Description of career experience (what I learned): Through this internship I acquired a lot of experience on experiment design and execution, field and lab work techniques as well as data analysis methods and report writing. But most importantly, this internship helped me have a clearer idea of the kind of work that I want to do after I graduate by allowing me to participate in different conferences where I was exposed to the various career opportunities available in the agricultural field.

What is your perception of agriculture now: With the human population on the rise, there is more need for research on the effects of agriculture on the environment in order to come up with more sustainable food production practices that meet the increasing demand for food while causing as little impact on the environment as possible."

How has this career experience broadened your employment opportunities: This experience has helped me become a better-rounded scientist. I have been able to experience what it would be like to use my skills as a biologist in the agricultural field.

Career and research aspirations: In the future, I would like to find a job where I can research the effects that anthropogenic activities, like agriculture, have on the environment. I believe that it is crucial to find a way to lessen such effects so that we can continue enjoying the great outdoors while ensuring that there is enough food to feed our people.

Skill Set: -Computer skills -field work techniques -sample processing techniques -ecological lab work -report writing -data analysis -experiment design and execution

The impact of my career experience: I am amazed at the intricate interactions that keep ecosystems in balance. The more I learn about nature the more I want to know. Luckily, I have found the right field for me, ecology. And the training that I am getting through education and this internship is preparing me for a career where I can work directly with nature. The area that interests me the most is the impact that human activities have on the environment. Before this experience, I had limited knowledge about the career possibilities available for a biologist within the USDA; but now, thanks to the different conferences that I have been able to attend I have found a place that is right for me. My plan is to find a job in the Forest Service, once I graduate. It is my desire to serve my country by researching environmental issues. By doing this I believe that I will be contributing to finding ways to protect and conserve this magnificent land, so that this generation and future ones can keep on enjoying the Great Outdoors.

In the future, I would like to find a job where I can research the effects that anthropogenic activities, like agriculture, have on the environment. I believe that it is crucial to find a way to lessen such effects so that we can continue enjoying the great outdoors while ensuring that there is enough food to feed our people.

California State University - Stanislaus Undergraduate Students

Name: **Julianna Aguilar**
Hometown: **Ceres, California**
Institution: **California State University**
Campus: **Stanislaus**
Rank: **Senior**
Major: **Geography**
Expected date
of graduation: **May 2014**
Degree: **Bachelor's of Arts in Geography;
Minor in Environmental and Resource Studies**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **jaguilar11@csustan.edu**



Career experience/location: My internship took place with the Tuolumne River Trust in Modesto, CA. The entirety of this internship consisted of Tuolumne River advocacy by means of school and neighborhood outreach programs.

Description of career experience (what I learned): Throughout this internship I've been able to network with several people involved in different non-profit organizations. I've learned that partnerships are extremely important when trying to resolve any issue, especially those encompassing the span of a river. I've learned a slew of things from taking water quality measurements to organizing community events at the river.

What is your perception of agriculture now: My perception of agriculture before this program consisted of schedules, specifically water schedules. After my experience I've come to the realization that water is definitely more than a set schedule. All of the policies and behind-the-scenes actions that need to take place in order for a farmer to water their crops are staggering.

How has this career experience broadened your employment opportunities: This experience has allowed me to funnel my interests into a more specific focus. I'm deeply interested in our environment and all of the natural processes occurring within it, but even more so with the hydrological aspects of it.

Being a geography major, my training has been broad, encompassing many disciplines. Working with the Tuolumne River Trust has allowed me to narrow my interest, of what seems to be everything, down to hydrology and the impacts water has on people and the environment.

Career and research aspirations: Ideally, I would be mapping watersheds and utilizing my GIS and remote sensing skills to better understand different hydrological environments around the world. Although I love working in the field, I also imagine myself eventually teaching and sharing my passion of hydrology and maps.

Skill Set: -Computer skills -Microsoft -ArcGIS 10.1 -Erdas -IDRISI -eCognition -Photoscan -data base management -Excel -water monitoring -community organizing -field work -various GPS units

The impact of my career experience: Being a geography major, my training has been broad, encompassing many disciplines. Working with the Tuolumne River Trust has allowed me to narrow my interest, of what seems to be everything, down to hydrology and the impacts water has on people and the environment. I plan to continue my education and hopefully attend graduate school next fall, focusing on GIS and incorporating aspects of hydrology in my research. Because I have developed such an appreciation toward the study of water, I have begun to take this into consideration when applying to graduate school, and making sure they have a program which would support both of my passions. Although I do plan on moving away for school immediately after I graduate, I know that the connections I have made at the Tuolumne River Trust would allow me to stay in my home town and possibly obtain a position at their organization.

Name: **Pedro Chacon**
Hometown: **Alturas, California**
Institution: **California State University**
Campus: **Stanislaus**
Rank: **Senior**
Major: **Geography**
Expected date
of graduation: **Fall 2014**
Degree: **Bachelor's of Arts in Geography**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS**
Email: **pchacon@csustan.edu**

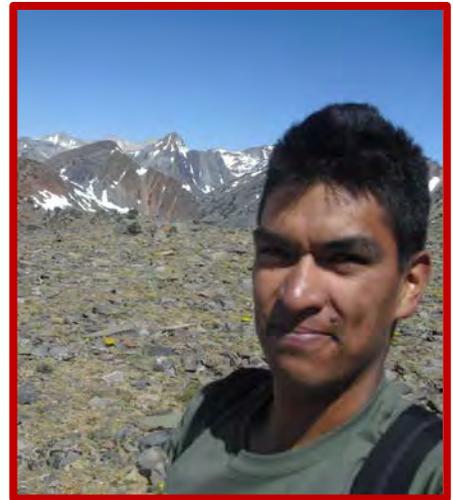
Career experience/location: The Bureau of Land Management in Alturas, California; US Forest Service in Lee Vining, California; and the Tuolumne River Trust in Modesto, California.

Description of career experience (what I learned): I am working with local communities in promoting watershed importance, educating on the importance of the Tuolumne River, and getting people to be more active in keeping it clean and to be more involved in it.

Career and research aspirations: My goal is to work for the Natural Resources Conservation Service or do something related to GIS or water. I would love to work around soils and do research on it. In general, I just want to be outside and active. That's the lifestyle I live and the type of work I want to do.

Skill Set: -GPS skills -mechanically inclined -basic computer skills
-ArcGIS -Qgis -making maps -physical labor and handyman work

The impact of my career experience: I think, in general, just getting work experience is very important and this internship has provided me with the opportunity to do that. My past government jobs had to do with manual labor but my internship here has to do a lot more with community interaction, promoting awareness, and fundraising. It's a whole different ball game, but in a good way. I think the more skills you pick up the better. You never know when you might need to use a wrench or organize a river clean up.



My goal is to work for the Natural Resources Conservation Service or do something related to GIS or water. I would love to work around soils and do research on it. In general, I just want to be outside and active. That's the lifestyle I live and the type of work I want to do.

Name: **Aldo Garcia**
Hometown: **Los Banos, California**
Institution: **California State University**
Campus: **Stanislaus**
Rank: **Undergraduate Alumni**
Major: **Geography**
Expected date
of graduation: **May 2013**
Degree: **Bachelor's of Arts in Geography**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **guy7bmwm5@hotmail.com**



Career experience/location: Geospatial Analysis of the Pattern of Floodplain, Geomorphology, Land Use, and Riparian Vegetation in the Tuolumne River Watershed. Geographic Information Systems (GIS) Lab at California State University, Stanislaus and the Stanislaus National Forest.

Description of career experience (what I learned): I learned to navigate publically available GIS data online to create various maps that highlight characteristics of the Tuolumne River watershed. Soil samples and soil property data were also collected in the field to gain a better understanding of the watershed. Field visits were conducted to gain a visual perspective of the dynamics of the watershed.

What is your perception of agriculture now: I understand the importance of finding a balance between human needs and the natural environment for future generations to enjoy.

How has this career experience broadened your employment opportunities: I was able to practice and gain experience in standard methods of collecting data. I was able to learn from my experiences both in the field and in using computer technology.

I understand the importance of finding a balance between human needs and the natural environment for future generations to enjoy.

Career and research aspirations: I would like to work with the natural flora and fauna of the Sierra Nevada Mountains. I am interested in working in projects that will aid in the management of the forest. I would like to be able to conduct fieldwork and be involved in projects involving GIS. I would like to work as a Forestry Technician to learn more about the forest and ultimately be involved in long-term research projects.

Skill Set: -ArcGIS version 10.1 -Quantum GIS version 1.8.0 -Microsoft Excel 2010 -Microsoft Word 2010
-Microsoft PowerPoint 2010 -Garmin etrex 10 GPS receiver

The impact of my career experience: This internship was related to my coursework and interest in geography, more specifically Physical and California Geography, and Geospatial Technology. I was able to learn about and visualize the mixed-uses of the Tuolumne River watershed including the natural ecosystems, agriculture, urban, and recreation. I was able to conduct and enhance my field work abilities by acquiring skills in soil sampling and measuring of soil properties by using standard equipment. This was useful because I worked together with a team of interns to collect data and I gained a general understanding of basic sampling methods. I also gained experience using GIS to create various maps and shapefiles. I learned to navigate publically available data online and obtain data to create maps and shapefiles for our study area. I also performed a basic analysis of a DEM file to create maps. Working with GIS has provided me with experience using various tools and I learned to research solutions for complications that arise during the map-making process. I believe I have attained valuable skills that I would like to apply in my future endeavors with the USDA. I am currently employed in retail, but I would love to follow my passion of the outdoors, and would like to start a career with the Forest Service and support the management of the forest.

California State University - Stanislaus Graduate Students

Name: **Felicia De La Torre**
Hometown: **Modesto, California**
Institution: **California State University**
Campus: **Stanislaus**
Rank: **Graduate**
Major: **Ecology and Sustainability**
Expected date
of graduation: **February 2014**
Degree: **Master's**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **fdelatorre@csustan.edu**



Career experience/location: My internship was offered through the “Watershed Management Experiential Learning for USDA Careers” provided by the WRI of CSU San Bernardino. I studied amphibians at scattered sites within San Joaquin and Stanislaus Counties.

Description of career experience (what I learned): In the field, I learned about handling and identification techniques of amphibians (by call and morphological characteristics), water quality testing, and habitat assessment. I also heightened my skills in marketing, communications, educational outreach, and leadership.

What is your perception of agriculture now: Agriculture provides essential commodities not only to humans, but can also provide benefits such as habitat and biodiversity to ecosystems as a whole.

How has this career experience broadened your employment opportunities: I expanded my network by speaking to landowners and gaining formal permission to sites. I also provided summary information and maintained contact about the water bodies contained on their property. I gained hands-on experience dealing with wildlife, environment, and people that will benefit me in my future career.

Career and research aspirations: In the next year, I see myself working as a field or lab biologist and moving up to a leadership position within the next five years. In ten years, I would like to be directing projects that will bridge the gap between agriculture and ecology.

Skill Set: -Intermediate Spanish proficiency -GPS -GIS experience (ArcMap in ArcGIS 10.1) -water quality monitoring -animal handling experience (herpetofauna, avian, etc.) -computer skills (webpage design and Microsoft programs)

The impact of my career experience: This career experience has been invaluable and I am grateful to have been given the opportunity to take part in it. Not only was I able to make substantial progress toward completion in my Master's program, I was also able to receive funding that supported all the travel and materials required for my cross-county project. I did not initially foresee all of the marketing and communications that this project would entail, but I am indebted to have been able to reach out and involve the local community to educate people in an area that is often overlooked. This opportunity gave me an inside look on what it takes to manage different water sources and how to measure habitat variables. I feel that I was able to get experience in wildlife biology, ecology, and hydrology. I am currently employed part-time as an office assistant and poultry technician through the California Poultry Federation while I finish up the last semesters of my graduate school career. I hope to obtain a full-time position within the biological field immediately after graduation in February of 2014.

Agriculture provides essential commodities not only to humans, but can also provide benefits such as habitat and biodiversity to ecosystems as a whole.

Name: **Michael Machado**
Hometown: **Hilmar, California**
Institution: **California State University**
Campus: **Stanislaus**
Rank: **Graduate**
Expected date
of graduation: **Spring 2015**
Degree: **Master's of Science in Geospatial Technologies**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **mikebmachado@gmail.com**

Career experience/location: Our group is currently working on a project that pertains to the recovery rate of riparian habitat in the Central Sierra Nevada Watershed: the Merced, Stanislaus, and Tuolumne Rivers after a wildfire.

Description of career experience (what I learned): I learned how to use Geographic Information Systems (GIS) to analyze on the hydro-geomorphic of a specific watershed region.

What is your perception of agriculture now: Agriculture is a very vital practice. Understanding how water is transported and allocated is needed as agriculture depends upon it.

How has this career experience broadened your employment opportunities: I find that this experience has inspired me to pursue my Doctorate's degree. I feel that with the research experience I have received I want to conduct research and teach others who want to learn about the environment.



Career and research aspirations: My participation in this internship has allowed me to gain experience in gathering data, performing data analysis, and presenting the result in a scientific form. This will also allow me to build a foundation in graduate school, and beyond. My ultimate goal is to further my studies in water resource management and conservation in the Central Valley of California.

Skill Set: -ArcGIS 10.1 -soil sampling -performing simple river analysis -using data sources to conduct research

Agriculture and our environment in general should be one of our top priorities to maintain.

The impact of my career experience: The Watershed Management Internship Program will help to prepare me for graduate studies and a future career in water resource management and conservation in the Central Valley of California. This opportunity is an incredible chance for me to advance not only my education, but to continue doing something I truly enjoy. For my thesis, I plan to conduct a study on the land changes of the Merced Riparian Corridor. I will use field studies, computer software, and historical land images to conduct my study. I plan to use my knowledge and my experience I've gained to conduct my study.

Name: ***Katrina Quadra***
Hometown: **Northridge, California**
Institution: **California State University**
Campus: **Stanislaus**
Rank: **Graduate**
Major: **Geography with a Concentration in Globalization and Development**
Expect date
of Graduation: **May 2013**
Degree: **Bachelor's of Arts**
USDA Agency
of interest: **National Resource Conservation Service NRCS, Agricultural Research Service ARS**
Email: **katrinaquadra@gmail.com**

Career experience/location: I interned at the Tuolumne River Trust located in Modesto, California from February to August of 2013.

Career and research aspirations: To research the causes and rates of disease transmission to improve access and quality of health care.

Skill Set: -Working proficiency in Tagalog -knowledge of devices used to measure water quality such as pH and turbidity -effective communicator and works well in a team environment

To research the causes and rates of disease transmission to improve access and quality of health care.



Florida International University Project Page

Florida-Caribbean Consortium for Agriculture Education and Hispanic Workforce Development (FCCAgE)

PI: Mahadev Bhat
Florida International University
bhatm@fiu.edu 305-348-1210

Collaborating Institutions:
Loretta Adoghe
Miami Dade College North
ladoghe@mdc.edu 305-237-1691

Pilar Maul
St. Thomas University
pmaul@stu.edu 305-628-6603

Angela Gonzalez
Inter-American University
agonzal414@gmail.com 787-391-9585

The overall goal of this project is to enable underrepresented students at four South Florida and Puerto Rican universities/colleges to develop scientific skills in biological, food and natural resource sciences and to find a career in USDA or related agencies, or to advance to higher education. The grant established the Florida-Caribbean Consortium for Agriculture Education and Hispanic Workforce Development (FCCAgE) between Florida Intl University (FIU), St Thomas University (STU), Miami Dade College North (MDC), and Inter-American University (IAU).

The strategic goal of this project is to recruit 49 Hispanic undergraduate and five graduate students and train them in plant, natural resources, and food sciences through course development and the establishment of experiential, experimental, and community outreach activities. Our final goal is to place Hispanic and other minority graduates of the FCCAgE in USDA or in higher education. The consortium was established in order to provide students with a holistic, multidisciplinary, and problem-based approach necessary for tackling tomorrow's agro-ecological challenges.

This project provides funding for the students committed to the training during their undergraduate or graduate education. Among its activities, it offers an 18-credit hour Agroecology Certificate Program at FIU and hands-on training at Organic Gardens established at each institution, and supports student travel to conferences and other research activities. In addition, FCCAgE conducts Agroecology-related and professional development workshops and field tours, and provides summer internships and job placement assistance. Students receive up to \$24,000 in funding throughout their scholarship term to support for time spent in career experiences, as well as experiential and experimental based learning. The program also provides monetary incentives to high school students and teachers to engage in the topic of Agroecology and other USDA National Priority Needs Areas.

FCCAgE - Florida International University Undergraduate Students

Name: **Adisbelkis Alvarez**
Hometown: **Miami, Florida**
Institution: **Florida International University**
Campus: **Modesto A. Maidique**
Rank: **Senior**
Major: **Environmental Studies**
Expected date
of graduation: **Summer 2014**
Degree: **Bachelor's of Science**
USDA Agency
of interest: **ARS**
Email: **aalva082@fiu.edu**

Career experience/location: (1) Agricultural Research Station (ARS), Invasive Plant Research Laboratory (IPRL) rearing and monitoring biological controls. (2) ARS in Prosser, Washington analyzing intercropping systems on soil carbon sequestration.

Description of career experience (what I learned): From my internships I learned the painstaking, yet rewarding, process of procedures in science. No matter how grueling the task I confronted was, I was thankful for the opportunity to get to work in a field that has such a huge impact on our daily lives.

What is your perception of agriculture now: You are what you eat, so eat what you grow.

How has this career experience broadened your employment opportunities: Throughout my internship experience I have learned to use a Gas Chromatograph (GC), collect gas samples, measure pH, and analyze soil samples for nitrogen, potassium, and carbon. All these skills will undoubtedly assist me in the search for future employment opportunities.

Career and research aspirations: My ultimate goal is to earn a Master's degree in Agricultural engineering and to find a job in the field of renewable energy, preferable with a focus on biogas.

Skill Set: -Microsoft Word -Excel & PowerPoint -comfortable and confident giving presentations and public speaking -basic understanding of lab protocol and can operate a Gas Chromatograph with precision -germinate, transplant, and harvest many species of plants

The impact of my career experience: During my second internship in Washington I became acquainted with the concept of integrated nutrient management, a practice which seeks to close the gap in the nutrient cycle. Runoff from chemical fertilizers has had a detrimental impact on aquatic life and drinking water quality. By switching to on the farm inputs like animal manure we can reduce our dependence on external inputs and reduce the environmental costs that come with them. Witnessing firsthand the potential of animal waste to produce energy and undermine the effects of using artificially produced fertilizer made me want to pursue a career in alternative energy, particularly biogas that manufactures natural fertilizer as a byproduct. In the future, I look forward to helping farmers grow their crops more sustainably while at the same time producing a viable energy choice for themselves and their community.



From my internships I learned the painstaking, yet rewarding, process of procedures in science. No matter how grueling the task I confronted was, I was thankful for the opportunity to get to work in a field that has such a huge impact on our daily lives.

Name: **Arturo Daniel Castellon**
Hometown: **Miami, Florida**
Institution: **Florida International University**
Campus: **University Park campus**
Rank: **Senior**
Major: **Environmental Studies**
Expected date
of graduation: **Summer 2014**
Degree: **Environmental Studies**
USDA Agency
of interest: **ARS**
Email: **acast099@fiu.edu**

Career experience/location: I have done two internships with the USDA. The first internship was with APHIS PPQ at Miami international Airport working on nematodes and plant fungi. The second internship was with the ARS where I worked with mango, avocado and sugarcane.

Description of career experience (what I learned): With APHIS PPQ I learned how to extract nematodes from soil samples so that they could be identified. I also learned how to isolate plant fungi and identify with high power microscopes. I learned how to photograph nematodes and fungi with microscope cameras. With the ARS I learned about tropical fruit trees and there genetics.

What is your perception of agriculture now: Today agriculture is conducted as an industry rather than a living system which may or may not be sustainable.

How has this career experience broadened your employment opportunities? Both of the internships that I participated in offered me jobs. After completing six months internship with the APHIS PPQ I decided it was not a job of my interest. On the other hand the ARS offered me a position which I am very interested in and look forward to working with them.

Career and research aspirations: Currently I am working on graduation from FIU and in the hiring process for a part time job with the ARS where I will be working with cacao. After graduation I would like to see myself with a permanent position at the ARS. Also, if possible I would like to pursue higher education so that I could move up in position through the USDA.

Skill Set: -Fluent in English and Spanish -proficient in Microsoft Word Office -familiar laboratory safety and equipment -efficient with coordinating and helping at events and presentations -experienced in breeding and handling small and large farm animals (horses, goats, chickens and rabbits) -organic gardening (soil management, pest management and food production) -apiarist(honey) -aquaculture (aquarium and pond) -avid outdoorsmen experienced in South Florida backcountry as well as Colorado Rockies alpine extreme summer and winter conditions -competitive equestrian show jumping -boating and ocean safety -finely tuned communication skills that can be tailored to the needs of any given situation

The impact of my career experience: My experience so far has been mostly with the agroecology program and the two internships I have done. One with APHIS PPQ and the other with the ARS, both of these experiences were made possible through the agroecology program at FIU. These internships both opened doors for me and gave me options that I did not have before. Currently I am looking forward to starting with the ARS which I believe it will be a great next step for me to reach my long term goal. In the future I want to help make the world's food system more efficient as well as secure. Furthermore I would like to have a stable job that can provide for all my needs while still contributing to the great good of everyone.



Today agriculture is conducted as an industry rather than a living system which may or may not be sustainable.

Name: **Edy Cicilio**
Hometown: **Miami, Florida**
Institution: **Florida International University**
Campus: **Modesto Maidique**
Rank: **Junior**
Major: **Environmental Studies BS; Sociology/Anthropology BA (Sociology Track)**
Expected date of graduation: **Fall 2014**
Degree: **Bachelor**
USDA Agency of interest: **Forest Service USFS**
Email: **Ecici001@fiu.edu**

Career experience/location: As an FCCAgE student I had the opportunity to intern and maintain ongoing research with the Center for Renewable Carbon (CRC) in the University Of Tennessee Institute Of Agriculture.

Description of career experience (what I learned): During the two-month summer internship with the CRC I participated in innovative biofuels research having to do with the genetic improvement of switch grass (*Panicum virgatum*) for increased lignocellulosic ethanol yield. I learned how to perform impact resistance tests, using a pendulum-style impact tester, to determine the effects to plant physical properties of switch grass that was genetically modified to reduce the lignin content and improve saccharification efficiency for better ethanol production.

What is your perception of agriculture now: Embracing a diverse portfolio of sustainable cultivation methods, whether for food or fuels production, is necessary if we wish to become better stewards of the environment.

How has this career experience broadened your employment opportunities: It has given me the ability to acquire the research experience working in laboratories and with state of the art technologies that are necessary in a competitive job market. Furthermore, it has put me in contact with the scientists and researchers that are at the vanguard of the science of biofuels, biomaterials, and agricultural production in general.

Career and research aspirations: I am currently involved in organic fruit and vegetable production at the FIU Organic Garden and am looking to find a position in a start-up farm, managed by a Baptist Health Hospital in South Florida, to help improve hospital food and beverages. My long-term career and research goals are to be a part of an organization committed to sustainable agricultural and environmental protection and education.

Skill Set: -Fully bilingual (Spanish and English) -organic fruit and vegetable farming -arboricultural pruning -installing drip irrigation systems -volunteer management -leading guided hikes -chemistry laboratory techniques -impact testing systems -MS Word, PowerPoint, Excel -type 87 WPM

The impact of my career experience: Internships are a valuable tool that has provided me the confidence, knowledge and skills to continue striving for more and better career opportunities that integrate my passion for sustainability.



Embracing a diverse portfolio of sustainable cultivation methods, whether for food or fuels production, is necessary if we wish to become better stewards of the environment.

Name: **Eliana Cordoba**
Hometown: **Miami, Florida**
Institution: **Florida International University**
Campus: **Modesto Maidique Campus**
Rank: **Senior**
Major: **International Relations/Certificates in Agroecology and Environmental Studies:**
Expected date of graduation: **Fall 2013**
Degree: **Bachelors**
USDA Agency of interest: **Animal and Plant Inspection APHIS**
Email: **ecord016@fiu.edu - ecord016@gmail.com**

Career experience/location: USDA Miami Animal Import Center. USDA Internship Summer 2013. Research Project: Transboundary Diseases: Heartwater Disease. Exposure to all quarantine and field animal inspection procedures. Import-export policies and Animal care. Plants: Inspection of plant material, actionable pests, diseases, fumigations, CITIES, trade restrictions, international treaties and international USDA programs.

Most Recent USDA Externship Program: Central Florida. Inspection of Exotic animals.

Description of career experience (what I learned): Animal Care: Transboundary and zoonotic diseases, Import-Export protocols of livestock, horses, birds, fish and reptiles. SITC Unit (USDA Intelligence and investigation Unit). Plants: CITIES protected species, exotic pests, USDA actionable pests, inspection procedures. Use of microscopes to identify and further report insects, larvae, pupae or eggs. Recognize plant diseases by name, Learn about international trade and agribusiness in south Florida and USDA international agricultural programs.



What is your perception of agriculture now: Agriculture is at the heart of national development and stability. Food and natural resources conservation depend upon multiple coordinated efforts between science, politics and citizens.

How has this career experience broadened your employment opportunities? I spent many hours at the animal and the plant inspection stations visualizing, handling, researching, using equipment, and shadowing biologists, entomologists, veterinarians, technicians and inspectors, while learning many of the skills needed for each of their duties. Those hands on experience are unique, valuable, marketable and useful for any future job opportunity for me at the USDA or any other Natural Resource related agency.

Career and research aspirations: I see myself as a high end executive employee at the USDA in Washington, coordinating important food safety and food security programs. Improving animal inspection facilities and other important facilities within the USDA through the experience obtained with years of work at the agency. I see myself helping people as the center of my motivation always. I do not only think about my own benefit.

Agriculture is at the heart of national development and stability. Food and natural resources conservation depend upon multiple coordinated efforts between science, politics and citizens.

Skill Set: -Data base management -GIS -research methods -biology lab -very good writing skills

The impact of my career experience: I am definitely going to pursue a graduate degree in agricultural sciences, especially related to agroecology. My future jobs will be all related to the design of innovative food safety and food security programs throughout the world. I know that I can apply my skills on social sciences and environmental sciences all together in jobs that involve having multidisciplinary background, such as government or international aid agencies.

Name: **Luis Garbinski**
Hometown: **Miami, Florida**
Institution: **Florida International University**
Campus: **Modesto A. Maidique**
Rank: **Sophomore**
Major: **Environmental Studies**
Expected date of graduation: **Spring 2016**
Degree: **BS**
USDA Agency of interest: **Agricultural Research Service ARS, Natural Resources Conservation Service NRCS, US Forest Service USFS**
Email: **ldgarbinski@hotmail.com**

Career experience/location: I had a summer 2013 internship at ARS Subtropical Horticulture Research Station (SHRS) located in Miami, Florida.

Description of career experience (what I learned): I learned the basics of field work and maintenance, especially regarding mango cultivars and physical characteristics. Also worked in a curatorial lab where fruit from different mango cultivars were analyzed and measured.

What is your perception of agriculture now: I believe that agriculture (even more so when it is organic agriculture) is the combination of effort, love and dedication of the farmer towards his crop and the agricultural innovations that come from scientists such as geneticists, which can increase yields.

How has this career experience broadened your employment opportunities: This internship specifically has given me beginners experience working within not only a USDA agency, but in the field of agriculture. It has also allowed me to network with people who have been working with the USDA for many years.

Career and research aspirations: My current research is in a laboratory setting working with chemical components of fertilizer which can be harmful; I see that my career path leads me to working in a similar environment, where I have learned more extensively how to work in a lab and have all the safety and preparation certificates that allow me to do research unsupervised.

Skill Set: -Chemistry laboratory and basic equipment experience -computer software experience -multilingual
-ability to do manual labor and field work

The impact of my career experience: This experience at the ARS-SHRS was the beginning of my career in the sense that it has set me on the right track towards future career experiences (other internships with the USDA) and possibly employment within the USDA. It also has allowed me to create and then focus my goals and objectives; as an undergraduate college student, before this opportunity I was undecided about a specific career path, now I can safely say that I found the career path that I feel is economically viable and also allows me to do something I am fond of.



I believe that agriculture (even more so when it is organic agriculture) is the combination of effort, love and dedication of the farmer towards his crop and the agricultural innovations that come from scientists such as geneticists, which can increase yields.

Name: **Randy Juste**
Hometown: **Miami, Florida**
Institution: **Florida International University**
Campus: **MMC**
Rank: **Junior**
Major: **Chemistry**
Expected date
of graduation: **May 2016**
Degree: **Bachelor**
USDA Agency
of interest: **USDA, ARS**
Email: **rjust005@fiu.edu**

Career experience/location: I was involved in an internship at the USDA/ARS Subtropical Horticulture Research station in Coral Gables, Florida. The duration of my internship was 12 weeks long.

Description of career experience (what I learned): During this internship I gained hands-on experience in using a gas chromatograph as a means of separating and analyzing vaporizable plant matter, maintaining a folder and keeping precise records. I learned what is like to work in a lab, follow protocol, and effectively communicate information.

What is your perception of agriculture now: That aside from food production agriculture also includes animal and pest management, plant protection and quarantine, research, and even resources in federal and political sectors.

How has this career experience broadened your employment opportunities: It has broadened the scope of reach of my bachelor's degree, offering a plethora of networking and job opportunities, in addition to the vast potential of focus for continued education.

Career and research aspirations: In five years, I see myself continuing my education, in a health profession, getting ready to leave graduate school. After that, I will most likely end up working in a hospital in a low income community.

Skill Set: -Computer skills -communication and social skills -precision in chemical handling and reagent measurements

The impact of my career experience: In the long run, this experience has encouraged me to finish my degree and to continue on and receive a graduate school education in the field of medicine, because great deals of the illnesses that plague our country today are the result of the food choices that we make. I am also considering pursuing a career in research, whether that is a master's degree or a PhD. I would be interested in studying in the field of chemical toxicology.



That aside from food production agriculture also includes animal and pest management, plant protection and quarantine, research, and even resources in federal and political sectors.

Name: **David Laws**
Hometown: **Pembroke Pines, Florida**
Institution: **Florida International University**
Campus: **Modesto Maidique**
Rank: **Senior**
Major: **Environmental Studies**
Expected date
of graduation: **2014**
Degree: **Bachelor's of Arts**
USDA Agency
of interest: **NRCS**
Email: **davidplaws@gmail.com**

Career experience/location: Nursery Manager, Verde Gardens-Homestead Florida. Garden manager, FIU Organic Garden - Miami, Florida.

Description of career experience (what I learned): Nursery best practices, organic best practices, integrated pest management, permaculture.

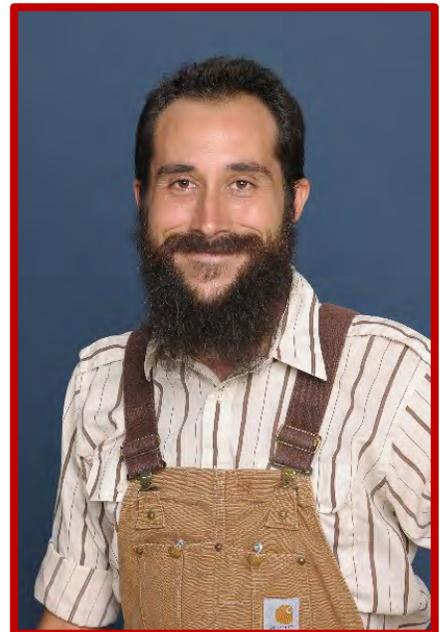
What is your perception of agriculture now: I see the potential for decentralized regenerative farms to heal our broken food system and fractured landscape.

How has this career experience broadened your employment opportunities: This experience has prepared me to step into a farm manager role and begin my own farm.

Career and research aspirations: In organic agriculture I've found my life's calling and plan to refine my farming skills far into the foreseeable future.

Skill Set: -Organic agriculture -permaculture design -nursery work -edible landscaping -agroforestry -integrated pest management -environmental education

The impact of my career experience: Through this experience I've secured a farm management position at the five acre Treehugger Organic Farms in Davie, Florida. The farm is well on its way to becoming a successful CSA, farmers' market, and educational/social center.



I see the potential for decentralized regenerative farms to heal our broken food system and fractured landscape.

Name: **Joshua Munoz**
Hometown: **Miami, Florida**
Institution: **Florida International University**
Campus: **Modesto Maidique Campus**
Rank: **Sophomore**
Major: **Environmental Studies, BS**
Expected date of graduation: **May 2016**
Degree: **Bachelor**
USDA Agency of interest: **Natural Resources Conservation Service NRCS**
Email: **jmuno065@fiu.edu**

Career experience/location: I am currently interning at LNB Farms in Homestead, Florida as a student and researcher of Vermiculture Systems Design and Organic Fruit Tree Management.

Description of career experience (what I learned): This career experience has offered me the unique and challenging experience to successfully design a large Vermiculture System for a fruit tree farm with onsite resources which led to efficient improvisation and creativity. I have had the opportunity to make connections with farmers and specialists that share my common goals and interests.



What is your perception of agriculture now: Agriculture is the central pillar of society and systems as it is the most important activity we partake-eating, a title that few other pillars can claim.

How has this career experience broadened your employment opportunities: This has opened the doors to the field of Vermiculture which is relatively new and is increasingly growing in demand as farmers and entrepreneurs realize the value of vermicomposting. I believe this experience will demonstrate that I am ready for the quickly changing field of Agriculture.

Career and research aspirations: My career aspirations include running a Community Supported Agriculture farm, designing food forest landscapes, empowering communities with size-efficient gardens, and entering academia as an updated professor in Agriculture. My research aspirations include tropical systems composting, tropical agroforestry for small farms, vermiculture methods, soil conservation and regeneration of soil microbial life.

Skill Set: -Permaculture Design Certified -native fluency in Spanish and English -compost management -public speaking -proficient writer

The impact of my career experience: My career experience has inspired me to pursue research in decomposition and vermicomposting methods which are very important to maintain soil fertility without the need for chemical inputs. This affects my line of research towards practical applications, engages me in a quickly growing field of decomposition processes, and allows for a better application of said systems in the management of any farm, CSA, or place of employment. In 5 years I can now see myself working for the Natural Resources Conservation Service in any of their many engaging sections. In 10 years I see myself running a farm and empowering incoming farmers to farm in a closed-loop system without the need for chemical inputs through proper management of natural resources. The long-term aspiration is for the idea and availability of vermiculture techniques to be far and wide.

Agriculture is the central pillar of society and systems as it is the most important activity we partake-eating, a title that few other pillars can claim.

Name: **Mariah Redmond**
Hometown: **Miami, Florida**
Institution: **Florida International University**
Campus: **Modesto A. Maidique**
Rank: **Junior**
Major: **Chemistry**
Expected date
of graduation: **Summer 2015**
Degree: **Bachelors**
USDA Agency
of interest:
Email: **rredm005@fiu.edu**

Career experience/location: Currently, I am serving Urban Paradise Guild as an intern and team leader. I work with UPG building gardens and serving various communities in Miami.

Description of career experience (what I learned): The FCCAgE program has turned my love for nature into hands-on career development. My advisors work closely with me to find lab projects relevant to my personal interests, such as chemistry and ethnobotany. I am also engaged in gardening projects learning to grow vegetables and herbs has been exciting and rewarding.

What is your perception of agriculture now: The US faces a severe and multifaceted crisis, but the socio-economic impacts of sustainable agriculture gleam brightly with abundant hope.



How has this career experience broadened employment opportunities: Being an FCCAgE scholar incites my passion and gives me focus. Although new, I have already begun lab trainings and an internship. My lab skills and fieldwork will be of utmost importance to future employers. My advisors push me to hone my skills which will propel me into the work force.

Career and research aspirations: My current research interests include ethnobotany and vermicomposting. Ethnobotany allows one to explore the relationships between plants and people. This is exciting to me because the field is as broad as it is beautiful; we all have a relationship with plants. I also like to study worms and employ new vermicomposting techniques with Urban Paradise Guild. When I work with earthworms, I feel like I am channeling the great generalist Charles Darwin. In my postgraduate future, I will find an environment that nurtures my scientific and environmental curiosity. I would love to work for the USDA or even live on a WWOOF farm in Ecuador and explore the Galápagos Islands (à la Darwin)

Skill Set: -Identifying & removing exotic plant species -large-scale composting -organic chemistry laboratory techniques -nonprofit volunteer recruiting

The impact of my career experience: The career experience afforded to me by the FCCAgE program is unparalleled. It has a profound impact on my future by helping me become someone who can make an impact. Because the program aligns with my academic goals, my focus stays sharp and I am more determined to succeed in my classes. I am encouraged and trained to see through an agroecological perspective (even in classes that seem irrelevant). Organic chemistry comes to life when shadowing a graduate researcher who studies pharmacologically active xanthanoids in mangoes. PowerPoint slides from Ecology of South Florida flash through my mind as I remove invasive Burma reed from Oleta River State Park. When I swing the heavy pickaxe, my classroom training transforms into tangible environmental change. I am being trained to be a steward of the land—OUR land—who can easily flow from the laboratory to the field.

The US faces a severe and multifaceted crisis, but the socio-economic impacts of sustainable agriculture gleam brightly with abundant hope.

Name: **Cristina Urbina**
Hometown: **Miami, Florida**
Institution: **Florida International University**
Campus: **Modesto Madique**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **May 2014**
Degree: **Bachelor's of Science**
USDA Agency
of Interest: **ARS, APHIS, NRCS, NIFA**
Email Address: **aurbi014@fiu.edu, ac.urbina10@gmail.com**

Career experience/location: I have been an intern with the USDA ARS in Miami, Florida.

Description of career experience (what I learned): Tropical Fruits, sugar cane for biofuels, germination trials and propagation techniques for a variety of tropical fruits, analysis of reproductive cycles on mango trees (flowering and fruiting seasons), analysis of effectiveness of fungicide on avocado trees as treatment for laurel wilt disease.

What is your perception of agriculture now: Tropical Fruit research is very important for food security.

How has this career experience broadened your employment opportunities: The career experience at the USDA ARS station was so successful that I was offered a position as a research technician. I plan to continue my PhD work with this station in order to continue my research and receive a full position in the future.

Career and research aspirations: This research experience helped me to achieve my first publication with USDA researchers, which will be very useful for my short term and long term research goals.

Skill Set: -Use lab equipment -plant identification -data entry -experience in collecting, harvesting, and labeling plant material samples on preparation for experimental analysis -proficient with scientific data entry, strong documentation and communication skills -bilingual -highly motivated -results oriented individual -excel in teamwork and critical thinking with advanced skills in organization -multi-tasking -internet research -administration - customer service -well-disciplined with proven ability to manage multiple assignments and timely reporting to project teams -excellent interpersonal and team-player skills

The impact of my career experience: As a result of the career experiences I have had thus far, I know that I want to continue to develop my academic and research skills by pursuing a graduate degree. I would love to go to grad school to pursue a degree in Biodiversity Conservation and Management, Forest Resources and Conservation or Environmental Horticulture. Also, I want to learn about plant pathology and entomology, as a way to complement my education.



The career experience at the USDA ARS station was so successful that I was offered a position as a research technician. I plan to continue my PhD work with this station in order to continue my research and receive a full position in the future.

Name: **Daniella Vargas**
Hometown: **Flushing, New York**
Institution: **Florida International University**
Campus: **Modesto Madique**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **May 2014**
Degree: **Bachelor's of Science**
USDA Agency
of interest: **US Forest Service USFS**
Email: **Daniella.vargas11@gmail.com**

Career experience/location: I have been an intern with the USDA Forest Service in Yampa, Colorado, and USDA ARS in Prosser, Washington.

Description of career experience (what I learned): With the Forest service I was certified as a wildland firefighter, CPR certified, and learned a great deal about Rocky mountain ecology. With the ARS I learned PCR, virus extraction, and purification, grafting techniques, inoculations, greenhouse care for potatoes, and potato market varieties.

What is your perception of agriculture now: Agriculture is the greatest challenge our society faces going forward, in terms of the changes we need to make to have a more sustainable system that conserves biodiversity, and does not deplete our resources.

How has this career experience broadened your employment opportunities: These opportunities have opened the doors for a career agricultural research and/or ecosystem management. I believe the skills set gained from both experiences will lead to a career that ties both of these aspects of agriculture.

Career and research aspirations: As I currently prepare to graduate, I plan to continue my studies at the graduate level and hope to eventually receive a PhD in the field of soils research, or something closely related. In the meantime, I'm assisting in a research lab in which my project is to determine the genetic difference between populations of a flower endemic to the Florida panhandle.

Skill Set: -Wildland firefighter -CPR certified -trails operations - campground care -grafting -molecular laboratory techniques - Microsoft Office -Adobe Photoshop -bilingual (Spanish) -organic gardening techniques

The impact of my career experience: As a result of the career experiences I have had thus far, I know that I want to continue to develop my academic and research skills by pursuing a graduate degree. I would like to enter a program that emphasizes sustainable and organic agriculture, in which I can focus on soil biology and conservation. With this knowledge I hope to find a job in either ecosystem management/restoration, or in a local public agency where I can be of service to small farmers.



Agriculture is the greatest challenge our society faces going forward, in terms of the changes we need to make to have a more sustainable system that conserves biodiversity, and does not deplete our resources.

Name: **Melanie Vasquez-Parrado**
Hometown: **Miami Beach, Florida**
Institution: **Florida International University**
Campus: **Modesto Maidique**
Rank: **Senior**
Major: **BS Environmental Studies**
Expected date
of graduation: **August 2014**
Degree: **Bachelor of Science**
USDA Agency
of interest: **Agricultural Research Service ARS, US Forest Service USFS, Wildlife Services**
Email: **Mvasq031@fiu.edu**

Career experience/location: During my time in the Agroecology Program, I was fortunate enough to become a summer intern at the Subtropical Horticulture Research Station as a part of the USDA-ARS agency located in Pinecrest, Florida.

Description of career experience (what I learned): While interning at the ARS, I worked in a variety of projects which included work such as phenotypic data collection of mango cultivars in the Curatorial Lab, to venturing out into the field, where species collections took place.

What is your perception of agriculture now: Prior to entering the program, my knowledge of agriculture was minimal. After being exposed to the science of sustainable agriculture, I learned not only of its evident importance, but have learned how to apply these concepts to related sciences, which are relevant to my interests such as biodiversity conservation and ecological biology.

How has this career experience broadened your employment opportunities: Without the assistance of the program and its coordinators, the experience I've gained thus far would not have been possible. The conferences, extracurricular activities, professional development workshops, and internships have granted us the experience needed to further our education and thrive as upcoming professionals.

Career and research aspirations: I am currently working towards my Bachelors degree in Environmental Studies where I expect to graduate following the Summer Term of 2014. In the next five years, I see myself with a Master's Degree; I aspire to further my education in a science related field. I have high hopes for the future, I look forward to work in a field where I cannot only share my knowledge, but to apply those acquired skills to enhance future environmental conditions. As a traveler, I am always open to gaining knowledge that can serve for a more sustainable future worldwide. I have turned my love for the environment into a career fit for me.

After being exposed to the science of sustainable agriculture, I learned not only of its evident importance, but have learned how to apply these concepts to related sciences, which are relevant to my interests such as biodiversity conservation and ecological biology.

Skill Set: -Computer skills -data management organizational skills -phenotypic data collection -laboratory experience -lab tools -communication



Name: **Rosario Vidales**
Hometown: **Homestead, Florida**
Institution: **Florida International University**
Campus: **Modesto A. Maidique Campus**
Rank: **Junior**
Major: **Environmental Studies**
Expected date
of graduation: **December 2014**
Degree: **Bachelor of Science**
USDA Agency
of interest: **ARS, APHIS, USFS**
Email: **rvida018@fiu.edu**

Career experience/location: Internships in entomology research with the USDA-APHIS-PPQ-Plant Inspection Station in Miami, Florida, and the USDA-ARS Beltsville Agricultural Research Center in Beltsville, Maryland.

Description of career experience (what I learned): Through my experience, I learned insect collection and sorting methods, insect pinning, insect dissections, non-destructive insect DNA extractions for gene barcoding purposes, high magnification microscope insect photography and Helicon and Zen depth of focus image software. This responsibility in hands-on work increased my interest in entomology and its importance.

What is your perception of agriculture now: At a young age, I concluded that agriculture is one of the most important fields; now I feel experienced enough to make it my career.

How has this career experience broadened your employment opportunities:

My experiences have developed my focus of interest in agriculture, as well as my interests in plants, insects, and research. I believe these experiences will broaden my career opportunities to working with the USDA.

Career and research aspirations: My current career aspirations include working with the USDA in an entomology or plant-insect interaction related field. In 5 years I hope to have successfully advanced in my graduate education, and gained further work experience in a lab setting. In 10 years I hope to be part of a research team under the USDA, perhaps including some traveling.

Skill Set: -Computer skills -insect DNA extraction -microscope photography -bilingual -gardening -vacuum -insect collection -insect dissection -depth of focus -software skills -data collection -plant pollinator observations -leadership -stereomicroscope skills -dissecting microscope -phase microscope -insect photography -organic farming -photography -composting -data spreadsheet skills -agroecology



At a young age, I concluded that agriculture is one of the most important fields; now I feel experienced enough to make it my career.

The impact of my career experience: Starting with my experience working with the USDA-ARS as a high-school intern under the USDA Junior Agricultural Ambassador Program, having experience in the agriculture research field has opened many doors for me in terms of scholarships and, now, further research opportunities with the FCCAgE program. Under the FCCAgE scholarship, I have had additional in-state and out-of-state internship experiences with the USDA-APHIS-Plant Protection and Quarantine, and USDA Agricultural Research Service that have helped me find my career interests, definitely increasing my interest in working on a career in research. My career goals have helpfully been shaped through the opportunities and support I have had throughout my undergraduate career experience, and I believe having these previous experiences on my resume will aid me in obtaining employment in the future.

FCCAgE - Florida International University Graduate Students

Name: **Christopher Lucas Estevez**
Hometown: **Miami, Florida**
Institution: **Florida International University**
Campus: **MMC**
Rank: **Masters**
Major: **Environmental Studies**
Expected date
of graduation: **May 2015**
Degree: **Masters of Science**
USDA Agency
of interest: **ERS, NRCS, FSA**
Email: **ceste008@fiu.edu**

Career experience/location: I have recently attended the 2013 Everglades Food Summit in Miami, Florida in order to understand relevant community issues pertaining to my research.

Description of career experience (what I learned): I have been analyzing statistics reported from the USDA and census bureau which are currently helping to shape my understanding of local food security in Miami-Dade County.

What is your perception of agriculture now: It has been my experience that policymakers and scientists have difficulty communicating with one another. Scientists are focused on the micro-level questions, while policymakers are focused on macro-level issues. The need to make scientific research relevant and impactful has motivated me to study subjects that involve both perspectives; macro-level economics and international relations as well as micro-environmental sciences

How has this career experience broadened your employment opportunities I am pursuing my master's degree in Environmental Science in order to expand my understanding of the science and the environment. I hope that my time at FIU will allow me to better the science behind formulate policy at both the national and local level.

Career and research aspirations: My career goals are to work in the formulation of policy as it relates to agriculture, the environment and economics. This requires an interdisciplinary understanding of the issues as well as an understanding of politics and policy making.

Skill Set: Research -legal research -Spanish
-policy analysis -grant writing -Microsoft Office

The impact of my career experience: My experiences have provided me the opportunity to engage in graduate research studies concerning agriculture and our local community. I am currently in the process of conducting an economic analysis of local food security in Miami, Florida.



It has been my experience that policymakers and scientists have difficulty communicating with one another. Scientists are focused on the micro-level questions, while policymakers are focused on macro-level issues. The need to make scientific research relevant and impactful has motivated me to study subjects that involve both perspectives; macro-level economics and international relations as well as micro-environmental sciences

Name: **Miles Medina**
Hometown: **Miami, Florida**
Institution: **Florida International University**
Campus: **Modesto Maidique**
Rank: **Graduate**
Major: **Environmental Studies**
Expected date
of graduation: **April 2014**
Degree: **Master of Environmental Studies**
USDA Agency
of interest: **ARS**
Email: **mmedi066@fiu.edu**

Career experience/location: Tropical Agricultural Research and Higher Education Center (CATIE), Costa Rica.

Description of career experience (what I learned): We attended lectures by CATIE researchers who discussed conservation efforts and land-use issues in CR, biological corridors, and tropical fruit research. Visits to smallholder organic farms and conservation areas illustrated relevant concepts and provided exposure to indigenous knowledge and local organic and conservation methods.



What is your perception of agriculture now: I came back with a renewed sense that sustainability issues and a love for the land need more emphasis in today's agriculture.

How has this career experience broadened your employment opportunities: I was exposed to new issues and areas of research and became interested in the PhD program at CATIE. These include agroforestry and tropical ecology.

Career and research aspirations: My aspirations are entrepreneurial. I want to develop a closed-loop urban farm—a model that integrates with the city and its ecosystem services. Profitability is important to incentivize others to do the same in other cities. In 5 years, I would like to have opened such an operation, and in 10 years I would like for it to have become established.

Skill Set: -Composting -aquaponic cultivation -urban gardening -organic farming -horticulture -basic construction -graphic design -problem solving -critical thinking -computer skills -spectroscopy -general lab work -data analysis

The impact of my career experience: The experience renewed my belief in the need to work toward transitioning agriculture to a more sustainable model that considers ecological limits, natural resource conservation, social responsibility and equity, and food security in addition to the bottom line. The contrast in attitudes and methods between organic farms and farmers on the one hand, and the large-scale industrial banana plantation on the other, underscored the importance of respect and love for the land. The heartfelt passion and commitment of the organic farmers we met was inspiring. I was given a great deal of optimism from learning about the success of conservation and reforestation efforts over the past few decades. To see small groups of people successfully leverage their limited resources to achieve their goals reassured me that I could do the same. While I have been focusing on urban agriculture in my graduate studies, the experience gave me a new appreciation for tropical ecology, agroforestry, and reforestation efforts. I find sustainability issues in both urban and forest agriculture of great importance, and I hope that I will have opportunities in the future to work on both of these.

The experience renewed my belief in the need to work toward transitioning agriculture to a more sustainable model that considers ecological limits, natural resource conservation, social responsibility and equity, and food security in addition to the bottom line.

FCCAgE - Florida International University Graduated Students

Name: **Carmen Rodriguez**
Hometown: **Miami, Florida**
Institution: **Florida International University**
Campus: **South Campus**
Rank:
Major: **Environmental Studies**
Expected date of graduation: **Graduated August 2013**
Degree: **Bachelor's Art**
USDA Agency of interest: **US Forest Service USFS**
Email: **Crodr042@fiu.edu**

Career experience/location: My career experience includes Inter-American Institute for cooperation on Agriculture (IICA) in San Jose, Costa Rica, and Costa Farms in Homestead Florida.

Description of career experience (what I learned): With IICA, I developed an online course, which taught me how to use software, create a lesson plan, and become a leader overall. In the Case of Costa Farms, I have gained so much knowledge in the ornamental plants field.

What is your perception of agriculture now: Agriculture now has become of larger scale, leading to the decrease of small family farms. I think Agriculture today has the potential to improve and function in a way that is beneficial to the environment.

How has this career experience broadened your employment opportunities: I was hired at Costa Farm in part, for the experience I had with IICA in Costa Rica. The vendor's I handle in my current job position are those from Costa Rica. Additionally, I now have experience in education and web course development

Career and research aspirations:? In the near future, I hope to complete my Master's degree, which will help me to excel in the work force. In 5 years I see myself as a PhD student with a USDA fellowship, working on sustainable agriculture.

Skill Set: -Computer skills -data base management
-surveyor -tropical tree identification -tree canopy survey
-web course developer -Agroforestry tutor -customer service
-leadership skills -plant production and management



Agriculture now has become of larger scale, leading to the decrease of small family farms. I think Agriculture today has the potential to improve and function in a way that is beneficial to the environment.

The impact of my career experience: My career experience with IICA has opened many doors for me. The first opportunity it created was the chance to become the professor for the course I developed, when it was launched live internationally in November 4, 2013. Additionally, it has provided with knowledge of the Agriculture field in Central and Latin America, as I foresee myself working internationally.

Current vocation after graduation: Administrative assistant at Costa Farms, tutor for international course, and pursuing graduate studies in Costa Rica.

Name: **Luke Thema**
Hometown: **Nokomis, Florida**
Institution: **Florida International University**
Degree: **Bachelor in Environmental Studies**
USDA agency
of interest: **US Forest Service USFS**
Email address: **lthem001@fiu.edu**

Career and Research Aspirations: My career aspirations are to work for the US Forest Service as a park ranger or wildness technician. I feel that my passion for the environment and ability to work in harsh and/or physically challenging environments allows for me to be a perfect candidate for these positions.

Skill Set: -Leadership -hard work -devotion -education

Research topic: Education plays a pivotal role in any type of research and is much lauded for its ability to provide critical thinking and execution. As I became more educated on various topics surrounding the environment my interests started to become more narrowly defined. It is for this reason that I gain an interest in the production of biofuel. The word “biofuel” is a broadly defined word, but for the purpose of my research it pertained to liquid biofuel and more specifically biodiesel. Since my main interest regarding the environment is conservation, I set out to create biodiesel in the most sustainable manner, while simultaneously thinking about conservation. With this in mind I decided to conduct research on biodiesel production using waste vegetable oil (WVO) as my primary feedstock. My research set out to obfuscate the many benefits of using WVO, with the long-term goal of implementing campus made biodiesel at Florida International University. Although implementation is key to sustainability, my research did not stop at production. I started to research the effects of methanol on free fatty acids (FFAs) during an acid esterification, due to the ability of FFAs to hinder biodiesel yield. This research conducted and was presented at the 2013 National Biodiesel Conference in Las Vegas, Nevada.



My career aspirations are to work for the US Forest Service as a park ranger or wildness technician. I feel that my passion for the environment and ability to work in harsh and/or physically challenging environments allows for me to be a perfect candidate for these positions.

Current vocation after graduation: Science teacher

FCCAgE - Florida International University Student Who Has Left the Program _____

Name: **Jose Manuel Martinez**
Hometown: **Miami, Florida**
Institution: **Florida International University**
Campus: **Modesto Maidique**
Rank: **Freshman**
Major: **Environmental Studies**
Expected date of graduation: **2017**
Degree: **Bachelor**
USDA Agency of interest: **Agronomy**
Email: **Jmart589@fiu.edu**



Career experience/location: I did research on what are the optimal growth conditions for Coconut palms, Alexander Palms, Queen Palms, and Chinese Fan Palms with agronomist Dr. Stewart Reed. USDA-ARS, 13601 Old Cutler Road Miami, Florida 33158.

Description of career experience (what I learned): I learned how to perform a chlorophyll fluorescence test on my palms and withdrew the same information from that test from my palms using a weather station. I learned how to make field notes and that not every note is a useful note. I learned how to gather all my data put it in the computer and create graphs and make sense of my data in words. I learned safety regulations used in the lab and how to use a PCP machine.

What is your perception of agriculture now: Before the internship I had a large respect for the environment and I wanted to feed the human population high quality food, great tasting, and healthy food and preserve the environment. After the internship I still feel the same way, but now I have some more knowledge to fulfill my goals.

How has this career experience broadened your employment opportunities: Putting that I have done volunteer work for the USDA-ARS for a year and learned so much from them has boosted my resume and impressed employers.

Career and research aspirations: Currently I volunteer at a vegetable farm called Teena's Pride Monday through Wednesday from 8:30 am until 2:30 pm. They teach me about hydroponics, working in a greenhouse, working in the field, and how to run a farm. I'm also working on constructing a humidity chamber for tomato grafting's with UF Professor Monica Ozores-Hampton at Teena's Pride. I also work a landscaping job and work with a florist selling and decorating high quality orchids by the bulk. I aspire to obtain an associates in Horticulture from Miami-Dade College. After I have my degree I will find a job working with an organic farm and volunteer for TreeHunger farms which is run by David Laws. Eventually I want to work for Mr. Laws because I love his agroforestry method of growing food. Once I have enough money and knowledge, I will have my own organic farm or agroforestry farm.

Before the internship I had a large respect for the environment and I wanted to feed the human population high quality food, great tasting, healthy food and preserve the environment. After the internship I still feel the same way, but now I have some more knowledge to fulfill my goals.

Skill Set: -Bilingual (Spanish and English) -Certified Horticulture Professional -Best Management Practices Florida Green Industries -easy communication with others -the need and want to help others -continuing a task until I see it through no matter how strenuous -proficient in Microsoft Word, PowerPoint and Excel -organized -patience

The impact of my career experience: This experience showed me how many internship and volunteer work opportunities there are and it allowed me to add more to my resume and knowledge.

FCCAgE - Inter-American University of Puerto Rico Undergraduate Students _____

Name: **Christian A. Millán Hernández**
Hometown: **San Germán**
Institution: **Inter-American University of Puerto Rico**
Campus: **San Germán**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **May 2014**
Degree: **Bachelor**
USDA Agency
of interest: **Agriculture Research Service ARS, USFS**
Email: **c_millan.01@hotmail.com**



Career experience/location: Fort Johnson Summer Research Fellowship Program, College of Charleston, Charleston, South Carolina.

Description of career experience (what I learned): During my research I gained experience using the spectrophotometer and the tonometry technique, making dilutions and solutions, research animal care, taking hemolymph samples from crabs, and worked with SigmaPlot v. 11.0. I also developed skills for communicating science and scientific writing.

What is your perception of agriculture now: Agriculture is the key to human success, it not only provides us with food, but it ensures future success for next generations.

How has this career experience broadened your employment opportunities: This experience helped me to proof my work ethics and commitment, and to push my limits. The experience served me to determine that I would like to pursue a career in possibly in physiology research.

Career and research aspirations: My biggest short-term goal is to graduate from my bachelor's degree. My next plan is to go to graduate school. First I would like to do a master's degree and specialize in animal or insect physiology. After this, I would like to pursue a PhD title in the same area. After my studies I would like to be a fulltime researcher or a research/professor.

Agriculture is the key to human success, it not only provides us with food, but it ensures future success for next generations.

Skill Set: -Computer skills in application programs
-lab and field studies skills in Ecology, Entomology, Microbiology, Chemistry, Biology, Zoology, Botany, Physiology, Biochemistry -bilingual: Spanish, English
-teamworker -leader -organized -critical thinker -math skills

The impact of my career experience: The past summer internship provided me the opportunity to do an independent research based on the physiological responses of marine organisms to environmental change. My research aimed to explain the effects of environmental hypoxia and elevated carbon dioxide on the hemocyanin binding properties of the Atlantic mud crab, *Panopeus herbstii*. This experience was very valuable to me because it serve me as a preparatory for graduate school, I was able to go through the pressure, at least to some degree, of a graduate student and a researcher; working hard on a tight schedule. During the internship I was able to make my project proposal and at the end write a full manuscript. This would not have been possible without the guidance of my mentor and workshops we were provided. Some of these workshops were focused on professional development, but the major part of them centralized on guidance for scientific writing and on developing skills for communicating science. As part of the latter, we did public display that will be rotated between different centers for environmental education showing the different areas of research of the interns. This career experience serves me to stand out as an undergraduate student and learn new techniques, but the most important lesson was that I was able to develop more confidence in myself and to have lots of patience.

Name: **Jonhsua Acosta Justiniano**
Hometown: **Puerto Rico**
Institution: **Inter-American University**
Campus: **San German**
Rank: **Sophomore**
Major: **Biology**
Expected date
of graduation: **May 2016**
Degree: **Bachelor**
USDA Agency
of interest: **APHIS, TARS, NRCS, NPDN**
Email: **jonhsua.acosta@hotmail.com**



Description of career experience (what I learned): As experience I have worked in the farm (home) of Mr. Hector Perez. There I developed certain capabilities in accordance with good management of various responsibilities such as: farming, aviculture (hens), citrus trees (crops) , ornamental plants (crops and decorations) herbicides (weeds), insecticides (insects) and fungicides (fungus). As another experience I am currently doing an undergraduate research in the Ronald E. McNair Post Baccalaureate Achievement Program and Ms. Barbara Sanchez MS as my mentor. During this research I have been able to perform certain tasks such as: different searches in academic pages on internet, books, articles and thesis. It has been of great academic achievement for me because I've able to compile, analyze, compare, understand and interpret all the information obtained for the (proposal and presentations) of 'Mac Nair' with the purpose of being able to do my research work to provide educational teaching about native species in Maricao (place of study), Puerto Rico. Also collaborate with other government agencies like Fisher Wild Service and the Department of Natural Resources and Environmental, in other types of issues related to species threatened or endangered of extinction.

What is your perception of agriculture now: Before I join the USDA program I have some information on agriculture because I always have been interest in the agronomy field. I have always been informed of certain resources, managements of (fungi, insects, pathogens and viruses), techniques (home remedies) and crops with different ornamental plants and citrus. Since the moment I joined the USDA program, my knowledge has been enhanced by NPDN certificates, community hours (farm) research program (Mac Nair) and botany class.

How has this career experience broadened your employment opportunities: These experiences have increased my opportunities because I have acquired more knowledge and skills in my area of interest for my professional development.

Career and research aspirations: My aspirations are to complete my studies in Biology with two minors in Environmental Technology and Chemistry. The USDA program gives me knowledge and experience that in the future allows me to continue my graduate studies at the University of Puerto Rico, Mayaguez, campus in agronomy and be later the owner of a farm with large crops and livestock.

Before I join the USDA program I have some information on agriculture because I always have been interest in the agronomy field. Since the moment I joined the USDA program, my knowledge has been enhanced by NPDN certificates, community hours (farm) research program (Mac Nair) and botany class.

Skill Set: -Computer management: -Microsoft Office and its applications -ability to work with people and develop educational workshops -able to work as a team member (excellent interpersonal relationship) -leader -dynamic -responsible and skilled at following directions

The impact of my career experience: The impact of my professional career affect my future education as it shows a great contribution (important) for Puerto Rican education and elsewhere. It is of great economic contribution to agriculture and medicine according to educational research that has been made and can be made in the future

Name: **Leishnaly M. Santiago Negrón**
Hometown: **Sabana Grande, Puerto Rico**
Institution: **Inter-American University of Puerto Rico**
Campus: **San German**
Rank:
Major: **Biology**
Expected date of graduation: **May 2015**
Degree: **Bachelor of Science**
USDA Agency of interest: **Food and Nutrition Services FNS, Food Safety and Inspection Service FSIS**
Email: **leishnalym@gmail.com**

Career experience/location: Veterinary Services Summer Internship, throughout the South and West area of Puerto Rico.

Description of career experience (what I learned): This internship gave me the opportunity to work with professionals in the area of veterinary science and working with animals, such as pigs, cows, goats and rabbits. I learned to operate the equipment for swine bleeding and conduct inspections at various farms.

What is your perception of agriculture now: The agriculture today is not being valued as it should be.

How has this career experience broadened your employment opportunities: This internship gave me the opportunity to interact and network, with professionals and it extended my knowledge and skills. In addition, this experience gave strength to my resume.

Career and research aspirations: At the moment I have not done any research, but I'm interested to do it in the area of food microbiology. From here in five years I envision myself working on some of my interest agencies or independently as a nutritionist.

Skill Set: -Knowledge in application programs: Microsoft Word, Excel & PowerPoint - calculate biodiversity
-knowledge at swine bleeding and animal diseases -excellent attention and concentration skills -able to work under pressure -organized -responsible -leader -trustworthy

The impact of my career experience: This internship experience helped me to grow professionally and personally. As we gain professional experience, we find it easier to deal with any job. Although the area of veterinary medicine does not have as much to do with my long-term goals, the development I had with the agency was unmatched. Today, jobs and graduate schools, focus more on the area of experience, more than in the GPA rank, to recruit their employees or students.



This internship gave me the opportunity to interact and network, with professionals and it extended my knowledge and skills. In addition, this experience gave strength to my resume.

Name: **Jiomar Santiago-Feliciano**
Hometown: **Las Marías, Puerto Rico**
Institution: **Inter-American University of PR**
Campus: **San Germán**
Rank: **Junior**
Major: **Chemistry**
Expected date of graduation: **May 2015**
Degree: **Bachelor in Chemistry and Minor in Biology**
USDA Agency of interest: **Agricultural Research Station ARS**
Email: **jiomars@gmail.com**

Career experience/location: I worked for Iowa State University (2012) in the Animal Science Department with Management of Poultry Production also for the PR's Zoo in greenhouses (2013).

Description of career experience (what I learned): I learned about different techniques in laboratories, also how to write a research paper and how to prepare a poster. Also I made an oral presentation in a symposium which helped me to keep developing my communication skills in a scientific level.

What is your perception of agriculture now: It is my main goal in any area that I would work in the future, I would always focus my career to our natural resources, food, and fiber.

How has this career experience broadened your employment opportunities: I have now more experience in laboratories, different places that I have visited for educational purposes, I developed the English as second language, and also I have a global vision about agriculture and other careers that will help me to perform better as professional.



Career and research aspirations: By being in laboratories, conferences, and other workshops I have learned about many careers and opportunities. I see myself in five years studying to finish a graduate degree. It could be in science or other field related, never losing my focus on agriculture. In ten years I see myself teaching in a University about my career choice and probably conducting some research with educational and teaching purposes.

Skill Set: -Bilingual -computer management -public speaking skills -laboratory techniques -workshop developer -written research papers -data management -discipline -organize -committed to agriculture

The impact of my career experience: Since I mastered my English communication skills in oral and written, I now have other goals. I would like to continue higher education in the US and explore other opportunities in careers that are not very popular in my country. Also I am evaluating the possibilities of making other internships and apply for scholarships in the US for my graduate degree goal. Now I feel more competitive and ready to face another challenge in my life. I would never lose agriculture as the main focus of my future career, now I understand better about our natural resources, food, fiber, and hard work to produce the field. Now I am not afraid of going to a professional meeting or conference out of my country to present my research in front of an audience. Which for me is very important in order to play a good role when applying for jobs and performing as professional in the different endeavors that we will have.

It is my main goal in any area that I would work in the future, I would always focus my career to our natural resources, food, and fiber.

Name: **Isamar Toro Silva**
Hometown: **Sabana Grande, Puerto Rico**
Institution: **Inter-American University of Puerto Rico**
Campus: **San German**
Rank: **Junior**
Major: **Biology**
Expected date of graduation: **May 2015**
Degree: **Bachelor**
USDA Agency of interest: **APHIS**
Email: **isa_1731@live.com**



Career experience/location: Veterinary Services (USDA-APHIS) Internship Program from June 3, 2013-July 12, 2013 at San German, Puerto Rico.

Description of career experience (what I learned): During the summer I performed task such as swine bleeding, identification of swine's and management of the blood that was being collected for a thesis investigation of *Trichinella spp.* Also I learned the basic concepts of managing a farm such as: assist a bristle in birth and gave medical care to the new born piglets from castrating the new born male, injecting iron in their system, weigh them, mark their ear for future identification and determining what of the females piglets was good enough to be used as future mothers by counting their nipples.

What is your perception of agriculture now: Now more than ever I understand the importance of the agriculture in our world thanks to the opportunity to be actively working and performing tasks related to this field understanding that we cannot survive without agriculture because a major part of the great foods that we consume comes from it.

How has this career experience broadened your employment opportunities: During the summer I learned how important is to protect and improve the animal health and productivity and how important is to enforce the law for the good of us. This opportunity prepared me by providing me identification and analytical skills that every field biologist needs. Finally helping me see the animal production and marketability in another perspective; taking in consideration the veterinary area or animal science.

Career and research aspirations: I hope after graduating from the Inter-American University as a Biologist to continue studying in the field of marine biology or animal health. I see myself working in the USDA as a field biologist investigating animal behavior especially in improvement in productivity.

Skill Set: -Computer skills -microbiological techniques -biostatistics skills -dissection skills and techniques -births assistance -management of farms -identification and analytic skills -first aid skills -veterinary medical assistance -bilingual third language: basic German -able to work under pressure -knowledgeable of animal and their management laws -field preparation -entomology skills -taxonomic identification skills

Now more than ever I understand the importance of the agriculture in our world thanks to the opportunity to be actively working and performing tasks related to this field understanding that we cannot survive without agriculture because a major part of the great foods that we consume comes from it.

The impact of my career experience: This internship taught me that Veterinary Services is a very important agency because thanks to them swine farms are monitored correctly and our national favorite food/animal: the pig is being managed properly. Also this experience gave me the opportunity to work in a council with two universities in the Lamas, Puerto Rico Experimental Station in the swine's area performing different task. In a future I continue considering as always to serve for the good been of animals and nature.

Name: **José G. Rodríguez Valentín**
Hometown: **Cabo Rojo, Puerto Rico**
Institution: **Inter-American University of Puerto Rico**
Campus: **San Germán**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **May 2014**
Degree: **Biology BA**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS, Agriculture Research Service ARS**
Email: **jrvalentin1890@gmail.com**

Career experience/location: Entomology Intern/Fruit fly identification; Animal and Plant Health Inspection Service (APHIS), Carolina, Puerto Rico.

Description of career experience (what I learned): I learned how to identify different plants pathogens. Most of my work focused on Fruit Fly Programs and specimen identification.

What is your perception of agriculture now: Agriculture has a social, physical, economic and environmental impact; that is agriculture for me, everything.

How has this career experience broadened your employment opportunities: This experience is evidence of my suitability, the optional part of my degree. I developed skills that can contribute and be important for my future success. I gained responsibility and excellent opportunity to develop my interpersonal and organizational skills. Skills that graduate recruiters look for and make me more aware of what I want in my future career.

Career and research aspirations: My goal is contribute to the conservation of the environment and natural resources. I think that with the knowledge obtained through my experiences and education I can do it. Gain experiences that benefit my career are my most objectives. I am interesting in genetic, crops, veterinary, virology and molecular biology field.

Skill Set: -Chemical, microbiological, biological laboratory techniques -leadership skills -computer skills -work under pressure -organized -initiative -logical and analytical skills

The impact of my career experience: My academic, summer internship and it experiences has truly shaped my undergraduate career. It boosted my network and greatly enlarged my knowledge about laboratory techniques and team work. In addition, I had the time and was allowed to use the data of the agency to set up a small study about the fruit fly distribution. I learned a number of techniques and analysis that will be useful in my further research career. Working in APHIS was probably the best way to start my experience career. It motivated me to play an active role in the future ecology challenges.

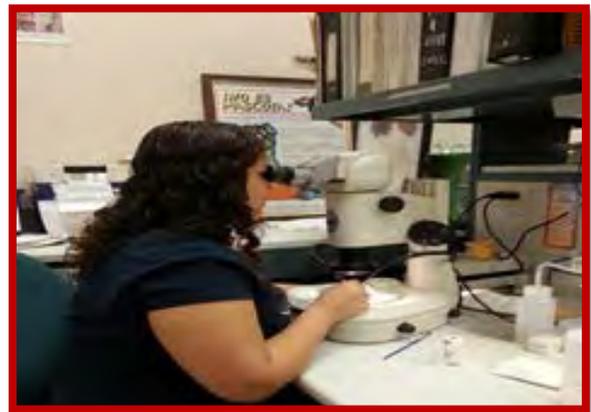


Agriculture has a social, physical, economic and environmental impact; that agriculture is everything for me.

Name: **Jannybeth Vazquez**
Hometown: **Puerto Rico**
Institution: **Inter-American University**
Campus: **San German**
Rank: **Sophomore**
Major: **Biology**
Expected date
of graduation: **May 2016**
Degree: **Bachelor**
USDA Agency
of interest: **USDA TARS**
Email: **jannybeth.vazquez@gmail.com**

Career experience/location: My most recent experience was to have an internship in the summer of 2013 at the agency USDA - APHIS - PPQ in Carolina, Puerto Rico.

Description of career experience (what I learned): I learn different things such as entomology lab skills. I learn how to make slides and identify different insects. I also made trapping that is the procedure to collect the insects. I also received different workshop on diseases that can affect citrus. I acquired new techniques working with databases.



What is your perception of agriculture now: My perception about agriculture is that it is important for the quality of life and should have more programs to benefit and raise awareness about its importance.

How has this career experience broadened your employment opportunities: This career opportunity increases the chances of getting a job, because thanks to this I acquired new knowledge and skills. I learned new laboratory techniques and database management that help me to have versatility in a future employment.

Career and research aspirations: My area of interest is the genetic. In a short term I would like to make so research in genetic. I would like to investigate in that area to improve the agriculture and use the products that are harvested to improve the quality of life. In five years I see myself increasing my knowledge by studying genetics in a graduate school.

Skill Set: -Ability to work in Microsoft office programs as Word, PowerPoint, Excel, Publisher, Access
-entomology lab skills - ability to identify specimens -biology and chemistry lab techniques -responsible -capacity to work as a team, punctual -organized

The impact of my career experience: The different experiences I've had in the program FCCAgE have a great impact on my future. Some of the experiences have been workshops, conferences and internships among other things. They have had an impact on my future education because it has given me the chance to learn new skills. It also helped me to decide on a career to study in a long term. Then I got the opportunity to experience different areas and interacting with the professional field of this variety of careers related to the USDA. All these workshops, activities and expertise help my professional development. These give me the opportunity to acquire skills and techniques that can help me achieve my goals of getting the desired job in the future. Many employers require you to have experience in the work area. All the things previously mentioned help me to comply with this requirement. It gives me the versatility to work in different jobs and tasks.

This career opportunity increases the chances of getting a job, because thanks to this I acquired new knowledge and skills. I learned new laboratory techniques and database management that help me to have versatility in a future employment.

FCCAgE - Miami Dade College Undergraduate Students

Name: **Ivan Enrique Castillo**
Hometown: **Hialeah, Florida**
Institution: **Miami Dade College**
Campus: **North**
Rank: **Sophomore**
Major: **Biotechnology**
Expected date
of graduation: **June, 2016**
Degree: **Bachelor of Science**
USDA Agency
of interest: **ARS, USFS**
Email: **icast118@gmail.com**

Career experience/location: I've conducted tests in chemical ecology at the USDA Agricultural Research Service in Miami, Florida, fall 2013, and worked in conservation/rehabilitation science at the Falcon Bachelor Bird of Prey Center.

Description of career experience (what I learned): In my first year as an FCCAgE scholar I've learned to work in a professional laboratory alongside professionals of various scientific fields including chemistry, biology, and physiology. At the USDA-Agricultural Research Service I conducted a study on chemical attractants for Caribbean Fruit Flies.

What is your perception of agriculture now: Since my inception into the FCCAgE program I've been exposed to aspects of agriculture I was unaware of and have realized how important and exciting it is for our future.



How has this career experience broadened your employment opportunities: With my time at the USDA-ARS I have gained the confidence necessary to work in a dynamic laboratory setting as a part of a specialized group of scientists. I have also gained the experience time required by many competitive agricultural companies.

Career and research aspirations: In the future I see myself with a PhD in biology conducting significant research and developing products/processes which strengthen the cooperative relationship between man and nature. Five years from now I will be midway with my PhD and in 10 years I'll be tackling the world's environmental problems one question at a time.

Skill Set: -Bilingual (English/Spanish) -Southern Blot -DNA Isolation -PCR Sequencing -Bird of Prey Conservation -titration -olfactometer analysis -horticulture -gel electrophoresis

The impact of my career experience: The experience I have gained through the FCCAgE program is invaluable. I've built a solid interest in agriculture which I may have never realized were it not for this program. The knowledge and skills I've acquired have made me a strong contender in the field of agriculture. Prior to this program I knew my goals were geared towards biology, but now I can say more precisely that I want to conduct research in agriculture. I plan on continuing my education and one day reducing the damage caused by man to nature.

Since my inception into the FCCAgE program I've been exposed to aspects of agriculture I was unaware of and have realized how important and exciting it is for our future.

Name: **Stephanie Diaz**
Hometown: **Miami, Florida**
Institution: **Miami Dade College**
Campus: **North**
Rank: **Junior**
Major: **Biology**
Expected date
of graduation: **May**
Degree: **Bachelor of Science**
USDA Agency
of interest: **NRS**
Email: **stephydiaz@aol.com**

Career experience/location: As of now, I am interning at MDC North campus' school of science. My mentor is Professor Alfredo Leon, and we are working on isolating chloroplasts from sabal palms and extracting DNA.

Description of career experience (what I learned): I am able to isolate chloroplasts from a sabal palm plant by blending the leaves, and then utilizing differential centrifugation. I understand how to use the DNEasy Mini Plant Kit and the solutions in the kit.

What is your perception of agriculture now: I am still interested in working with sustainable agriculture, more so the ways in which we utilize the land for food production so that our animal counterparts' habitats are not destroyed in the process.



How has this career experience broadened your employment opportunities: I am now gaining experience in the lab, and not just the field, thus I can now imagine myself working in the lab, at least part of the time.

Career and research aspirations: I currently hope to graduate with my Bachelor's in Science degree in Biopharmaceutical, and I will continue on to graduate school. I aim to earn a PhD in the field of wild life conservation as my ultimate goal is to conduct research and relay my findings through nature documentaries airing on television networks such as Discovery and BCC.

Skill Set: -Computer skills -microbiological techniques -gel electrophoresis -DNA extraction

The impact of my career experience: FCCAgE has offered me countless opportunities, many of which have opened my mind to many career possibilities. Prior to my entering the FCCAgE program, I never considered working as part of a government agency, such as the USDA. My passion has always centered around wildlife, much more specifically, wildlife conservation. As I finished my first year as an FCCAgE scholar, I began to see myself entering the agricultural field, and incorporating certain aspects of agriculture into my passion for wildlife. Participation in several conferences across the US (made possible through FCCAgE), has exposed me to agencies such as the Natural Resources Conservation Service. Their goals mirror my own, and I can imagine myself working as part of their agency in the future.

I am still interested in working with sustainable agriculture, more so the ways in which we utilize the land for food production so that our animal counterparts' habitats are not destroyed in the process.

Name: ***Claudia Isabel Gonzalez***
Hometown: **La Habana, Santos Suarez**
Institution: **Miami Dade College**
Campus: **North**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **July, 2014**
Degree: **Bachelor**
USDA Agency
of interest: **ARS, APHIS**
Email: **Claudia.gonzalez024@mymdc.net**

Career Experience/location: I interned at ARS in 2012, and then did research on campus with plants. Summer of 2013 I started with antibodies and protocols used with cord blood in Jackson Hospital.

Description of career experience (what I learned): I have learned how to properly use pipets, microscopes, prepare different media depending on the cell type. I have also learned how to use the McPhail traps for luring insects and animals.

What is your perception of agriculture now: I thought agriculture is just farming and taking care of animals and plants, but I've realized there is a lot of math and science in it.

How has this career experience broadened your employment opportunities: I want to pursue a career in lab research and upon working in the ARS subagency I know now I can study biocontrols and influence the environment with a research position in this subagency.

Career and research aspirations: In five years I see myself finishing my Ph.D. in Microbiology with a Focus in Immunology. I want to be great in my studies and be able to find solutions to diseases that haven't been found yet. In ten years I see myself working as part of a team experimenting and finding out new cures.

Skill Set: -Research data analysis -microbiological skills -Microsoft Office



I thought agriculture is just farming and taking care of animals and plants, but I've realized there is a lot of math and science in it.

The impact of my career experience: While in this program, I have had to manage working two jobs and manage a full-time class schedule and home life, this has made me work on my stress management and, as a student, how to balance all these things and grow up. It has made me more prepared to the stress that I will be dealing with as a graduate student and in my profession in general.

Name: **Genevy Lima**
Hometown: **Miami, Florida**
Institution: **Miami Dade College**
Campus: **North**
Rank: **Senior**
Major: **Biological Sciences**
Expected date
of graduation: **August 2014**
Degree: **Bachelor**
USDA Agency
of interest: **APHIS, ARS**
Email: **Genevylima24@hotmail.com**

Career experience/location: I interned at Dumond Conservancy observing Owl Monkey behavior. I also contributed in the research of “Physiological Characterization of Mangrove *Rhizosphere* Bacteria” at MDC North.

Description of career experience (what I learned): From this experience, I have learned many techniques used in microbiology and biochemistry. I got to work with many students and learn several monkey behaviors that are only found in this species.

What is your perception of agriculture now: Since I started this program, I have gotten to experience how important agriculture really is not only globally but locally as well.

How has this career experience broadened your employment opportunities: I feel more prepared to apply for national internships nationwide and expand my career networking circle.

Career and research aspirations: Currently I am pursuing a Bachelor of Science in Biological Science at Miami Dade College and conducting research on and off-site, I am hoping to get involved in a USDA summer internship program this upcoming summer. In 5 years from today, I expect to be finishing my Ph.D. in Animal Science so that I can obtain a job at APHIS conducting research. In 10 years from now, I want to have my own research facility, research team, and be able to publish some of my work.

Skill Set: -Knowledge of laboratory techniques and procedures -ab high-end equipment handling -microbiological techniques -Bilingual (English/Spanish) -research skills -leadership and communication skills

The impact of my career experience: The experience I have gained working in both research will give me an upper hand when I go to look for future employment or internships. Working in a laboratory setting has prepared me in many different ways. Thanks to FCCAgE I have gotten to network in different states and countries, which has also given me a bigger perspective in the agriculture field and has given me a bigger goal to accomplish to be able to help my community. My long term goal is to conduct research to be able to contribute to my community and help inspire others as I was.



Since I started this program, I have gotten to experience how important agriculture really is not only globally but locally as well.

Name: **Moise Louis**
Hometown: **Miami, Florida**
Institution: **Miami Dade College**
Campus: **North Campus**
Rank: **Senior**
Major: **Biotechnology**
Expected date
of graduation: **May 2014**
Degree: **Bachelor's in Science**
USDA Agency
of interest: **Research**
Email: **moise.louis002@mymdc.net**

Career experience/location: I have had the privilege of working with two awesome scientists while assisting them with their research. Dr. Paul Pratt and Dr. Marta Torroella have shown me the importance of being disciplined while conducting research.

Description of career experience (what I learned): While working with these professionals I have learned what type of work is expected from scientists at their level.

What is your perception of agriculture now: Agriculture is a field that is very much needed and it is important for the future development of our environment. This knowledge gives me a greater appreciation for the agricultural sciences.

How has this career experience broadened your employment opportunities: My experience will allow me to work at a variety of lab setting thus making me a better candidate for employment in my chosen field.

Career and research aspirations: My goal is to conduct meaningful research in the screening of pancreatic cancer.

Skill Set: Computer skills -microbiological techniques -communication skills
-technical writing

The impact of my career experience: Due to the knowledge garnered from being involved with the research projects conducted my aforementioned mentors, Dr. Paul Pratt and Dr. Marta Torroella, I have gained the confidence necessary to be successful in all my future research endeavors. Their research has also greatly motivated me to meet my educational goals and start conducting meaningful research. I look forward to working in the agricultural field in hopes of positively impacting the food shortages in third world countries.



Agriculture is a field that is very much needed and it is important for the future development of our environment. This knowledge gives me a greater appreciation for the agricultural sciences.

Name: **Mercedes Maduro**
Hometown: **St. Thomas, Virgin Islands**
Institution: **Miami Dade College**
Campus: **North**
Rank: **Junior**
Major: **Biotechnology/Pathology**
Expected date
of graduation: **Fall 2014**
Degree: **Bachelor's of Biotechnology**
USDA Agency
of Interest: **Agriculture Research Service ARS**
Email: **Mercedes.maduro001@mymdc.net**

Career experience/Location: I have completed and presented summer research at the University of Florida in Gainesville, on behalf of Miami Dade College. This research took place in a microbiology lab involving *Lactobacillus johnsonii*. I am also starting a new research project that I expect will be continued for my duration at MDC.

What I have learned from my experience: I have had ideas about research in the past and felt that I didn't want a profession that would keep me in doors. By working in the lab I have come to realize that not all labs are like that. I was also surprised to find that I thoroughly enjoy being in the lab and all other aspects of it including the long hours. This has lead me down the path of considering research as a profession.

What is your perception of agriculture now: The concept of agriculture is broader than just the trees and plants that grow around us.

How has this career experience broadened your employment opportunities: By working in the lab and participating "hands-on" in our school garden, I feel that my chances for employment with an agriculturally associated organization are far greater than someone else without them.

Career and Research Aspirations: I hope to receive my masters in pathology while completing research. By the end of that time I hope to gain employment or continue on for my MD/PhD in pathology to investigate agricultural borne pathogens.

Skill Set: -Writing -leadership skills -cooperative -proficient in Microsoft Office -proficient in operation of lab equipment -organized -problem solver

The impact of my career experience: By working in the lab and taking part in research, I have been exposed to concepts and matters that the general public is too busy to pay attention too. The impact of agriculture on our lives is very crucial. By embarking on research that helps keep people as well as the environment safe, we can strive for a healthier tomorrow. The first step is education and by gaining my education I can do my part by not only completing research but by educating the general public with my knowledge and my findings. My education and lab experience should lead me to the right job opportunities that will allow me to complete my mission.



By working in the lab and taking part in research, I have been exposed to concepts and matters that the general public is too busy to pay attention too. The impact of agriculture on our lives is very crucial. By embarking on research that helps keep people as well as the environment safe, we can strive for a healthier tomorrow.

Name: **Philip J. Mercado**
Hometown: **Miami, Florida**
Institution: **Miami Dade College**
Campus: **North**
Rank: **Junior**
Major: **Biotechnology**
Expected date
of graduation: **May 2015**
Degree: **BS**
USDA Agency
of interest: **Food and Safety**
Email: **philip.mercado001@mymdc.net**

Career experience/location: University of Illinois Urbana Champaign working in the Biophysics. Studying the looping kinetics of E.Coli DNA at 83 base pair using single molecule fluorescence resonance energy transfer (smFRET).

Description of career experience (what I learned): I learned how to complete a graduate school application, write a scientific research paper, and complete a poster and oral presentation. In addition learning how to work with a diverse group of people in order to complete a goal.

What is your perception of agriculture now: I believe that agriculture is extremely important, not just from a food and safety stand point, but research and economical. Innovation to the field can only be created by investing in research and development.

How has this career experience broadened your employment opportunities: This experience has changed my view on graduate school and advancing my degree.



Career and research aspirations: In 5 to 10 years I would like to be a lead researcher for an organization like Monsanto and others in providing better alternatives and ideas to solving issues nationally and globally in the field of agriculture.

Skill Set: -Multi-wave digester -inductively coupled plasma spectroscopy (MS) -auto clave
-excellent leadership skill -software Origin 9, MATLAB, Microsoft Excel, PPT, Access

I believe that agriculture is extremely important, not just from a food and safety stand point, but research and economical. Innovation to the field can only be created by investing in research and development.

Name: **Hayley O'Bryan**
Hometown: **Hollywood, Florida**
Institution: **Miami Dade College**
Campus: **North**
Rank: **Senior**
Major: **Criminal Justice**
Expected date of graduation: **May 2014**
Degree: **Bachelor's in Applied Science BAS**
USDA Agency of interest: **Forest Service USFS, Food Safety Inspections Service FSIS**
Email: **hayobryan@gmail.com**

Career experience/location: This past summer 2013, I interned as a compliance investigator with (FSIS), in Sunrise Florida.

Description of career experience (what I learned): I learned the role of a compliance investigator in the Federal Food Service. My primary focus was on the federal Meat, Poultry, and Eggs Acts and I learned how agency is the first line of defense for a safe food supply.

What is your perception of agriculture now: Agriculture is very important, and there are a variety of career fields related to agriculture, that I am now aware of.

How has this career experience broadened your employment opportunities? My experience with investigations has given me the skills to investigate properly in my field.

Career and research aspirations: After Miami Dade College I plan to attend Sam Houston State University in Texas to pursue a master's degree in Criminal Justice. I will maintain a focus in agriculture and take classes offered in their agriculture program. In ten years I plan to have a career within the USDA Forest Service or FSIS, in particular agroterrorism research.

Skill Set: -Computer skills -investigation techniques -research -planning -communication skills: verbal, written, listening

The impact of my career experience: I have learned so much so far on what I can do, and what classes I need to take in order to get where I am going. The USDA has given so many opportunities to really advance myself professionally, and now I see what exactly makes a great investigator. Since I have learned so much professionally, I have learned many strategies on how to interview for my career confidently. I plan on going into investigations, law enforcement, and policy making. My long term objectives would be to continue with the USDA, and to move up to many potential career opportunities within the USDA agencies.

I have learned so much so far on what I can do, and what classes I need to take in order to get where I am going. The USDA has given so many opportunities to really advance myself professionally, and now I see what exactly makes a great investigator



Name: **Fernando Parajon**
Hometown: **Hialeah, Florida**
Institution: **Miami Dade College**
Campus: **North**
Rank: **Junior**
Major: **Biological Sciences**
Expected date
of graduation: **August 2015**
Degree: **Bachelor**
USDA Agency
of interest: **NRCS, ARS, APHIS**
Email: **Fernando.parajon001@mymdc.net**

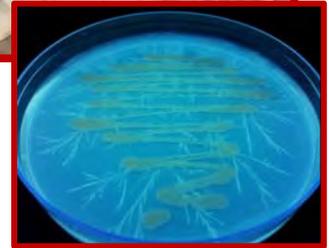
Career experience/location: During the summer internship I continued my research of “Physiological Characterization of Mangrove Rhizosphere Bacteria” at MDC North.

Description of career experience (what I learned): During this experience, I learned many techniques such as bacteria inoculation, physiological and morphological testing of Rhizosphere Bacteria. I also learned to collect and analyze all our results.



What is your perception of agriculture now: My perception of agriculture since I started in the program has changed; I can see the importance that agriculture has on our local communities and how much we as people depend on it.

How has this career experience broadened your employment opportunities: With the lab skills obtained from my internship, I have obtained great connections in my field that can lead to possible employment opportunities in the future.



Career and research aspirations: I am currently pursuing a degree in Biological Sciences and conducting research on site. This summer I am looking forward to obtaining a summer internship within the USDA. I see myself on a path to complete a PhD in Biomedical Engineering within five years with an ultimate goal to improve our world and work towards goals such as safer food, cleaner water, and land conservation.

Skill Set: -Proficient in Microsoft Office -familiar laboratory safety and equipment -Bilingual (Spanish, English) - Microbiological techniques -good methodological and research skills -self-directed -organized -punctual -work well under pressure and in a team settings

The impact of my career experience: As a Biological Lab Technician at MDC I have gained invaluable knowledge and experience, that will allow me to succeed in the professional world and open more doors in regards to research. Working on my current research has allowed me to network with various groups and personnel in the field that can help me reach my long term goals. Thanks to the FCCAgE program I have been able to network with local professionals that have helped me get one step closer to my goals.

As a Biological Lab Technician at MDC I have gained invaluable knowledge and experience, that will allow me to succeed in the professional world and open more doors in regards to research.

Name: **Nicole Camille Ramsay**
Hometown: **Miami, Florida**
Institution: **Miami Dade College**
Campus: **North**
Rank: **Sophomore**
Major: **Biopharmaceutical Sciences**
Expected date
of graduation: **May 2016**
Degree: **AA in Pharmacy**
USDA Agency
of interested: **ARS**
Email: **nicole.ramsay001@mymdc.net nikkitty15@hotmail.com**

Career and Research Aspirations: After getting my undergraduate degree in biopharmaceutical sciences, I would like to get my doctorate in pharmacy and possible get another bachelor in food science/nutrition. I really want to research how drugs affect people both positively and negatively. I want to turn those negative effects into positives by natural means; in other words, I want to see if I can use plants and herbs to make drugs without using artificial means in the lab.

Skills Set: -Excellent oral/written communication skills -great organization skills
-fast learner -proficiency in using Microsoft word, PowerPoint, Publisher, Excel
-mat lab

Research topic: Extracting heavy metals in fruit juices using chelators

About me: I'm your average ordinary, happy-go-lucky, optimistic, hardworking person who is always bursting with energy. I love to learn in and outside of the science field and I treat every day like an adventure. I always see the positives of any situation I'm thrust into--no matter how bad things get. In my spare time, I love to curl up and read a good book or two, write fantasy and romance stories, sing & play the piano and running/jogging around my block until I get exhausted.



After getting my undergraduate degree in biopharmaceutical sciences, I would like to get my doctorate in pharmacy and possible get another bachelor in food science/nutrition. I really want to research how drugs affect people both positively and negatively.

Name: **Yaneisy Rocha**
Hometown: **Fort Lauderdale, Florida**
Institution: **Miami Dade College**
Campus: **North**
Rank: **Senior**
Major: **Biology**
Expected date of graduation: **Spring 2013**
Degree: **Bachelor in Biopharmaceutical**
USDA Agency of interest: **FNS**
Email: **yaneisycuba@gmail.com**

Career experience/location: I had a great experience at the Invasive Plant Research Laboratory. This internship gave me knowledge of insect life cycles and the invasive weed biological control agents.

Description of career experience (what I learned): I have gained practical experience in chemistry, biology, and microbiology, both in the lab and in the field. I have performed chemical reactions, and I am currently using microscopes to observe a variety of specimens.

What is your perception of agriculture now: Agriculture is crop production, animal veterinary, fruit yield, meat yield, cotton, and other goods which come from soil. In this issue knowledge on soil erosion protection, soil fertility, irrigation systems, dam for water conservation, farm machinery for modern agriculture, pesticide, and related industrial activities like diet industries is needed.



How has this career experience broadened your employment opportunities: This experience has influence in my employment opportunities because they look at all the skills I have acquired in this program.

Career and research aspirations: Attend to a pharmacy graduate school. Conduct research in drug discoveries, microbiology and chemistry.

Skill Set: -Bilingual -proficient in Microsoft Word & Excel
-leadership -DNA extraction -PCR -gel electrophoresis -DNA sequencing -gram positive and gram negative staining -acid fast staining -microscopy -Western Blotting

Agriculture is crop production, animal veterinary, fruit yield, meat yield, cotton, and other goods which come from soil. In this issue knowledge on soil erosion protection, soil fertility, irrigation systems, dam for water conservation, farm machinery for modern agriculture, pesticide, and related industrial activities like diet industries is needed.

The impact of my career experience: The experiences I have had in this program have helped me meet my career goals. It has always been my passion to help and interact with people. One of my life goals includes being able to make a difference in our world and giving my assistance where it is needed. The experiences in the different labs also support the academic goals that are important for my career.

Name: **Paul Zuniga**
Hometown: **Miami, Florida**
Institution: **Miami Dade College**
Campus: **North**
Rank: **Senior**
Major: **BS Biological Sciences**
Expected date
of graduation: **December 2014**
Degree: **AA General Transcript**
USDA Agency
of interest: **APHIS, ARS, FSIS**
Email: **paul.zuniga001@mymdc.net**

Career experience/location: I was a volunteer at Florida International University, Modesto Maidique Campus.

Description of career experience (what I learned): During my volunteering, I helped create a spreadsheet of the literature on chickpea vernalization. By doing so, I took a glance at the importance and complexity of the primary literature in the Sciences. The experience helped me grow professionally in that I understand how important my present education will be in communicating and contributing with future colleagues.



What is your perception of agriculture now: I have a better perception of how the world is living unsustainably and that science in agriculture is the way to contribute to our planet.

How has this career experience broadened your employment opportunities: Being able to communicate with future colleagues in the vocabulary of science will make me a better candidate for employment opportunities?

Career and research aspirations: I would like to become involved in the fields of molecular biology and genetics.

Skill Set: -Computer skills -microbiological techniques -molecular biology techniques -bilingual

I have a better perception of how the world is living unsustainably and that science in agriculture is the way to contribute to our planet.

The impact of my career experience: Education is built upon education. My experience will make a difference when going to graduate school.

FCCAgE - Miami Dade College Undergraduate Students Not Pictured _____

Name: *Rose Losekar Lorna Jean-Mary*
Major: **Biological Sciences**
Hometown: **Miami, Florida**
Expected date
of Graduation: **May 2014**

Name: *Stephon Reid*
Major: **Associates of Art, Optometry**

Name: *Joseph Solomon*
Major: **Horticulture**

Name: *Ricky Valido*
Major: **Environmental Science**
Hometown: **Hialeah, Florida**
Expected date
of Graduation: **2015**

FCCAgE - Miami Dade College Former Students

Name: *Traniece Yvette Fullwood*
Major: **Biotechnology**
Hometown: **Miami Florida**
Graduated: **August 2013**



Name: *Patricia Gonzalez-Abreu*
Major: **Biology**
Hometown: **Miami, Florida**
Graduated: **May 2013**



Name: *Aixa Guadarrama*
Major: **Biotechnology**
Hometown: **Hialeah, Florida**
Graduated: **May 2013**



Name: *Jessica Moreno*
Major: **Biotechnology**
Hometown: **Miami, Florida**
Graduated: **May 2013**



Name: *Solomon Mpalanyi*
Major: **Biopharmaceutical Sciences**
Hometown: **Miami Gardens, Florida**



Name: *Diana Valentina Rivadeneira*
Major: **Biology**
Hometown: **Guayaquil, Ecuador**
Graduated: **May 2013**



FCCAgE - St. Thomas University Undergraduate Students

Name: **Garrick Amedee**
Hometown: **Miami, Florida**
Institution: **St. Thomas University**
Campus: **Main Campus, Miami Gardens**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **May 2014**
Degree: **Bachelor of Science in Biology**
USDA Agency
of interest: **APHIS PPQ**
Email: **gamedee@stu.edu**



Career experience/location: During Summer 2013 I have worked in the USDA Animal and Plant Health Inspection Service Plant Protection and Quarantine as a Biocontrol technician in Puerto Rico.

Description of career experience (what I learned): I worked with a team of summer interns in various aspects of insect pests including preparing slides of insects for the identifiers at Washington DC. In addition, I assisted in data entry and organization to assist on data analysis.

What is your perception of agriculture now: Agriculture has a strong scientific component that I was not aware of. Scientists are publishing new discoveries on how to improve the growth of many crops.

How has this career experience broadened your employment opportunities: By working with PPQ, I became aware of the many target pests that destroy our agriculture in the tropical region. I learned of various approaches to combat these pests. With this experience, I am getting prepared to become an excellent aid in any USDA Entomology department.

Career and research aspirations: I will continue working in the field of entomology to gain extensive knowledge of the insect world. As a current undergraduate, my background in the field of Entomology has only been through my internships. I would like to continue being trained more by the USDA. After a few years working, I will then go to graduate school for a MS degree to learn new techniques in Entomology.

Skill Set: -Insect slide preparation -microscope identification -baiting traps -publishing scientific reports
-statistical analysis - pest identification -transforming DNA -transfecting cells -SDS Page -Western Blot -PCR
-gram staining -STAND exam -immunochemistry

The impact of my career experience: The USDA does make a difference on how people today approach agriculture. I want to be that person that discovers new ideas and obtains novel results. The USDA is important not only for agriculture but to other fellow Americans to enjoy safe and delicious commodities. With the past USDA internships, I was able to access different generations of experience that teach ways that I was not exposed to. In a lecture setting at the University, I would only be taught from a recommended textbook, but going out to the field gave me hands on knowledge and skills to use in my career. I am more confident in going into my future interview with a strong background in my field that will expose me to new opportunities. I was very fortunate to build strong bonds with my past mentors that will help me on any path or questions I may have in the future. With each internship experience, I made sure to leave an impact as a contributor and show complete passion in the work. With all the work I accomplished, I want to grab interviewers' attention with my resume and change the interview to a conversation of common interest. This would allow me to become the perfect candidate for the position I would be applying to.

Agriculture has a strong scientific component that I was not aware of. Scientist is publishing new discoveries on how to improve the growth of many crops.

Name: **Jordan A. Facey**
Hometown: **Hialeah, Florida and Panama**
Institution: **St. Thomas University**
Campus: **Main Campus, Miami Gardens**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **December 2014**
Degree: **Bachelor of Science in Biology**
USDA Agency
of interest: **Agricultural Research Station ARS**
Email: **jfacey@stu.edu**



Career experience/location: During Summer 2013 I performed molecular biology techniques at the USDA-ARS-SHRS in Miami, Florida. These techniques were associated with RNA extractions of different mango cultivars and lychee.

Description of career experience (what I learned): I learned new DNA and RNA extractions techniques, solution preparation, short and long protocols of RNA isolation, and RNA quantification and analysis. I also contributed to some aspects of other projects that involved lipid extractions, grafting mango trees, and collecting fibers from *S. spontaneum*.

What is your perception of agriculture now: I now realize the many areas of scientific research behind practices in modern agriculture in order to provide good crops to the consumer.

How has this career experience broadened your employment opportunities: This experience helped me understand how different laboratory facilities primarily function. I gained the skills and interest needed to work as a science technician performing molecular biology techniques and genome sequencing for the production of improved crops.

Career and research aspirations: My career aspiration is to have a job in the field of agricultural science. In the future I see myself with a Master's degree in plant taxonomy, or plant physiology and being able to perform research for various cultivars of apples, mangos, and cocoa, among other fruits. I want to develop my research on subtropical plants and the ecosystem during graduate school.

I now realize the many areas of scientific research behind practices in modern agriculture in order to provide good crops to the consumer.

Skill Set: -Making reagents and dilutions -grafting and inoculating techniques -laboratory skills in molecular biology -adapting new procedures -microscope skills -preparing media -gardening skills -leadership skills -reliable -bilingual -oratory skills interpreting languages

The impact of my career experience: My experience at the USDA-ARS in Miami has been a life changing one. I have discovered how much I like working in a laboratory, and I have improved in many techniques related to my laboratory skills. In other words, the opportunity at the USDA has capacitated me with the knowledge of working with different types of lab equipment and top of the line laboratory techniques. I learned more here than I have ever learned at my other laboratories from the universities I attended. I was exposed to so many different procedures and techniques that by the time I was done I was able to identify the difference between centrifuges, distinct ways of performing dilutions, making new solutions, and even learning how to sterilize a cluster of used equipment simultaneously. I will use all the knowledge I obtained from my career experience to work towards helping the ecosystem we live in. I want be an impact in this world, and I wish to do it at an agricultural level. I want to keep a friendly environment wherever I become employed at, and I hope to be able to support our world that is slowly losing its natural resources. I want to use this opportunity of working within the agricultural field to obtain more knowledge about my surroundings, and help spread the word of keeping the earth safe.

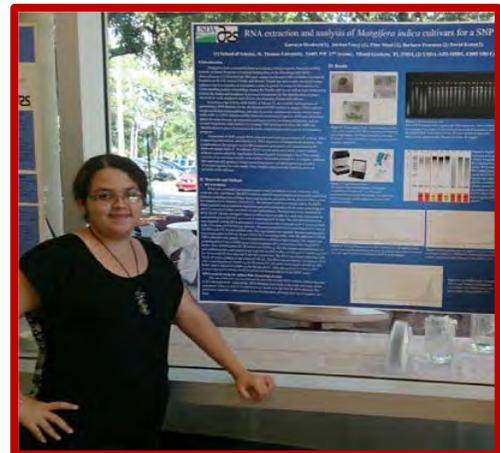
Name: **Karenyn Herdocia**
Hometown: **Masaya, Nicaragua**
Institution: **St. Thomas University**
Campus: **Main Campus**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **2014**
Degree: **Bachelor of Science in Biology**
USDA Agency
of interest: **USDA Agricultural Research Services ARS**
Email: **kherdocia@stu.edu**

Career experience/location: I completed an internship at the USDA-ARS Subtropical Horticulture Research Station in Miami station using Molecular biology techniques for RNA extraction and analysis in various subtropical fruit trees.

Description of career experience (what I learned): I had the opportunity to work with state of the art equipment. Also I learned how to extract RNA from plant material, how to graft, how to transplant avocado trees and how to work in a lab setting with a constant amount of a heavy work load.

What is your perception of agriculture now: Before I started the program agriculture to me meant farming but now it means research and a world of many possibilities.

How has this career experience broadened your employment opportunities: Interning for a molecular biology lab was a great experience. I got to learn things I have not learned in class yet and this reassured me that I do want to become a scientist and maybe end up working for the USDA.



Career and research aspirations: I hope to finish with my degree in a year or less and go to graduate school to pursue a PhD in Microbiology or Plant pathology. Or if the opportunity comes and when I have completed my Bachelor degree, I would like to work for the USDA ARS before I go pursue higher education.

Skill Set: -Management/leadership -able to work under quarantine conditions -microbiological techniques -conduct RNA extraction under two different protocols -RNA quantification and analysis -Microsoft literate -bilingual -self-directed -reliable -detail oriented -self-motivated

The impact of my career experience: The first internship I did helped me realize that I do not like insects but I did enjoy learning about them. This second internship made my career choice more clear because I learned so much more than what I expected, especially in the field of molecular biology that I had never been exposed to previously. My mentors were very helpful, and guided me though the procedures according to the tasks that we were working on. I learned so much from this internship experience: I got to work with equipment that I had never worked with before and I got to meet a lot of people. I am glad that I got the opportunity to work with such wonderful people and learn a little from all of them.

Interning for a molecular biology lab was a great experience. I got to learn things I have not learned in class yet and this reassured me that I do want to become a scientist and maybe end up working for the USDA.

Name: **Jeny Misdraji**
Hometown: **Honduras**
Institution: **St. Thomas University**
Campus: **Biscayne Campus**
Rank: **Senior**
Major: **Biology/Psychology**
Expected date
of graduation: **August 2014**
Degree: **BS in Biology and BA in Psychology**
USDA Agency
of interest: **ARS, FSIS**
Email: **jmisdraji@stu.edu**

Career experience/location: I participated in a research project on the effect of plant extracts on the cancer cell lines at St. Thomas University. I worked with the Florida exotic plant *Ardisia crenata*.

Description of career experience (what I learned): I learned several lab techniques among them, preparation of extracts from various plant organs, counting cells both in the electronic equipment and manually, different assays and aggregation assays as well as the use of bioanalyzer equipment that reads 96-well plates for data analysis.

What is your perception of agriculture now: I learned that agriculture is more than harvesting. Agriculture is the application and extension of scientific study. We can get the science out of the lab into the field.

How has this career experience broadened your employment opportunities: My summer research experience taught me new laboratory techniques needed for working in a lab setting. Also, I gained professional skills that are great for any career environment, such as teamwork, attention to detail, laboratory notebook keeping, etc.

Career and research aspirations: As of now, I am considering the many options that graduate school offers in the fields of agriculture. I am considering Entomology and Microbiology as my favorite options and trying to decide if that is the road I want to pursue. I hope that one day I will find myself pursuing my dream of higher education, either through a Master's program or a PhD program.

Skill Set: -Microbiological and molecular biology techniques -proficient in the use microscope -cell count -tissue culture -cell aggregation assay -western blotting -gel electrophoresis -DNA extraction -bacterial cultures -use of micropipettes -computer skills -Microsoft Word: Power Point, Excel

The impact of my career experience: As part of the FCCAgE program, I have been exposed to the professional environment by working in research environments, attending symposia and conferences. Also, I gave a presentation on my research at the St. Thomas University Symposium held this past September. In addition, the internships opportunities and the research currently being done and the STU Organic Garden have given me the discipline and the tools needed to go out into the workforce or go into a graduate program. I have learned the connection between agriculture and science and how these two together can help society with problems such as food demand and how we can implement new techniques to improve the crops not only for the market but to help underdeveloped countries and teach the people these techniques so hunger can be diminished. Thanks to my experience this past summer internship in a research lab I was able to consider my career aspirations more closely and draw a better plan for graduate school. Now, I can see myself moving on from a bachelor's degree and into either a masters or a doctoral program. FCCAgE has given me the opportunity to focus and try different areas of study to find out what my strengths and weaknesses and work with them to become a better candidate for higher education.



I learned that agriculture is more than harvesting. Agriculture is the application and extension of scientific study. We can get the science out of the lab into the field.

Name: **Tomas E. Pendola**
Hometown: **Buenos Aires, Argentina**
Institution: **St. Thomas University**
Campus: **Main Campus**
Major: **Chemistry**
Expected date
of graduation: **May 2014**
Degree: **Bachelor's of Science in Chemistry**
USDA Agency
of interest: **Agricultural Research Services ARS**
Email: **tpendola@stu.edu**

Career experience/location: Research on comparison of Vitamin C levels and other metabolites in organic and non-organic tomatoes. This research was done at the Chemistry Department at St. Thomas University.

Description of career experience (what I learned): I learned important analytical and instrumental chemistry skills such as the use of a GC-MS, Liquid Chromatography, Acid-Base Titrations and the use of an IR spectrophotometer. I also learned the importance of a well-kept lab notebook and to properly select an experimental method.

What is your perception of agriculture now: Now I understand that agriculture extends far past the fields where the crops are grown; it goes into the lab where field practices are researched and improved.

How has this career experience broadened your employment opportunities: This internship has allowed me to experience working in chemistry in a lab setting. It has helped me narrow down my future career in the field of analytical chemistry and specifically with produce.



Career and research aspirations: My aspirations include a basic wish to use research to better the lives of people through an availability of better foods. In 5 years I see myself finishing a PhD in Analytical Chemistry with research into soil chemistry. In ten years I hope to use this PhD in improving agricultural practices through improving the soil-plant nutrition interaction.

Skill Set: -Analytical chemistry techniques -microbiological techniques -website management -communications -image editing -video editing -rural gardening -composting -working under pressure -meeting tight deadlines -bilingual -leading teams -work delegation -following precise instructions

The impact of my career experience: This experience has helped me decide in which area of chemistry I want to work in, whether it is academia, research or in the private sector. I have realized that I love working in a lab researching areas that were previously untouched. I realized that to do the work I want and make a contribution to society, research would be the best way to do it. The internship has also given me an arsenal of skills that I can now use to further my future career, these skills such as setting up and independently running a GC-MS are rarely found in an undergrad student and make those of us who have them highly marketable in the job market. These kinds of skills are only learned through experience and are difficult to learn in a classroom environment. Finally the experience showed me the huge difference between a class lab setting and a research setting where doing the background work such as researching methods and making sure that the work is essential where a class setting is more straight forward and the protocol is set for you. As important as setting protocols is doing literature research and adapting or creating protocols. All these are essential skills for any scientist to have, and I was able to do all of them, at least to some level, during my research time in the lab.

Now I understand that agriculture extends far past the fields where the crops are grown; it goes into the lab where field practices are researched and improved.

Name: **Siffredi Ramos**
Hometown: **Hialeah, Florida**
Institution: **St. Thomas University**
Campus: **Main Campus**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **August, 2014**
Degree: **Bachelor's in Science**
USDA Agency
of interest: **Agricultural Research Service ARS**
Email: **sramos@stu.edu**

Career experience/location: In the summer of 2013 I interned at the solar station located in Saint Thomas University. I constructed a solar food dehydrator performed experiments with various vegetable products.

Description of career experience (what I learned): I was able to put aspects of what I have learned in my physics courses as well as my biology courses to good use. This internship also allowed me to tap into my creative hands-on skills in order to construct this food dehydrator from a sheet of plywood and a recycled filing cabinet.

What is your perception of agriculture now: I am now aware that there are interesting and crucial scientific experiments behind growing, improving and processing food crops.

How has this career experience broadened your employment opportunities: This experience allowed me to polish my skills as a professional. Having been granted this experience and satisfied my mentors with the outcome, not only have I obtained for myself several great references, but also great professional connections for the near future.

Career and research aspirations: Upon graduating and obtaining my Bachelor of Science and minor, I plan to take all the necessary steps in order to realize my goal of attending graduate school. I expect to enroll directly into a doctorate program. After five years in graduate school, I hope to have already completed my dissertation and received my doctoral degree. In ten years, I see myself holding an important position within the USDA-ARS.

Skill Set: -Languages: English and Spanish -laboratory equipment: autoclaves, pH meters, electrophoresis equipment, PCR machines, multiple pipettes, analytical balances, and sterile environments -technical programs: Microsoft Office; Word, Excel, PowerPoint, and Outlook -operating systems: Windows XP, Vista, 7, 8, and Mac OSX -personal qualities: responsible, dependable, organized, trustworthy, and determined



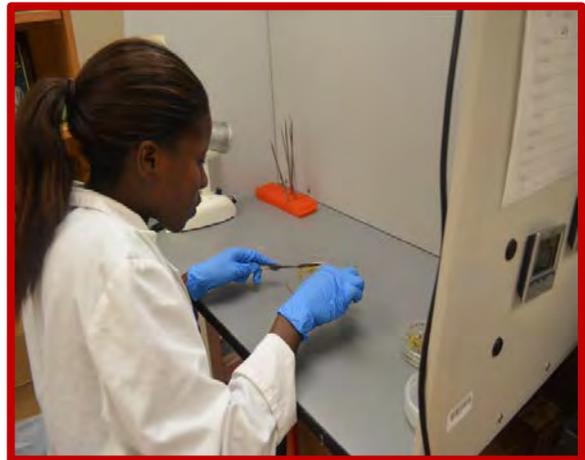
I am now aware that there are interesting and crucial scientific experiments behind growing, improving and processing food crops.

The impact of my career experience: Learning to navigate through the professional world while still being enrolled as an undergraduate student has helped me to succeed in many ways as a student. By exposing myself to what can be a future career, I am motivated to perform to the best of my abilities in school as well as in any extracurricular activities that I choose do so that I may expedite my training as an undergraduate student. As a consequence of my career experience, I have been introduced to a vast network of colleagues and professionals. This in turn has allowed me to create unique relationships with these individuals, while simultaneously opening opportunities that I did not have before. I have traveled to agricultural sites, visited research labs and been exposed to applied science in agriculture.

Name: **Jose Judy Stervil**
Hometown: **Haiti**
Institution: **St. Thomas University**
Campus: **Miami Gardens, Florida**
Rank: **Junior**
Major: **Biology**
Expected date of graduation: **August 2015**
Degree: **Bachelor of Science in Biology**
USDA Agency of interest: **Agricultural Research Service ARS**
Email: **jstervil@stu.edu**

Career experience/location: I worked on the project “Somatic Embryogenesis in various *Theobroma cacao* cultivars from the National Germplasm Repository at USDA-ARS-SHRS in Miami, Florida”. This project is a collaboration between St. Thomas University and the USDA

Description of career experience (what I learned): I applied the scientific methods to perform an experiment. I learned how to regenerate embryos using Somatic Embryogenesis, and acquired various laboratory skills while doing so. Most importantly, I expanded my knowledge on how to work in a laboratory setting and present my research.



What is your perception of agriculture now: This internship experience showed me the importance of agriculture in the nation. Now I understand that agriculture does not simply involve field work but the laboratory aspects of it, and that there is an important research component to growing crops in the field.

How has this career experience broadened your employment opportunities? This career experience has significantly broadened my employment opportunities. Not only has it given me a broad set of laboratory skills but it has been motivating, enlightening, and has enhanced my enthusiasm to excel in agriculture.

Career and research aspirations: My aspiration is to go to graduate school. I see myself as becoming a great researcher when it comes to plants and agriculture. It is my intention and determination to make my work in the agriculture arena one of my most desirable achievements.

Skill Set: -Working on a sterile environment - culture media preparation -plant tissue culture skills, learning the use of equipment such as autoclave, sterile hood, incubator, and pH meter -computer skills -great organizational skills -very reliable -excellent interpersonal skills

This internship experience showed me the importance of agriculture in the nation. Now I understand that agriculture does not simply involve field work but the laboratory aspects of it, and that there is an important research component to growing crops in the field.

The impact of my career experience: The impact of my career experience is that it has given me the passion and drive for doing research in plants and agriculture. I thought that agriculture only involved the field; I did not know there was a laboratory aspect to it. Now, I have discovered there is a lab component to agriculture where a scientific approach can be integrated to do the unthinkable. I feel there is nothing more interesting than working in the field of agriculture.

Name: **Vanessa Valentin**
Hometown: **Lima, Peru**
Institution: **St. Thomas University**
Campus: **Main Campus**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **Summer 2014**
Degree: **Bachelor of Science in Biology**
USDA Agency
of interest: **Agricultural Research Services ARS**
Email: **vvalentin@stu.edu**

Career experience/location: This Summer 2013 I did my internship at the USDA-APHIS-Plant Protection Quarantine in Miami. I worked on scientific photography and insect dissection.

Description of career experience (what I learned): I learned how to pin and mount insects using dissecting tools, take professional scientific photography with a dissecting microscope, including the use of Helicon and Photoshop to fix the photographs, and dissecting beetles genitalia.

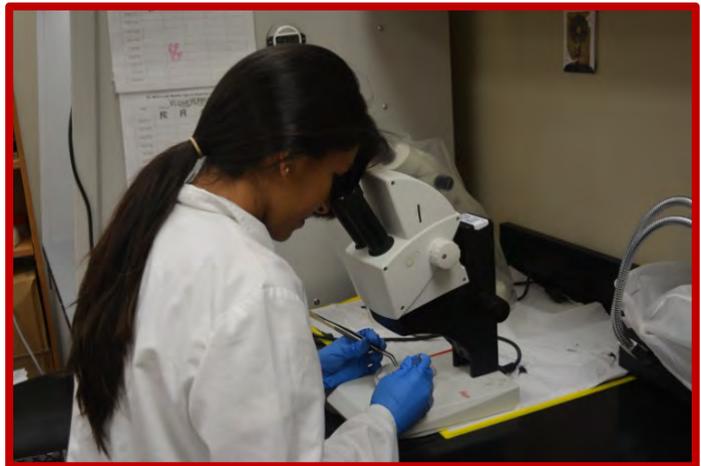
What is your perception of agriculture now: Interning at the USDA the past two years has really changed my perception about agriculture because now I know how broad a career in agriculture is.

How has this career experience broadened your employment opportunities: I am a better candidate for future job applications, since my resume will highlight this internship experience at a top of the line research lab; where I learned techniques that many undergraduate students would not be expose to.

Career and research aspirations: In the next five years I see myself working for the USDA, while doing my Master's degree or PhD in Biochemistry, Biomedical Sciences, or Entomology. Whichever route I take I want to do research for the rest of my life because I am really passionate about it. When I did my first internship at the USDA I fell in love with research.

Skill Set: -Insect breeding (quarantine) -cancer cell culture -aseptic techniques -making media -fluorescent microscope -dissecting genitalia of insects -insect mounting -scientific photography -Helicon & Photoshop -computer skills -bilingual

The impact of my career experience: On my first internship at the USDA-ARS-Invasive Plant Research Laboratory, I fell in love with the feeling of being a scientist. The feeling of doing things I have never done before and exploring absolutely everything was great. That summer I went from not knowing what I want to do in the future to 'I want to be a scientist'. The internship gave me research experience that I never had in class such as breeding insects under quarantine conditions. My next internship experience was at a cancer research laboratory at Saint Thomas University, where we use an invasive plant sent from the USDA for testing. My last internship was at the USDA-APHIS-Plant Protection Quarantine in Miami, where I learned techniques from insect mounting to collection and professional scientific photography including training on why we have the USDA. All these research experiences made an impact on my career path, and I am glad to be part of this program for that reason.



Interning at the USDA the past two years has really changed my perception about agriculture because now I know how broad a career in agriculture is.

Name: **Karen Vergara**
Hometown: **Miami**
Institution: **St. Thomas University**
Campus: **Main**
Rank: **Senior**
Major: **Biology with a Specialization in Pre-Veterinarian Studies**
Expected date of graduation: **May 2014**
Degree: **Bachelor of Science in Biology**
USDA Agency of interest: **APHIS**
Email: **kvergara@stu.edu**

Career experience/location: Experience in zoo keeping at the Zoo Miami in Miami, Florida.

Description of career experience (what I learned): An overlook on different types of diets, enrichment, protocols for animals' well-being and safety on the zoo keepers; animal observations in behavior and physical conditions were also implemented.

What is your perception of agriculture now: Since I have been part of this program I have learned how vast the agricultural field really is. I believe that the field of agriculture is open to most majors.

How has this career experience broadened your employment opportunities: I am more opened to the idea of pursuing the field of Animal Care in general, rather than only taking into account the Veterinarian field. I have been looking into the field of management of animals, whether they are farm animals or zoo animals.

Career and research aspirations: In 5 years I see myself graduating from either graduate school with an MS or DVM degree. In 10 years, I hope that I either work with the government or collaborate with others to make a private practice in Veterinary or Animal Care.

Skill Set: -Zoo keeping techniques -a few veterinary techniques in animal care and maintenance -laboratory skills -Microsoft Office: Word, Excel, PowerPoint, Outlook, Access -moderate Spanish

The impact of my career experience: Working in the field has definitely opened my eyes to the different types of careers related to animal science. Minor things learned in some courses in the past, now shed new light when I find applications for it, so I end up going through my old notes to brush up on some facts. As I speak with the professionals around me, I see just how competitive the work force is, giving me more reason to work harder on my goals. With my experiences, I also see that I have only covered a minor portion and am very interested in finding other opportunities to work in different fields before applying to graduate school.



Since I have been part of this program I have learned how vast the agricultural field really is. I believe that the field of agriculture is open to most majors.

FCCAgE - St. Thomas University Graduated Students

Name: **Melanio Bruceta**
Hometown: **Holguin, Cuba**
Institution: **St. Thomas University**
Campus: **Main Campus**
Rank: **Alumni**
Major: **Biology**
Expected date
of graduation: **Graduated August 2013**
Degree: **BS in Biology**
USDA Agency
of interest: **USDA ARS Miami**
Email: **mbruceta@stu.edu**

Career experience/location: My internship for Summer 2013 was at St. Thomas University Organic Garden. I developed a project of environmentally sustainable techniques for urban gardening.

Description of career experience (what I learned):

My internship opportunity at St. Thomas University exposed me to urban agriculture. I worked in the confection of pots and different types of vertical gardens in order to show that is not necessary a big garden to grow your favorite vegetables, spices, and fruits.

What is your perception of agriculture now: I have been able to experience a variety of fields that I can work with a career in agriculture, such as plant molecular biology, genomics and urban agriculture.

How has this career experience broadened your employment opportunities: These internships provided me with work experience that I can include in my resume, and also with enough professional background to excel in my future employment.

Career and research aspirations: My career aspirations are to work at a USDA station as a science research assistant while I complete my graduate studies. I would love to do research in Molecular Biology.

Skill Set: -Computer skills -languages: English & Spanish -leadership skills -laboratory skills such as microscopy -plant tissue culture -staining techniques -acid fast simple -use of scientific instruments: autoclave, pH meter -flow cytometer -gel electrophoresis -SDS PAGE -construction of organic garden

The impact of my career experience: My career experiences have given me hands on real projects, where I experienced the everyday activities that scientists undertake in a lab, and in their offices. I have been able to meet great scientists, which have advised me on the correct pathway to become one of them. At the beginning of my undergraduate studies, a career in agriculture never occurred to me. Through these career experiences and this program I learned and mastered new techniques I never thought I was going to do, such as DNA sequencing, and DNA editing. In addition, being selected for internships, travel, and community services, I have realized that this is what I really enjoy doing, and what I would love to do as a vocation and as a career,



My internship opportunity at St. Thomas University exposed me to urban agriculture. I worked in the confection of pots and different types of vertical gardens in order to show that is not necessary a big garden to grow your favorite vegetables, spices, and fruits.

Name: **Luisa Maria De Souza**
Hometown: **Habana, Cuba**
Institution: **St. Thomas University**
Campus: **Main Campus**
Rank: **Alumni**
Major: **Biology and Chemistry**
Expected date
of graduation: **Graduated August 2013**
Degree: **BS Biology and BS Chemistry**
USDA Agency
of interest: **USDA ARS Miami**
Email: **ldesouza@stu.edu**

Career experience/location: I had a research experience at St. Thomas University working in conjunction with the USDA ARS SHRS Miami station. I developed methods for polyploidy induction in *Hippeastrum*.

Description of career experience (what I learned): The research experience not only provided me with hands on setting where I was able to apply previous knowledge of chemistry, molecular biology and genetics, but also introduced me to the utilization of novel laboratory equipment such as the flow cytometer.

What is your perception of agriculture now: My internship changed my perception of the agricultural sector, from a strictly outdoors working field into a wide field of integrated sciences.

How has this career experience broadened your employment opportunities: Because the agricultural field is a large arena where several disciplines of science and research come together under a common purpose, my career experience as an FCCAgE scholar has also significantly broadened with potential future employment opportunities.

Career and research aspirations: Currently I have a BS in biology and chemistry. As part of my immediate goal I plan to embark myself on a master degree in biological sciences to later obtain a PhD in biochemistry or molecular biology.

Skill Set: -Microbiological techniques -data base mgmt. -use of autoclave, pH meter -flow cytometer -gel electrophoresis -SDS PAGE -establishing 1° and 2° cell cultures - plant tissue culture techniques -DNA extraction and purification - protein purification -computer proficiency -leadership skills -public speaking skills -plastic art skills -performing art skills

The impact of my career experience: Although most argue that education is the key to the visualization of long term objectives, I believe that hands-on experience is what lays the path for true success. Having said this, although my scholastic education in biology and chemistry it laid the groundwork for my comprehension of the theoretical and scientific phenomena, my career experience within FCCAgE has been the key factor of my success. One cannot truly measure one's knowledge unless it is tested through practical implementation. FCCAgE has provided me with experience and practice through hands-on internship opportunities that have allowed me to master and bolster my laboratory skills. In short, career experience has transformed me into a competent and competitive applicant for future educational opportunities, professions, and job opportunities.



The research experience not only provided me with hands on setting where I was able to apply previous knowledge of chemistry, molecular biology and genetics, but also introduced me to the utilization of novel laboratory equipment such as the flow cytometer.

New Mexico-Puerto Rico Natural Resource Career Tracks NRCT Program Page

Successfully preparing Hispanic students for careers in critical natural resource fields

PI: Dr. Martha Desmond

Department of Fish, Wildlife, and Conservation Ecology, New Mexico State University
mdesmond@nmsu.edu
575-646-1217

Co-PIs: Dr. Jess Zimmerman

University of Puerto Rico-Rio Piedras
jesskz@ites.upr.edu

Berlinda Baca-Sanchez

USDA Forest Service, Albuquerque
bbacasanchez@fs.fed.us

Amy Padilla

USDA Forest Service, Albuquerque
apadilla@fs.fed.us

Rick Tafoya

USDA Forest Service, Albuquerque
rtafoya@fs.fed.us

This project is a collaboration among 14 Hispanic Serving Institutions in New Mexico and Puerto Rico focusing on Climate Change and Forest Service (FS) Labor Force Track. Our main objectives center on identifying and mentoring cohorts of students in our Natural Resource Career Tracks (NRCT) Program to prepare for careers in Natural Resource Management. Students are provided a series of experiential learning opportunities appropriate for their academic level that engage them in resource management. Annual programs have included agency internships, semester research mentorships, 14 graduate students, 3 field courses, a semester exchange program between New Mexico and Puerto Rico, high school presentations and field trips, 12 workshops and trainings, and advising and tutoring. Across 2 years we have placed 111 students on internships with 91 paid for by the employer. We have sent 56 students to professional meetings and placed 53 students in semester faculty research mentorships. We worked hard this year to make our students competitive for the new PATHWAYS Program. NRCT programs result in improved recruitment, retention, academic performance and graduation rates; a greater number of students transition from 2 to 4 year institutions; and more students move directly to careers with the FS or other USDA agencies. The NRCT Program mentors a minimum of 50 students annually; however, many more students will benefit. We strive to maintain the USDA's goal of retaining 90% of program students annually and moving them to USDA career pathways.

NM-RP NRCT Eastern New Mexico University - Undergraduate Student_____

Name: **R. Matthew Gonzales**
Hometown: **Ruidoso, New Mexico**
Institution: **Eastern New Mexico University (ENMU)**
Campus: **Ruidoso Campus**
Rank: **Sophomore**
Major: **Environmental Science**
Expected date of graduation: **May 2014**
Degree: **Associates of Science**
USDA Agency of interest: **The United States Forest Service USFS**
Email: **Robert.M.Gonzales@enmu.edu**



Career experience/location: I am the President of the ENMU Phi Theta Kappa Honor Society (PTK), a member of The Wildlife Society ENMU Chapter and an ENMU-Ruidoso English Tutor.

Description of career experience (what I learned): As President of PTK I have gained leadership, organizational, networking, and communication skills. The Wildlife Society provided me with networking opportunities with wildlife professionals. Society members also helped me to understand the importance of wildlife management and conservation, particularly in the context of federal agency work.

What is your perception of agriculture now: The NRCT helped me understand how many fields of study fall under USDA, through discussing experiences with my peers in regards to their respective internships.

How has this career experience broadened your employment opportunities: Membership in the PTK National Honor Society will be reflected on my college transcript.

Career and research aspirations: As a sophomore at a two-year institution, I am seeking a university to attend that has an environmental science degree plan with an emphasis on hydrology. I am also currently searching for internship opportunities within the NRCT program. In five years I see myself finishing a graduate program, and in ten years I hope to have a career with the USDA as a Hydrologist.

Skill Set: -personnel management
-Microsoft-Office proficiency
-writing/composition proficiency
-statistical analysis -titrations -topographic-map reading -basic biology/chemistry lab procedures
-dissecting/compound-light microscope proficiency -student organizing skills -event coordination -delegation of tasks -meeting planning -fund-raising planning

The NRCT helped me understand how many fields of study fall under USDA, through discussing experiences with my peers in regards to their respective internships.

The impact of my career experience: Since my graduation from high school, I have worked in retail sales for several companies. For two of these jobs I started off as a part-time employee, but was quickly promoted to full-time and later a management position. In May of 2011, two days after returning from my honeymoon, I was laid off from my retail sales job; it was this event that made me realize that my lack of an education was limiting the number and quality of jobs I was qualified for. The following semester I enrolled at ENMU-Ruidoso and started working towards an Associate of Science degree. My experiences in the work force gave me an advantage at school, as I was already used to a rigorous workload and constant deadlines. I found my interest leaning more towards the hard sciences and that is why I reached out to the ENMU Wildlife Society Chapter. Between discussions with group members and the faculty advisor I decided environmental science was the best course. The NRCT program retreat has solidified my interest in this field, and I am looking forward to my first internship experience. I will be seeking a job as a hydrologist and I will need to continue my education; I am currently searching for a university to attend. After attaining the necessary education I hope to establish a career as a USFS hydrologist.

NM-RP NRCT New Mexico State University
New Mexico Highlands University Undergraduate Students

Name: **Marc Estrada**
Hometown: **Reserve, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Las Vegas**
Rank: **Junior**
Major: **Forestry**
Expected date of graduation: **May 2015**
Degree: **Bachelor of Science in Forestry**
USDA Agency of interest: **United States Forest Service USFS**
Email: **mde_76@yahoo.com**

Career experience/location: For the 2013 summer I worked as a Forestry Technician on a Type 6 Engine for the USDA Forest Service out of Reserve, NM.

Description of career experience (what I learned): From the experience, I have learned more about fire behavior in areas other than the Gila. I have learned some of the responsibilities of supervisors on fire incidents and have performed some of their less complex duties.

What is your perception of agriculture now: Agriculture is an integral part of the world we live in and must be cared for by knowledgeable managers.

How has this career experience broadened your employment opportunities: My experience has allowed me to further my qualifications with the Forest Service. Increasing my qualifications and experience will better prepare and present myself for future employment.

Career and research aspirations: My current goal is to finish my Bachelor's degree and obtain a Forest Service Job. I see myself attending graduate school a couple years after working. In 10 years I hope to be a permanent USDA employee as a Fire Management Officer or a Fuels Specialist.

Skill set: -Chainsaw skills -hand tool knowledge -type 6 engine skills -fire suppression skills -communication skills -computer skills -GIS skills -GPS skills

The impact of my career experience: My career experience really allows me to see what portions of my education are heavily applied, and pressures me to focus on those areas. My experiences have shown me some of the skills and knowledge that employers are looking for and how to demonstrate that you have those skills. I have also learned about the difficulty that can be presented when hiring due to competition and other factors. Through my experience, I have been able to network with other government officials, which is important when applying for job positions. I have seen and learned about current management, and have been able to brainstorm for future management that may incorporate current management while incorporating a new point of view. I hope to use my knowledge and education to better the forests that are currently being managed. I hope to work my way up the ladder, learning as much as I can on the way so that I will be well prepared for the challenges ahead of me.



Agriculture is an integral part of the world we live in and must be cared for by knowledgeable managers.

Name: **Angelica Gallegos**
Hometown: **Las Vegas, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Las Vegas, New Mexico**
Rank: **Undergraduate**
Major: **Environmental Geology**
Expected date
of graduation: **December 2015**
Degree: **Bachelor of Science**
USDA Agency
of interest: **Undecided**
Email: **teeni_tiny41@yahoo.com**

Career experience/location: This summer I was a student intern at Fort Union National Monument in Watrous, New Mexico.

Description of career experience (what I learned): Over the summer, I was able to participate in many of the park events and programs. I had the opportunity to do some GPS and GIS work around the park to create maps. I also got to create a geology site bulletin.

What is your perception of agriculture now: Agriculture is the involvement of farming, ranching, and other land use with a goal to satisfy the public interest of producing and marketing the final products.

How has this career experience broadened your employment opportunities: This career experience has helped me to be open minded and adaptable to new things. It has a connection to future employment because it allows employers to see how I work under change and pressure.



Career and research aspirations: Right now I am enjoying having a job as a Supplemental Instructional Leader for Geology 101. Not only does it allow me to work while in school, it allows me to learn new things and help others in the class as well. In the future I see myself in a stable job with a government agency working on geology research in the field and lab.

Skill Set: -Hiking -map reading -camping -manual labor -Microsoft office -GPS/GIS mapping -some rock and mineral identification -communication skills -math proficiency -self motivated

The impact of my career experience: My summer internship has impacted my life in so many ways. First, I must say that it helped with more experience in developing better people and communication skills. Although the internship was not only dealing with things that are close to my major, having a variety of tasks helped me to become adaptable to new tasks that I am faced with. I know this experience will help me with future education because it helped me to realize my true potential to deal with change and difficult situations. I also feel that having a job in a place where you have to interact with visitors and be prepared to answer questions allowed me to develop new ways of learning and understanding. I was able to remember the facts rather than memorizing them temporarily. As for the future, I know that I want to be able to work in the field doing geology, however, I also know that regardless of where I end up, I will be able to adjust and adapt to any environment and give my all do achieve any task I am given.

Agriculture is the involvement of farming, ranching, and other land use with a goal to satisfy the public interest of producing and marketing the final products.

Name: **Santiago Garcia**
Hometown: **Rowe, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Las Vegas-Main Campus**
Rank: **Sophomore**
Major: **Forestry**
Expected date
of graduation: **December 2015**
Degree: **Bachelor of Science**
USDA Agency
of interest: **Forest Service USFS**
Email: **sgarcia18@live.nmhu.edu**

Career experience/location: In my 2013 internship, I was a pre-sale timber forester trainee on the Bearlodge Ranger District, Black Hills National Forest, Sundance, WY.

Description of career experience: I learned about timber prescription work, which consisted of marking and cruising timber, conducting silviculture stand exams, and performing fuel load surveys.

What is your perception of agriculture now: I have a great passion for the outdoors and with help of the NRCT program, I see the importance of the preservation and management of our natural resources.

How has this career experience broadened your employment opportunities: Without the participation of internships and research provided to me, I would have been unsuccessful in securing an indefinite pathways position.

Career and research aspirations: My overall goal is to become a pre-sale timber forester. With my education and trainings planned, I will be successful in achieving my goal within the next few years and I hope to still be in the Black Hills National Forest.

Skill Set: -Wild land and structural firefighting -heavy equipment operation
-animal husbandry -tree thinning and felling -chainsaw operation and maintenance
-trail maintenance -fence building -welding and metal work fabrication
-ATV/UTV operation - camping/wilderness survival - timber cruising



The impact of my career experience: I am a non-traditional student that was out in the work force for 10 years prior to returning to school. I have worked in private sectors, and in the local, state, and federal government. My passion for the outdoors and the land brought me back to school. Being from New Mexico, my culture and traditions are a big part of my life. Throughout my family history, my ancestors helped with the establishment of Santa Fe, NM, and survived by using the land. My passion for the outdoors stems from these traditions and helped form who I truly am today. I have learned to use the land for fuel wood to warm my house, and to harvest herbs, plants, and animals for consumption. I enjoy living a green life and encourage others to explore a sustainable lifestyle as well. For me, working for the Forest Service is not just a job or career choice, but also a life style. During my internship I was able to use the education from NMHU and apply it to my position. The job and training taught me how to do timber prescription work like marking and cruising timber, conducting silviculture stand exams, and performing fuel load surveys. I am looking forward to going back to continue my training and becoming a certified timber cruiser.

I have a great passion for the outdoors and with help of the NRCT program, I see the importance of the preservation and management of our natural resources.

Name: **Joseph Gonzales**
Hometown: **Pecos, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Main campus - Las Vegas**
Rank: **Senior**
Major: **Forestry**
Expected date
of graduation: **December 2015**
Degree: **Bachelor of Science**
USDA Agency
of interest: **US Forest Service USFS**
Email: **joefidelgonzales@gmail.com**

Career experience/location: I worked in Laramie, Wyoming on a summer internship as a Range Technician with the US Forest Service.

Description of career experience (what I learned): While working as a range technician, I gained knowledge in land management by applying special techniques used to monitor rangelands. These techniques were setting vegetation transects to measure the production of forage and forage taken from rangelands.

What is your perception of agriculture now: Agriculture is an important factor in society and is sometimes taken for granted.

How has this career experience broadened your employment opportunities: This experience didn't just broaden my opportunities; it made me find my true interest which is to become a range technician.

Career and research aspirations: In the future I see myself working for the U.S. Forest Service as a range technician. In my given time and experience with the Forest Service I expect to gain enough knowledge to become a ranch manager and keep the land healthy and beneficial.



Skill Set: -Computer skills -certified farrier -horseback riding -ATV's -snowmobiling -welding -animal husbandry -topographic maps -compass -GPS -spot trackers -power tools

The impact of my career experience: My career experience opened my eyes and made me embrace the diverse, fluctuating ecological sites around the western United States. The hands on experience and networking through the agency were quite beneficial. It got me prepared for some classes and vice versa. My previous experiences with the U.S. Forest Service actually made me decide my major, which is Forestry (natural resources). The experience made me realize what I truly want to do after pursuing my bachelors, which is to become a range technician with the U.S. Forest Service. My long term goal is to secure a long term pathways internship and continue to further my education.

This experience didn't just broaden my opportunities; it made me find my true interest which is to become a range technician.

Name: **Lorenzo Herrera**
Hometown: **Taos, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Las Vegas, New Mexico**
Rank: **Junior**
Major: **Forestry**
Expected date
of graduation: **May 2015**
Degree: **Bachelor of Science in Forestry**
USDA Agency
of interest: **US Forest Service USFS**
Email: **Lorenzo_Herrera93@yahoo.com**



Career experience/location: The summer of 2012 I had a short term internship (STEP) with the U.S. Forest Service as a Type II Wild land Firefighter on a Type 6 engine. I was located on the Comanche National Grasslands in Springfield, Colorado.

Description of career experience (what I learned): I learned how to operate a Type 6 engine, hose lays, sharpen tools, and to use fire suppression. I learned how to use various tools such as the Pulaski, combination tool, and many more on fire assignments for specific tasks. It was a great experience and assured me that wild land firefighting is a career I would like to obtain.

What is your perception of agriculture now: My perception for agriculture relates to fire use. I have learned that fire is a great tool in sustaining a healthy ecosystem. As it is, the majority of the forests are extremely dense and the fire return interval is behind schedule. In order to have a healthy agriculture system, fire is a natural tool to continue the use of harvesting healthy crops.

How has this career experience broadened your employment opportunities: This experience has proved to me that obtaining a career in fire is what I want for a future occupation. The networking and hands on experience is what influenced me in firefighting. There is always something new to learn about fire behavior. This experience gave me the opportunity to explore many different ecosystems and view how fire affects them. Working with the Forest Service was a great experience and I hope to have many more.

Career and research aspirations: I currently want to continue firefighting as a career. I see myself in 5 years as a full time, type I firefighter. There is much to learn and I hope that I will know enough to return the favor in teaching others about fire behavior. In ten years I see myself as a boss of any position such as an engine boss, firing boss, task force leader, or any leadership that is available in fire. Towards the end of my career I would like to achieve to level of being a fire management officer

My perception for agriculture relates to fire use. I have learned that fire is a great tool in sustaining a healthy ecosystem.

Skill set: -Microsoft Office -PowerPoint -fire software programs such as Behave Plus version 5.0 -fire monitoring -plots looking at tree data -vegetation -soil data

The impact of my career experience: My experience has influenced me in continuing my education in fire behavior and forest management. There is never enough to know about fire behavior. I want to continue my education so that in my future I will be able to educate others who obtain a career in fire. I want to achieve employment with the USFS in fire because I enjoy the task of fire suppression in managing for healthy forests and ecosystems. I grew up surrounded by forests and it's always been a dream to help manage these forests. My past generations have viewed the land as the reason to our life's existence. My goal is to manage the forests in the most beneficial and efficient way possible. In doing that, furthering my education is important so I can learn how different ecosystems operate. Fire is a tool but may not be needed in certain types of ecosystems. Knowing when and where to use this tool is extremely important in managing a forest. Learning more about fire on a daily basis is what keeps my interest. Someday I will come up with my own ideas and understanding of fire behavior. In order to do that, continuing in my career path is necessary.

Name: **Juan Jauregui**
Hometown: **Sapello, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Las Vegas, New Mexico**
Rank: **Senior**
Major: **Forestry**
Expected date of graduation: **December 2014**
Degree: **Bachelor of Science in Forestry**
USDA Agency of interest: **US Forest Service USFS**
Email: **juanjauregui62@yahoo.com**

Career experience/location: This was my second summer working with the USDA-USFS on the Carson National Forest out of the Canjilon Ranger District. I have a long-term pathways position and my current title is a Forestry/Fuels Student Trainee.

Description of career experience (what I learned): I learned about the National Environmental Policy Act (NEPA), how to use GPS units, mark timber and fuel wood units, fight fires, techniques of disposing limbs in thinning projects, utilize a chainsaw, and the how to remove and identify hazard trees.



What is your perception of agriculture now: My viewpoint on agriculture has increased since working for the Forest Service. Trees can be grown as a crop and harvested on a rotation just like farming. So in a sense I helped farm throughout my summer, on a large scale with a very different crop.

How has this career experience broadened your employment opportunities: Hands on experience is way better than just learning something from a textbook. I was able to implement what I have learned in class out in the field and get paid for it. This experience has made me more marketable because I gained new skills in the workplace that I can utilize in the future.

Career and research aspirations: At NMHU I have been involved in research for the past four years, regarding low cost soil amendments and deep seed planting. This research gives me the opportunity to work in the greenhouse and conduct science experiments where I am constantly replicating experiments and changing one variable at a time. Knowing this research can solve potential hunger problems in desert areas, where there is very little water and poor soils, excites me. That is my inspiration to continue research while in school. After my bachelor's degree I intend to pursue a Master's degree. Then I intend to work for the USFS on the Carson Nation Forest in Northern NM, eventually working my way up the ladder towards a District Ranger Position.

My viewpoint on agriculture has increased since working for the Forest Service. Trees can be grown as a crop and harvested on a rotation just like farming.

Skill Set: -GPS Units; Trimble and Garmen -Microsoft Excel -PowerPoint -fluent Spanish -fight wild land fires -welding capabilities -fence building -public speaking skills

The impact of my career experience: My career experiences have taught me a lot. My decision of pursuing a Master's came after talking to fellow employees and professors. I knew education is important but I didn't completely realize how beneficial a Master's can be in pursuing my long-term objectives with the USFS. Moving up in the Forest Service takes time and both education and experience can only help in preparing me for it. I am not sure how far up I intend to go up with the Forest Service, but for right now I am satisfied with continuing my education and obtaining as much hands on experience as possible.

Name: **Rose Peralta**
Hometown: **Albuquerque, NM/Denver, CO**
Institution: **New Mexico Highlands University**
Campus: **Las Vegas, New Mexico**
Rank: **Senior**
Major: **Forestry**
Expected date
of graduation: **May 2014**
Degree: **Bachelor of Science in Forestry**
USDA Agency
of interest: **US Forest Service USFS**
Email: **rperalta1@live.nmhu.edu**



Career experience/location: I was a field intern with the Hermit's Peak Watershed Alliance (HPWA) in Las Vegas, NM. The Gallinas watershed, Sapello Watershed, and Tecolote Watershed were the primary locations.

Description of career experience (what I learned): We conducted geomorphologic, abiotic, and biotic measurements of the Gallinas River and wetlands in the Gallinas Canyon, in order to assess the conditions of the watershed. This data will later be used to implement restoration projects in the area. With this opportunity I was able to network within the community and also with the NM Environmental Department in Santa Fe. Working with HPWA has taught me fundamentals of watershed health and sustainability.

What is your perception of agriculture now: Agriculture is a necessity and a stepping stone to a complex network, which needs a more sustainable method in order to continue to feed the now approaching 9 billion people on the planet.

How has this career experience broadened your employment opportunities: I am committed to be actively involved in the restoration of highly altered areas, and after restoration to assist with habitat conservation in order to maintain and manage the land efficiently. I feel my work with Hermit's Peak Watershed Alliance has prepared me pursue these opportunities.

Career and research aspirations: My short term educational goals are to excel in all my classes and keep on course to graduate in 2014, and further pursue a Master of Science degree in Wildlife Biology. With this, I have set a long-term goal to acquire a career in forestry with a wildlife concentration in conservation. My goals are to work directly with conservation of wildlife through various restoration treatments of impacted areas. Such projects include researching animals in their natural habitat in order to develop effective management plans to maintain their populations and increase diversity.

Agriculture is a necessity and a stepping stone to a complex network, which needs a more sustainable method in order to continue to feed the now approaching 9 billion people on the

Skill Set: -Geographical Information Systems -SPSS -plant identification -hydrology techniques -computer skills -computer programming -geomorphological techniques -Garmin/Trimble -vegetation transects -restoration techniques -microbiological techniques -stand management -stand surveying -telescope -clinometer -prism -compass

The impact of my career experience: My passion for wildlife and environmental conservation has led me to believe that the right dose of environmental management is essential so that future generations may experience all the beauty and wonders of the world. The research and work that I have performed has given me experience and knowledge in environmental science, increasing my understanding of environmental processes. Additionally, it has inspired me to continue to excel in every project with determination and dedication. For example, my work with the Hermit's Peak Watershed has benefited me not only with professional experience in my direct field, but also provided me with opportunities to develop strategies for involving community members with watershed health and restoration projects.

Name: **Justin T. Saiz**
Hometown: **Rociada, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Las Vegas, New Mexico**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **May 2014**
Degree: **Bachelors**
USDA Agency
of interest: **US Forest Service USFS, Fish and Game USFG**
Email: **justinguns@yahoo.com**

Career experience/location: I worked this summer on a Type 6 Wild Land Fire Engine in Laramie, Wyoming, as well as on a hand crew out of the Pecos/Las Vegas Ranger district.

Description of career experience (what I learned): What I have learned in my most recent fire job was how to operate and maintain a type 6 engine. I also had the ability to learn more as a sawyer and take leadership classes to further my leadership abilities.

What is your perception of agriculture now: What you hear and what is actually true and going on can be completely different some times.

How has this career experience broadened your employment opportunities: By working in my past summer position I was able to get a better understanding of how things work in the fire world, but not so much about what my actual interests are.

Career and research aspirations: I am planning on completing my undergraduate degree this spring and starting a Master's degree in the fall. I hope to be conducting field research after that, and possibly in the next five years be in a Ph.D. program. I am hoping to conduct a long term study on the demographics of snakes like my mentor has done.



Skill Set: -Operating chain saws -Combat Life Save -currently a NCO in the military -carpentry -computers -physical labor -building fences -operate heavy equipment including semi -shooting -lab and field research skills

The impact of my career experience: From my current career experience I have been able to gain more knowledge and experience in the fire world. I have had opportunities to fight fire on a hand crew as well as an engine for a summer. After being in fire for four years now, I have some idea about how things function and whether or not I would like to make it a career choice. Even though my interests are in wildlife, fire has afforded me educational opportunities as well as another outlook as to how government operations happen at a different level.

By working in my past summer position I was able to get a better understanding of how things work in the fire world, but not so much about what my actual interests are.

Name: **Steven A. Salinas**
Hometown: **Ribera, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Main**
Rank: **Junior**
Major: **Biology**
Expected date of graduation: **May 2015**
Degree: **Bachelor of Science**
USDA Agency of interest: **All**
Email: **ssalinas@live.nmhu.edu steven_bacon_basketball@hotmail.com**

Career experience/location: I was an assistant for Biology Master's students at NMHU, working under Dr. Jesus Rivas and graduate students Molly Wright, Robert Ortega, Jose Griego, Casey Taylor, and Jennie Guilez. Locations worked include Raton, Rio Mora Wild Life Refuge, New Mexico Highland University, and Ribera, NM.

Description of career experience (what I learned): I learned how to use various lab equipment and became more familiar with the anatomy and telemetry of bullfrogs, leopard frogs, crayfish and bears.

What is your perception of agriculture now: Agriculture is an abused and misunderstood resource that we the students need to save for the future.

How has this career experience broadened your employment opportunities: I believe the hands-on field aspects of this job have given me the opportunity to see and get a feel for animal field work. This could possibly lead to a job as a biologist in the field of zoology. Regardless, it's pointing me toward working with animals.

Career and research aspirations: In two years I see myself finishing my undergrad with a degree in biology. In 4 years I see myself with my masters in biology. In 5 years I see myself in a doctoral program or applying for doctorate programs in biology and animal related fields. In ten years I see myself working for an organization where I can help work with and protect animals, hopefully at a zoo.



Skill Set: -Computer skills (Excel) -biological techniques (anatomy, sexing, dissecting) -data base management -field work experiences

The impact of my career experience: This job will impact my career choices because it let me get a hands-on feel to a wide variety of animals. It taught me that working with animals can have intense work schedules such as 8-am to 4 am, and then helping someone else the next day. It made me stronger with pack abilities, and smarter with nature. It really has opened several doors and I hope I find the perfect one suiting all of my needs.

This job will impact my career choices because it let me get a hands-on feel to a wide variety of animals. It taught me that working with animals can have intense work schedules such as 8-am to 4 am, and then helping someone else the next day.

Name: **Rebecca Vigil**
Hometown: **Albuquerque, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Las Vegas, New Mexico**
Rank: **Senior**
Major: **Forestry**
Expected date
of graduation: **May 2014**
Degree: **Bachelor of Science**
USDA Agency
of interest: **US Game and Fish USFG**
Email: **rvigil65@live.nmhu.edu**

Career experience/location: I participated in an internship with the Hermits Peak Water Shed Alliance in Las Vegas, NM. Their mission statement is as follows: “Hermit’s Peak Watershed Alliance is to foster land stewardship to ensure the long-term vitality of the human and natural communities of the Hermit’s Peak region, specifically the Gallinas, Sapello and Tecolote watersheds”.

Description of career experience (what I learned): Through my work with this amazing non-profit organization, I was able to receive skills that I know will assist me in my career. These skills included how to assess rivers and wetlands, along with restoration methods and their proper implementation.

What is your perception of agriculture now: I had a vague understanding of how a watershed functions and its importance prior to this internship. Now I have the knowledge and appreciation of how to assess wetlands and rivers and also educate people about them.

How has this career experience broadened your employment opportunities: This experience was highly rewarding and served to provide me with a different view of the possibilities that science can offer. It also helped me reinforce my drive and love for my field and career choice.

Career and research aspirations: My immediate educational goals include obtaining a BS degree in the Forestry department, as well as obtaining the skills I require to pursue a career in this field. My overall long term goal is to establish a career in research while continuing my education towards my doctorate.

Skill Set: -Data gathering -classification -social skills -laboratory techniques -critical thinking -problem solving -reflective thinking -determination -statistical analysis -computer use -writing skills -identification of plant and insect life -resource management training

The impact of my career experience: I would like the opportunity to be able to enjoy many different experiences, whether they are continual lab work, field work, or just the benefit of learning from professionals within the field of natural resource management. I believe I will not only be able to obtain the previously mentioned skills and experience, but above all that I stand to gain leadership and establish professional connections. These things impact my drive towards higher education and they give me the confidence and the tools to look forward. They affect my possibilities for employment by expanding my horizons and extending my network of professionals.



I had a vague understanding of how a watershed functions and its importance prior to this internship. Now I have the knowledge and appreciation of how to assess wetlands and rivers and also educate people about them.

NM-RP NRCT New Mexico State University
New Mexico Highlands University Graduate Students

Name: **Geno Castillo**
Hometown: **Las Vegas, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Las Vegas, New Mexico**
Rank: **Graduate**
Major: **Natural Sciences; concentration in Geology**
Expected date of graduation: **May 2015**
Degree: **Master of Science**
USDA Agency of interest: **Geology**
Email: **gcastillo@live.nmhu.edu**

Career experience/location: This summer I worked on my Master Thesis in New Mexico.

Description of career experience (what I learned): This summer I learned how igneous intrusions formed and what minerals are in the rocks.

What is your perception of agriculture now: Agriculture is very important, and people need to both appreciate and take care of it.

How has this career broadened your employment opportunities: This career experience has given me more knowledge about igneous intrusions and how they are formed. This experience will help me obtain a future position with the USDA.

Career and research aspirations: I want to be able to obtain a long-term job with the United States Department of Agriculture.

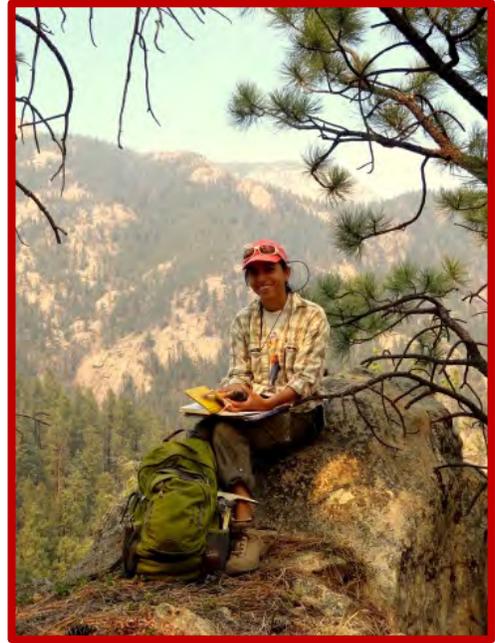
Skill Set: -Reading a map -GIS -Microsoft Word -Microsoft Excel -Microsoft PowerPoint -hiking and camping -leading other people

The impact of my career experience: The career experience I completed has allowed me to be more proficient in my study of geology. I was able to work on a project that has never been studied before by any scientist. That is indeed a great honor. I want to thank the USDA NRCT program for funding me in my Master Thesis research.



Agriculture is very important, and people need to both appreciate and take care of it.

Name: **Danielle Cedillo**
Hometown: **Salina, Kansas**
Institution: **New Mexico Highlands University**
Campus: **Main Campus - Las Vegas**
Rank: **Graduate**
Major: **Natural Sciences; Concentration in Geology**
Expected date of graduation: **May 2014**
Degree: **Masters of Science**
USDA Agency of interest: **United States Forest Service USFS**
Email: **dcedillo_615@hotmail.com**



Career experience/location: During the summer of 2013, I worked on my thesis research on Hermit's Peak, northern New Mexico, funded by the USDA via the NRCT program.

Description of career experience (what I learned): I primarily did field work, which involved measuring structures with a Brunton compass; marking waypoints; collecting samples for petrography and geochronology; and geologic mapping. When not doing field work, I was managing my data in excel and ArcGIS, cutting rock chips, and analyzing thin sections.

What is your perception of agriculture now: I once thought agriculture involved farming and ranching only, but have discovered that it encompasses many more disciplines that we all depend on for resources.

How has this career experience broadened your employment opportunities: Through this experience, I am closer to gaining my master's degree and more proficient in research related skills. This in turn, opens more doors for career options to me.

Career and research aspirations: My current career outlook is quite open-minded. After graduate school I will be looking for a position with the USFS, at a research center, or in the private sector. In 5 years I hope to be looking for a long term position and in 10 years either climbing the ladder towards a management position or considering pursuing my Ph.D.

Skill Set: -MS office -ArcGIS -ERDAS Imagine -golden surfer -total station
-auto leveler -magnetometer -flow discharge meter -livingstone drive rod piston corer -Garmin/Trimble GPS -manual transmission -chainsaw -crosscut saw

I once thought agriculture involved farming and ranching only, but have discovered that it encompasses many more disciplines that we all depend on for resources.

The impact of my career experience: Working on my thesis research as an internship has its obvious benefits, including that it pushed me closer to receiving my degree. I gained valuable skills in the areas of field geology, time management for a project, data management, and structural analysis techniques. These skills will be carried on to my future job positions in natural resource management. Working in an outdoor setting and building pride for my project has further reminded me of my passion for protecting our environment and why I am seeking a career in natural resource management. I do not have any specific career goals at this time, but I hope to have the opportunity to work in a variety of positions before deciding on a long-term career. This experience has indirectly helped guide me down the right path and eliminated options that aren't right for me. In the long term I hope to have a job that I enjoy and am proud of, along with a close connection to the local community regarding my work and environmental protection actions.

Name: **Elyssa Duran**
Hometown: **Cuba, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Las Vegas**
Rank: **Graduate**
Major: **Life Science**
Expected date
of graduation: **May 2015**
Degree: **Master's of Life Science**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS,
United States Forest Service USFS**
Email: **eduran16@live.nmhu.edu**



Career experience/location: This summer I was an NRCS Soil Conservationist at Fort Morgan, CO.

Description of career experience (what I learned): I was familiarized more with NRCS cost share programs and their implementation, including contract applications, rules and guidelines, and funding periods. I also improved mapmaking skills utilizing Toolkit and ArcGIS. ProTracts, as well as other important databases and software programs were also used.

What is your perception of agriculture now: Agriculture is far more intricate than I previously realized. Farmers are pressured for production, if not for actual production, for profit in order to survive.

How has this career experience broadened your employment opportunities: This internship allowed me to gain experience outside my field of study and was a diverse experience that made me better-rounded, thus a more valuable employee. Having diverse experience makes me more competitive while applying for jobs.

Career and research aspirations: My current career aspirations include maintaining a long-term internship position with the NRCS or other federal agency. I hope to acquire a position as a GS-9 upon completing my Master's degree. I would like to advance quickly, but also receive adequate experience and training in any position I might assume. I can only hope that opportunities for different types of work will present themselves, anything from: GIS, remote sensing, fire management, timber, fuels, and NEPA. In ten years I see myself in a leadership position within a federal agency.

Agriculture is far more intricate than I previously realized. Farmers are pressured for production, if not for actual production, for profit in order to survive.

Skill Set: -Bilingual (English/Spanish) -basic computer skills -ArcGIS -ArcMAP -Toolkit -ProTracts -type 1 Firefighter Qualified -water lab equipment operation -defensive driving certified -natural resource inventory experience

The impact of my career experience: My career experience has brought to life the aspects of natural resource management that we talk about in the classroom. The internships I have had have shown me that different techniques and practices aid better in some regions than they do in others. Resource management is local. Having moved around a lot, it has made me a versatile, flexible, adaptive person. Also having had various supervisors, I've learned that every supervisor and their expectations vary. Learning this early on is perhaps one of the most valuable lessons to be learned through internships, for leadership and colleagues change quite often. You must be able to transition well after any changes that may occur. My career experience has allowed me to get a good idea of what aspects of the job position I really enjoy and have no problem with, and also those that I also need to improve on. My career goals include securing a full time permanent position with a federal agency in the management of natural resources, specifically in the Forestry and Fire Management aspects. Along with that, my long term objectives include making learning a life-long priority in my career, as resource management is ever changing.

Name: **Benjamin Gonzales**
Hometown: **Las Vegas, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Las Vega, New Mexico**
Rank: **Graduate Student**
Major: **Natural Resource Management-Soils**
Expected date
of graduation: **May 2015**
Degree: **Masters of Science in Natural Science**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS**
Email: **bgonza41@live.nmhu.edu**

Career experience/location: During the Summer 2012 I worked with the Forest Service in Boulder, CO. This past summer, 2013, I worked with the Hermit's Peak Watershed Alliance.

Description of career experience (what I learned): Virtually all environmental issues are human induced, "an ounce of prevention is worth a pound of cure", an old adage that applies to modern practices. Human presence alone has created opportunities for students like me, who are passionate about the environment and its resilience.

What is your perception of agriculture now: I perceive agriculture as an inevitable occurrence in civilization. Our innate greed and desire for instant gratification however, often trumps our ability to manage lands effectively.

How has this career experience broadened your employment opportunities: My career experience has helped me be more willing to seek advice, collaborate with others, and take risks. I gained experience in a wide variety of work environments and scenarios, which has increased my confidence during interviews and actual employment.

Career and research aspirations: My goal is to work as a Soil Scientist with NRCS. I would like to develop strategies to combat erosion and desertification in the Southwest that would be beneficial to governing bodies, farmers and ranchers, and private landowners.

Skill Set: -Soil analysis -plant identification -vegetation surveys -stream morphology -wetland assessment
-macro invertebrate identification -Auto CAD -GIS

The impact of my career experience: My career experience has allowed me to develop as an individual, and also as functioning member of my community. As a native of the region, I have witnessed the extremes that the high desert has to offer. In this respect, I have also learned how important the land is to subsistence, particularly in Northern New Mexico. As the Western U.S. develops, our strategies and practices will have to meet and exceed the stresses involved. I hope to play a pivotal role in this transition.



I perceive agriculture as an inevitable occurrence in civilization. Our innate greed and desire for instant gratification however, often trumps our ability to manage lands effectively.

Name: **Jennie Guilez**
Hometown: **Las Cruces, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Las Vegas, New Mexico**
Rank: **Graduate**
Major: **Natural Sciences; concentration in
Environmental Science & Management**

Expected date
of graduation: **May 2014**
Degree: **Master of Science**
USDA Agency
of interest: **US Fish and Wildlife Service USFWS**
Email: **jenn_92185@yahoo.com**

Career experience/location: I have been lucky enough to spend my summer performing my master's thesis research at the Rio Mora Wildlife Refuge in northeastern New Mexico.

Description of career experience (what I learned): I earned several techniques involving mark and recapture methods, becoming familiar with aquatic fauna by identification, and taking morphological data. I have been using instruments for pit tagging, scales and tools for taking lengths and widths of animals, and capture methods which include using baited minnow traps.

What is your perception of agriculture now: From previous internships I have come to the understanding that the USDA is a natural resource and multi land use organization.

How has this career experience broadened your employment opportunities: As a natural resource management student, this experience directly influences the field of work I would like to be involved in. I am interested in preserving natural resources with as little human influence as possible.

Career and research aspirations: I would like to provide my time to conservation efforts. With an increase in human influences, I am interested in the interactions between multiple invasive and native species alike. In the near future I would like to be working with an agency that has specific goals of preserving ecosystems for what they are and what they can be in regards to each situation.

Skill Set: -Field research- leadership -communication -animal care
-backpacking -hiking -camping -data base management -computer skills

The impact of my career experience: As an undergraduate I had the opportunity to work with several professors in the field of research. This provided the motivation to continue my degree in biology. As my career progressed, I was able to work for the USFS in the summer of 2012 where my love for the outdoors increased. It was then that I decided to continue my education in natural resource management and I enrolled for classes the following semester. With the help from the NRCT program I have been able to continue my research for my master's thesis throughout the summer of 2013 and I am currently on the last leg of my research. In the months that follow I will be working on my thesis and my expected graduation date is May 2014. Upon graduation I hope to obtain a job in the field of wildlife and natural resource conservation.



As a natural resource management student, this experience directly influences the field of work I would like to be involved in. I am interested in preserving natural resources with as little human influence as possible.

Name: **Robert E. Ortega**
Hometown: **Mora, New Mexico**
Institution: **New Mexico Highlands University**
Campus: **Las Vegas, New Mexico**
Rank: **Graduate**
Major: **Natural Sciences; concentration in
Environmental Science and Management**

Expected date
of graduation: **May 2014**
Degree: **Master of Science**
USDA Agency
of interest: **US Forest Service USFS**
Email: **rorteg10@live.nmhu.edu**

Career experience/location: This summer I conducted research at the Rio Mora National wildlife Refuge as part of my graduate program of study at New Mexico Highlands University.

Description of career experience (what I learned): I learned different field sampling methods for sampling amphibians. I conducted call surveys, mark and recapture surveys, day surveys, night surveys, and telemetry surveys on frogs. I also learned how to process frogs for biometric data and use pittags and elastomer tags for marking frogs.

What is your perception of agriculture now: Agriculture is the key stone in our modern civilization, which is so often overlooked as a career. Our growing civilization could not be maintained without modern agriculture.

How has this career experience broadened your employment opportunities: This experience gave me a better understanding of the requirements and dedication, which are necessary in conducting field research. This opportunity has strengthened my skill set and made me more diverse individual.

Career and research aspirations: I want to obtain a research position with the United States Department of Agriculture.

Skill Set: -GPS -Trimble's -hiking -camping -GIS -manual labor -amphibian surveys -biological range surveys -chitrid sampling -electroshocking -fish holding unit construction -fish stocking -fish handling -animal husbandry -computer skills

The impact of my career experience: My research experience over the summer helped me to see that I want a career in research. I was able to monitor the population of amphibians and had to deal with tricks Mother Nature unleashed. I saw how research has to evolve and change in order to achieve its goals. I presented my research at the joint meeting of herpetology and ichthyology, which gave me valuable insight into the world of research. I realized further graduate course work is needed to fulfill my goals of obtaining a research position with the United States Department of Agriculture.



Agriculture is the key stone in our modern civilization, which is so often overlooked as a career. Our growing civilization could not be maintained without modern agriculture.

NM-RP NRCT Inter-American University of Puerto Rico Bayamon Undergraduate Students

Name: **Erik Calderón-Dávila**
Hometown: **Puerto Rico**
Institution: **Inter-American University of Puerto Rico**
Campus: **Bayamon**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **May 2015**
Degree: **Undergraduate**
USDA Agency
of interest:
Email: **erik.bassoon@gmail.com**

Career experience/location: I worked in the US Fish and Wildlife Service at the Island municipality of Vieques, Puerto Rico, in which my Internship was conducted.

Description of career: I learn new thing, such measuring sea turtles, and the correct use of tools at an emergency and the maintenance of official vehicles. I work with endemic endangered plants; how to plant and having care of them. Taxonomy of different organism: Birds, reptiles and plants.

Perception in Agriculture: In agriculture area I work in a greenhouse spreading seeds and learning how to plant. I helped to reforest area in collaboration with other agencies Thanks to this internship in the FWS I could learn and focus what I really want to do in the future. All my research and studies help me to take advantage of the internship.

Career and Research: One of my biggest goals or the most important thing in my life is to complete my studies to provide a high quality work to any nation. I aspire to be a professional worker in the field, working directly with bats and how they help agriculture with the role that they develop in the environment.

Skills: In my case I learned many skills such: -estimate birds population -plant in sand -monitoring sea turtle nests -birds taxonomy -use official vehicle -punctuality and responsibility in every work assigned

Since I started in the Inter American University of Puerto Rico I have been working on the field. Most of my work that I realized is with bat. One of the prolonged researches with bat is now about to be publicized: The Role of *Artibeus jamaicensis* and *Brachyphylla cavernarum* in the Dispersal of the endangered *Stahlia monosperma* in Puerto Rico. My future plans are to be able to conclude my undergraduate studies to continue with my graduate and doctoral studies in ecology. I have been in many symposiums where I have met many people that helped me to guide and head me to my goal. I met different staff of the department of interior which help me and headed mi more to the many agency of the department too. Thanks to my first internship with the FWS now I have a high quality of work. That helped me to be a more social person, more disciplined, and a better candidate for future jobs. Finally I am glad of this program that helped me to expand my horizons to new opportunities.



In agriculture area I work in a greenhouse spreading seeds and learning how to plant. I helped to reforest area in collaboration with other agencies Thanks to this internship in the FWS I could learn and focus what I really want to do in the future.

Name: **Luis O. Marrero Ramos**
Hometown: **Dorado, Puerto Rico**
Institution: **Inter-American University of Puerto Rico,**
Campus: **Bayamon**
Rank: **Undergraduate**
Major: **General Biology**
Expected date
of graduation: **May 2015**
USDA agency
of interest: **Agricultural Research Service ARS**
Email: **luiso.ramos@live.com**

Narrative: I am from the island of Puerto Rico. I have always been fascinated by nature and the outdoors. This fascination grew more intense as I pursued a degree Biology in the Inter-American University of Puerto Rico, Bayamon Campus. I am interested in a career with the USDA as an Entomology researcher that focuses on agriculture protection from invasive insect species. I have done volunteer work with USDA APHIS where I assisted in collecting and classifying insect specimens in the field. I also participated in an internship at the USDA ARS Horticultural Research Lab in Ft. Pierce, Florida working with monitoring of citrus pest using pheromones. Through my work experience I have seen that the field of Agriculture is really important for our everyday life. These experiences have influenced my future career goals, I started without really knowing what to do after I graduate and now I have a clear goal of what I want to do with my life. For the future I want to have a PhD in Entomology, hopefully in about 5 years I can start my Doctorate degree in a University in the United States. My skills involve – Computer Skills – Statistical analysis – DNA extraction – PCR amplification – Microscopy – Insect classification – Wet/Dry insect preservation – Insect dissection & slide mounting – Behavior analysis of ants – Animal sampling and handling – Photography. My work experience has taught me a lot and has inspired me to carry on this path. It has impacted me in many ways and has influenced my future goals in life. I want to work in Agriculture and my experiences in research and in internships have helped me define that goal. I am willing to work hard for this goal. There is still a long way to go and there are many areas for me to explore within this particular field, but I am really excited and eager to learn everything I can from my work experiences.



Through my work experience I have seen that the field of Agriculture is really important for our everyday life. These experiences have influenced my future career goals.

Name: **Kevin Gabriel Martes Román**
Campus: **Universidad Interamericana**
Rank: **Senior**
Major: **Environmental Science**

Narrative: Kevin G. Martes Román (1988, Bayamón, Puerto Rico) is an environmental science student in the Bayamon Campus of the Interamerican University of Puerto Rico. He has a short career in architectural design and in addition to his major degree he is doing two minors in chemistry and biology. He serves as a volunteer at the Manatee Conservation Center of Puerto Rico. Where he has been conducting management and capture of marine mammals, necropsies, aerial surveys, building transmitters and control of water quality. He also participated in an internship with the Forest Service Wilderness Ranger serving at the Black Hills National Forest in South Dakota. In the internship he received training in chainsaw, crosscut, first aid and CPR. In addition to receiving knowledge and practice in the management of natural resources.

He serves as a volunteer at the Manatee Conservation Center of Puerto Rico. Where he has been conducting management and capture of marine mammals, necropsies, aerial surveys, building transmitters and control of water quality.



NM-RP NRCT Inter-American University of Puerto Rico
Bayamon Graduate Students

Name: **Carlos A. Ortiz-Alvarado**
Hometown: **Toa Alta, Puerto Rico**
Institution: **Inter-American University of Puerto Rico**
Campus: **Bayamón**
Rank: **Masters**
Major: **Biology with a concentration in Naturals Sciences**
Expected date of graduation: **December 2014**
Degree: **Masters in Science**
USDA Agency of Interest: **HORT's Lab, Florida**
Email: **cortiz3515@gmail.com**

Career experience: Internships at UIA-PR (2010-2011) studying relationship between hormone levels, gene expression and defensive behavior; Internship at Florida's Horticulture lab (2013) working as a lab technician.

Description of career experience: Out of all those experiences, I mostly learned molecular laboratory techniques (PCR, RealTime PCR, DNA /RNA extraction, Electrophoresis, Transformation) and statistical analysis (Sampling, Data collection, Statistical tests) and how to apply both of them for environmental research.

What is your perception of Agriculture now: Agriculture is more than planting and harvesting, is a complicated network of sciences that work together to improve the standing of our natural resources.

How have these career experiences broadened your employment opportunities: These experiences have entrusted me with the tools to apply for Grad school and serve as the basic steps to develop a research Thesis.



Career and research aspiration: My current field of interest is Sociogenetics, the association of social behavior to gene expression, extending to Environmental-Genetic interactions. Mainly, I wish to continue through this line of research to work on the impact of social insects on agriculture through molecular analysis. In five years I hope to be working on my PhD degree and in 10 years I wish to be working in Academics with a research Lab.

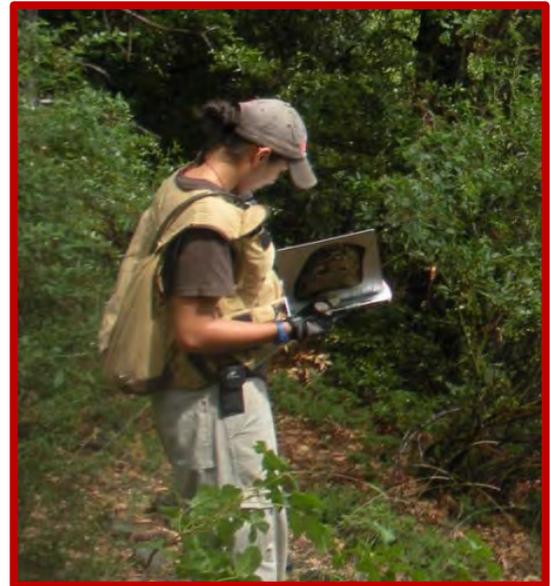
Skills set: Fluent in Spanish -fluent in English -computer skills (Word, Excel Power Point) -molecular techniques -field techniques -mathematical and statistical analysis skills -chemistry techniques

The impact of my career experience: My previous and current research background, coupled with my work as a tutor of Biology and Mathematics and Teacher's Assistant of Zoology and Botany laboratories, have motivated me to pursue graduate studies and a career in Academics and research. As a Hispanic, I feel I can reach towards new students, primarily minority students, and encourage them to continue through the path of scientific research. This way, not only could I impart what any scientific knowledge I have come to have, I could contribute and impact the preparation of new generations of scientists and introduce them to the scientific community.

Agriculture is more than planting and harvesting, is a complicated network of sciences that work together to improve the standing of our natural resources.

NM-RP NRCT New Mexico State University - Las Cruces Undergraduate Students _____

Name: **Naomi Apodaca**
Hometown: **Las Vegas, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Senior**
Major: **Wildlife Science**
Expected date
of graduation: **December 2014**
Degree: **Bachelor of Science in Agriculture**
USDA Agency
of interest: **United States Forest Service USFS, US
Fish and Wildlife Service USFWS**
Email: **naomiapodaca@yahoo.com**



Career experience/location: I was a Wildlife Technician for the United States Forest Service in Georgetown, California on the El Dorado National Forest.

Description of career experience (what I learned): During this internship I had the opportunity to experience doing field work conducting surveys, and utilizing GPS and map-and-compass method for navigation in rough terrain. I was also introduced to using ArcGIS, and protocol for data collection and hiking in extreme terrain.

What is your perception of agriculture now: I have learned that agriculture plays an extremely important role in the conservation and mitigation of important resources we rely on.

How has this career experience broadened your employment opportunities: This opportunity has enabled me to acquire skills necessary to those needed when being considered for a career in this field of study. I was also able to meet people that may be a valuable resource for finding a career with the Forest Service in the near future.

Career and research aspirations: I am currently working on my own research with Burrowing owls and I am hoping that my research contributes to the body of knowledge about these birds. Upon graduation I would like to find myself a career with the Forest Service, Fish and Wildlife Service, or any service within the USDA doing research or biological evaluations. I am interested in the research side and I can see myself conducting my own research with birds. In ten years I can either see myself doing research, teaching, or continuing a career with the Forest service as a Wildlife biologist.

Skill Set: -Horseback riding -4X4 vehicle/ATV operation
-hiking in extremely difficult terrain -topographic map reading
-using map and compass navigation -Garmin GPS units -radio telemetry -camping -manual labor -Bandit software -Microsoft Office

I have learned that agriculture plays an extremely important role in the conservation and mitigation of important resources we rely on.

The impact of my career experience: This experience was helpful in that it broadened my knowledge about the Forest Service, how it works, benefits for employees, and what kind of skills and critical thought goes into being able to perform well in a wildlife position. This job motivated me to want to pursue a Masters in Wildlife Science and possibly a Doctoral degree. I really enjoyed working on the Georgetown district and I learned a lot of valuable information from my team and other colleagues. This job also motivated me to want to study other disciplines that are related to wildlife and the Forest Service in general. I would like to return to work for the Forest Service as a permanent employee once I have finished my educational goals.

Name: **Isidro Barela**
Hometown: **Belen, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Senior**
Major: **Wildlife Science**
Expected date
of graduation: **December 2014**
Degree: **Bachelor of Science**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **ibarel01@nmsu.edu**

Career experience/location: This summer I worked as a field technician with a graduate student who was working on his master's thesis in the Carson National forest, New Mexico.

Description of career experience (what I learned): During this career experience I have learned how to effectively and efficiently conduct vegetation surveys. I gained experience in data collection along with interacting and working with private land owners and natural resource agencies.

What is your perception of agriculture now: Agriculture is an invaluable natural resource that is taken for granted and needs to be conserved for life to continue to strive.

How has this career experience broadened your employment opportunities: This career experience has demonstrated to me what is needed to succeed in a research field and has taught me how to effectively conduct field work. By gaining valuable field work experience, this opportunity has definitely broadened my employment opportunities within the natural resources field.

Career and research aspirations: I would like to pursue a career in a natural resource agency, preferably with the United States Forest Service as a Wildlife Biologist.

Skill Set: Field surveys -data collection -vegetation sampling -GIS -map reading -hiking & backpacking skills -Microsoft office -welding -chainsaws -plant and grass keying and identification -ATV's -off-road vehicles, standard and automatic - Extended stay camping - First Aid certified - Horseback riding – construction - GPS units -vegetation planting, harvesting, and removal -laboratory techniques -microscopes -presentations -public interactions -computer skills -plant pressing and mounting -handling various animal species -handling preserved museum specimens -working with livestock -manual labor

Agriculture is an invaluable natural resource that is taken for granted and needs to be conserved for life to continue to strive.

The impact of my career experience: My career experience has shown me what to expect and what is expected for me to succeed in this field. I have experienced the pros and cons that come with conducting field surveys, giving me a glimpse of what my future has in store for me. The knowledge and experience gained from this career experience has increased the opportunities and has expanded my appreciation and respect for this side of the field. This experience has increased my passion for my chosen field and has strengthened my perseverance to succeed and to make a difference.



Name: **Rebecca Boyce**
Hometown: **Las Cruces, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Senior**
Major: **Wildlife Science**
Expected date
of graduation: **May 2014**
Degree: **Bachelor of Science**
USDA agency
of interest: **Undecided**
Email: **rboyce@nmsu.edu**



Career experience/location: I accepted an employment opportunity under Dr. Gary Roemer in the Fish and Wildlife Department at NMSU, doing Kit Fox research at White Sands National Monument. My time was split between lab, moving motion sensitive cameras, and actual animal handling. Most time was spent moving cameras, and the shortest time period was spent on trapping; the latter proved to be the most fun.

Description of career experience (what I learned): My previous experiences together, have allowed me to view different perspectives and gain some insight on what similarities and differences exist by comparison. The research side emphasized attention to detail while accounting for personal safety and keeping in mind the ultimate goal. Research is for the benefit of knowledge and science, so the work I contribute is a reflection on how dedicated I am to contributing to better information.

What is your perception of agriculture now: I have a growing awareness of the impact of agriculture on human well-being and the influence of people on the environment as time goes by. I find the information I have gained over a period of time to be interesting and important when one considers what agriculture provides. It is something I believe everyone should have some insight on, in order to plan for the future.

How has this career experience broadened your employment opportunities: My professional experiences have added to the skills I have to gain access to higher employment opportunities. I now feel that I have a basic understanding of the differences between federal positions and research openings. I intend to use this information to guide myself through that last year of school in helping myself to find the job I feel I could contribute the most to, while comfortably enjoying my job responsibilities.

I have a growing awareness of the impact of agriculture on human well-being and the influence of people on the environment as time goes by.

Career and research aspirations: I plan to pursue a master's degree in Geography that would focus primarily on Geographic Information Systems (GIS), studying biogeography of wildlife movement. Up to and after 5 years of my graduation from receiving my master's degree I would like to have moved into the professional career field.

Skill set: -Conducting surveys -small mammal handling -kit fox handling -GIS -computer skills

The impact of my career experience: I have found that my experiences are very important for my future employment. I have not only gained from my most recent employments, but also from others, that skills are very important in executing professional tasks and responsibilities. Also, dedication does not go unnoticed. Those who perform well will eventually be the ones to receive the benefits of top employers and the choice of locations. I now have an understanding of how to interact with those I work with in a collaborative fashion and take into consideration other expert opinions. The professional field is different in that you are required to use what you have learned in class to show your capabilities. A good work ethic is respected while also highly valued. If I sent a message to any up and coming student, it would be to get your name out there by accepting any opportunity that may arise, and present yourself in an appropriate manner so that those you need to impress will pay more attention to what you want them to notice.

Name: **Miranda Butler-Valverde**
Hometown: **Las Vegas, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Junior**
Major: **Conservation Ecology**
Expected date
of graduation: **May 2015**
Degree: **Bachelor of Science**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **miranda2@nmsu.edu**

Career experience/location: This summer I worked as a biological science technician at Valles Caldera National Preserve in Jemez Springs, New Mexico.

Description of career experience (what I learned): I learned how to trap small mammals, conduct a salamander survey, electroshock fish, analyze coyote scat, and investigate bear and mountain lion GPS clusters. I also learned the importance of safety and communication when working in remote areas.

What is your perception of agriculture now: Agriculture is essential to our existence and I think we need to keep emphasizing the need for sustainability.

How has this career experience broadened your employment opportunities: I learned a variety of wildlife techniques, and I also made excellent contacts with natural resource professionals that will make me competitive in the job market and possibly lead to future employment.

Career and research aspirations: After completing my bachelors, I would like to continue my educational career and gain research experience by pursuing a Masters and possibly a doctoral degree. I hope to eventually become a professional in a wildlife science related field. I will strive to protect native species and work toward preserving and restoring natural ecosystems.

Skill set: -Hiking -camping -GPS navigation -map reading -radio telemetry -small-mammal trapping -electroshocking fish -Microsoft office -scat analysis -salamander surveys

The impact of my career experience: My summer experience was wonderful; I worked in a beautiful part of New Mexico, I had excellent colleagues, and I learned an enormous amount about wildlife management. All of this only reinforced my goal of obtaining a career in the natural resources. I now have a better idea of what to expect while working in a natural resource government agency and I also feel better prepared for when I transition into conducting my own research.



Agriculture is essential to our existence and I think we need to keep emphasizing the need for sustainability.

Name: **Miranda Campos**
Hometown: **Albuquerque, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Senior**
Major: **Wildlife Science**
Expected date
of graduation: **May 2014**
Degree: **Bachelors of Science in Agriculture**
USDA agency
of interest: **Bureau of Land Management BLM**
Email: **mjcampos@nmsu.edu**



Career experience/location: I worked as a Sevilleta National Wildlife Refuge Intern in La Joya, New Mexico.

Description of career experience (what I learned): This internship was very eye opening in regards to the amount of hard work that is associated with research. I learned how to operate different types of construction tools to build structural frames that were used for monsoon research on the vegetation within the refuge.

What is your perception of agriculture now: My perception on agriculture and everything associated with it has grown.

How has this career experience broadened your employment opportunities: This career experience has boosted my resume a great deal, and has made me stand out to my employers. Everything associated with the program is associated with what I want to do as an employee in the future.

Career and research aspirations: My current aspirations include completing my undergraduate career and attaining a Bachelor's degree in wildlife science, as well as completing a publication on my burrowing owl research within the department of Fish, Wildlife, and Conservation Ecology. My future career aspirations include traveling and hopefully gaining experiences abroad that have to do with my study of interest. I would also like to become a wildlife biologist for a government agency or a private outfit. In five years, hopefully I will be traveling and gaining experience within my field. In 10 years I see myself as having a good job as a wildlife biologist.

Skill Set: -Presentation Skills (Poster and Oral) -writing skills -computer skills -fishing -hunting -fence building -defensive driving -4wheel driving operation -bear spray operation -mist-netting skills -power tool operation -checking for chronic wasting disease -sand-dune lizard surveying -salt cedar management -Northern Goshawk surveying -spade food toad surveys -grizzly bear transects -game camera operation -eagle nest surveys -vegetation surveys -small mammal trapping and tagging

The building of relationships with different professionals around the state and country has also been a great benefit to me, and will most undoubtedly be a great asset in the future.

The impact of my career experience: I have been very blessed in my career experiences, not only at the university, but also within the field through various internships. At the beginning of my career, I was very general in what I wanted to pursue within the wildlife field. Through all of these experiences, I have narrowed my interests down to working with big game animals. Not only did these internships help me narrow down my interests, but also gave me a variety of skills that can be implied wherever I work in the future. The building of relationships with different professionals around the state and country has also been a great benefit to me, and will most undoubtedly be a great asset in the future.

Name: **Pedro Castillo**
Hometown: **Salem, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces**
Rank: **Senior**
Major: **Wildlife Science**
Expected date
of graduation: **December 2014**
Degree: **Bachelor in Wildlife Science**
USDA Agency
of interest: **Animal and Plant Health Inspection Services APHIS**
Email: **peter10@nmsu.edu**

Career experience/location: This summer I was working as a Biological Technician with the Bureau of Reclamation in Socorro, New Mexico.

Description of career experience (what I learn): This summer I had the opportunity to do migratory bird surveying for two different species under the endangered species list. I got to work with GPS and other tools to create GIS mapping.

What is your perception of agriculture now: Agriculture is needed for survival for humans as well as for wildlife, but it seems that we are taking over so we need to control and manage land restricted for wildlife.

How has this career experience broadened your employment opportunities: This career experience has given me a broader prospective and I learn that for any federal agency that I decide to work for, I can always do something related to wildlife, which is my degree of interest.

Career and research aspiration: After I graduate I would like to get a full time job with APHIS, the Forest Service, or with Game and Fish. In five years I see myself working as a law enforcement officer for the Forest Service.



Skill Set: -Bilingual (Spanish and English) -computer skills (Microsoft Word, Excel, and PowerPoint) -hiking -fishing -camping -tractor operator -manual and automatic truck operator -familiar with lab work and safety procedures -chain saw certified -CPR -AED -first aid for adults certified -GIS maps -farm worker

The impact of my career experience: My career experience for this summer keeps proving to me that working for a federal agency, protecting natural resources is what I really want to do for a future job after I graduate. Also, learning new things just keeps getting more exiting. Through my career I will never finish learning because natural resources will always be something that we have to conserve. Since human population keeps growing we need more land for agriculture production, and we also need land for our wildlife.

Agriculture is needed for survival for humans as well as for wildlife, but it seems that we are taking over so we need to control and manage land restricted for wildlife.

Name: **Maria Y. Chavez**
Hometown: **Carlsbad, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Junior**
Major: **Conservation Ecology/Horticulture**
Expected date
of graduation: **2015**
Degree: **Bachelor's Degree**
USDA agency
of interest: **Agricultural Research Services ARS**
Email: **chavezmy@gmail.com**

Career experience/location: I was a field tech for Dr. Shannon McCaulley's study on dragonfly survival, funded by Cal Poly, at Quail Ridge Research Preserve, California.

Description of career experience (what I learned): I learned a considerable amount of information about the species of dragonflies present in the area such as mating behaviors, development, and foraging. I learned how to handle, catch, preserve, and look for dragonflies.

What is your perception of agriculture: My perception of Agriculture is unchanged.

How has this career experience broadened your employment opportunities: This semester I am continuing the study with a research project of my own, as a member of the Mabry lab. This field and lab experience will help get me into graduate and doctorate school.

Career and research aspirations: I want to go to graduate school to emphasize in Agro ecology. During or after grad school I want to join the Peace Corp. I then intend to receive my PhD and hopefully work for an agency such as the ARS, where I can continue to do research.

Skill Set: -Catching and handling invertebrates -greenhouse procedures -fertilization application -gator driving
-harvesting produce -micropipette measurements -water chemistry -data entry

The impact of my career experience: This internship has provided me with experience and opportunities that will be beneficial to getting into graduate programs, which is my primary focus.



This internship has provided me with experience and opportunities that will be beneficial to getting into graduate programs, which is my primary focus.

Name: **Michael Finley**
Hometown: **Alamogordo, New Mexico**
Institution: **New Mexico State University**
Campus: **Main/Alamogordo (both)**
Rank: **Junior**
Major: **Wildlife Management**
Expected date of graduation: **Fall 2014**
Degree: **Bachelor of Science in Wildlife Management**
USDA Agency of interest: **US Forest Service USFS**
Email: **finley74@hotmail.com**



Career experience/location: I was a Wildlife Technician, for the USDA US Forest Service, Region 3 on the Guadalupe Ranger District, Lincoln National Forest.

Description of career experience (what I learned): I Learned how to operate some heavy equipment and machinery, learned more about Mexican Spotted Owl habitat, as well as formations and species that thrive in caves. I broadened my knowledge on using maps to navigate, built on leadership skills, and served as a crew lead with responsibilities of the crew on my shoulders.

What is your perception of agriculture now: Agriculture is a key component in providing water and food from soil, and is vital to the continuance and health of the ecosystems and species habitat.

How has this career experience broadened your employment opportunities: This internship with the US Forest Service greatly influenced my career opportunities with this agency, due to the fact that I made professional references, but also created new friendships and relationships with forest wildlife biologists. This is my 3rd season working for the Forest Service and these internships are helping me get my foot in the door for when I get my degree to seek a permanent position.

Career and research aspirations: Within the next year I plan to have received my B.S. in Wildlife Management and am currently the father of my four year old son, Michael X. In 5 to 10 years I plan to still be working for the US Forest Service and to have a Master's degree in wildlife and management, specifically Mexican Spotted Owls, and to still be married to my wife of almost 5 years now, Elena Finley.

Skill Set: -Computer skills -GPS -map navigation -data base mgmt. -firefighter Type II qualified -CPR -first aid -ATV license -government license -chainsaw certified -endangered species monitoring -trick tank maintenance

Agriculture is a key component in providing water and food from soil, and is vital to the continuance and health of the ecosystems and species habitat.

The impact of my career experience: My career experience greatly impacts my future employment, career goals, and life goals. With these internships, as I stated above, I am making contacts and professional references and impressing people who I may be working for in the near future, so I strive to impress them every day that I work for them. The three seasons I have done these internships and obtaining at least a Bachelor's in FWCE management, greatly impacts whether or not I will be working for the Forest Service in a couple years as a permanent employee. I know if I get a permanent job once I get my Bachelor's degree, then I will continue to pursue higher education and obtain a Master's degree in the Wildlife Sciences. The ability to get a permanent job and get a Master's degree in Wildlife Sciences are not only career goals, but also help me reach long term, personal life goals, such as having a good, stable job and being able to provide for my wife and son.

Name: ***Dominique Lujan***
Hometown: **Albuquerque, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Junior**
Major: **Wildlife Science**
Expected date
of graduation: **May 2015**
Degree: **Bachelor's in Wildlife Science**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **domlujan@nmsu.edu**



Career experience/location: I worked for the Forest Service as a Forestry Technician for the San Juan National Forest, Pagosa Ranger District, summer of 2013, and the Black Hills National Forest, Hell Canyon Ranger District, summer of 2012.

Description of career experience (what I learned): I learned how to maintain wilderness campsites and trails, by ensuring trees and debris were cleared, cleaning out and installing water bars, and rehabilitated minor wilderness areas and trails by brushing in trails and transplanting saplings. I also learned how to assemble and install buck and rail fencing and install Carsonite posts to mark motorized vehicle trails. I learned how to be independent and what it takes to survive through extended camping trips in wilderness areas.

What is your perception of agriculture now: I am more observant on the needs to ensure our lands are maintained and what it takes to preserve and care for the environment, plants, and animals.

How has this career experience broadened your employment opportunities: Since I have held three temporary appointments with the Forest Service, I believe that this pattern shows that I will be a dedicated Forest Service employee, if given the opportunity. I have worked with different rangers and biologists, and have shown that I am eager to learn and can complete a task efficiently and independently.

Career and research aspirations: I would like to obtain an internship position in a wildlife or fisheries position, while being able to pursue my higher education. Upon graduation, I would hope to obtain a permanent position within a Federal Government Agency, so that the time I have vested would count towards me having a stable and rewarding career.

Skill Set: -Utilize tools such as Pulaski -crosscut saw -chainsaw -handsaw -rogue hoe -shovel -loppers -rake -hammer -axe -hand drill -hatchet -personal protective equipment -hiking -back packing and extended stay camping -operating 4WD and all-terrain vehicles -and navigation using GPS -reading road and topographic maps -proficient using various communication devices such as 2-way radios and walkie-talkies -computer skills -work independently or on a team

I am more observant on the needs to ensure our lands are maintained and what it takes to preserve and care for the environment, plants, and animals.

The impact of my career experience: I have had the opportunity to explore the different types of positions available within the Forest Service. Although, I have gained valuable knowledge and skill sets with these positions, it is still my goal to obtain an internship pertaining to wildlife and fisheries, which is what I am working toward in my major.

Name: **Lia Martinez de Armendariz**
Hometown: **Canjilon, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Senior**
Major: **Civil Engineering Technology**
Expected date
of graduation: **December 2014**
Degree: **Bachelor's in Wildlife Sciences**
USDA Agency
of interest: **United States Forest Service USFS, Natural Resource Conservation Service NRCS**
Email: **liad@nmsu.edu**

Career experience/location: The past two summers, my internship with the Forest Service has been on the Carson National Forest in Taos, New Mexico.

Description of career experience (what I learned): I shadowed engineering personnel and learned the basic premises of engineering surveying, project planning, creating contract packages, development of design, specification writing, and AutoCAD drawing. Other learning opportunities also included learning facility maintenance engineering and road maintenance engineering. Other opportunities included shadowing Forest Resource professionals, such as Recreation, Forestry, Minerals/Geology, and Fire.

What is your perception of agriculture now: Agriculture is the only industry that affects every single person in the world, whether they know it or not. Without agriculture there cannot be any other industries in the world.

How has this career experience broadened your employment opportunities: The past two summers of the Pathway's internship has allowed me to see how the government operates, and to see what it is like to be an employee of the federal government.

Career and research aspirations: I aspire to be proficient and successful in the field of civil engineering, and acquire a satisfying and challenging career where I can learn and grow as a professional and as a person.

Skill Set: -Microsoft Office -AutoCAD -Mac and PC Systems -manual labor -hiking -bilingual -navigation -horseback riding -reliable

The impact of my career experience: The impact of my career experience has allowed me to be prepared for what the real world has to offer when it comes time to get a full time job/career after graduation. I have learned a lot about my field of interest as well as other fields involved within the Forest Service.

Agriculture is the only industry that affects every single person in the world, whether they know it or not. Without agriculture there cannot be any other industries in the world.



Name: **Vanessa Martinez**
Hometown: **Albuquerque, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Junior**
Major: **Agriculture and Community Development**
Expected date of graduation: **December 2014**
Degree: **Bachelor of Science in Agriculture**
USDA Agency of interest: **United States Forest Service USFS, Natural Resources Conservation Service NRCS, US Agency for International Development USAID**
Email: **martinv@nmsu.edu**



Career experience/location: The summer of 2013 I was given the opportunity to work with the Natural Resource Conservation Service in Tahoka, Texas, where I served as a *soil conservationist trainee*.

Description of career experience (what I learned): As an employee of NRCS, my job is career oriented. Within the one month that I spent there, I was able to become more thorough in my understanding of agricultural production and management. I learned about the variety of programs available to farmers and ranchers to make better use of their land. I was also trained in various computer and GIS applications; this included the development of CRP contracts, maps in ARC-GIS, and Toolkit.

What is your perception of agriculture now: Agriculture is universal; it is natural resources, conservation, sustainability, wildlife, forestry, development, aid, international, community, etc. We all dwell in agriculture somehow, somehow, throughout our days, varying from the food on our table, down to the very soil that clods our shoes. As John Muir stated, "When we try to pick out anything by itself, we find it hitched to everything else in the universe." That eloquently describes my perception of agriculture.

As John Muir stated, "When we try to pick out anything by itself, we find it hitched to everything else in the universe." That eloquently describes my perception of agriculture.

How has this career experience broadened your employment opportunities: My career experiences have broadened my employment opportunities. They have challenged my strengths and strengthened my weaknesses, using them to my fullest potential. I have also been given the opportunity to meet faces from all around the country and internationally, whom to this day I share professional and personal friendships. Networking in different career fields such as wildlife, environmental science, and forestry make for a better understanding in my field area of study.

Career and research aspirations: My current career aspirations are to retain more experience and knowledge pertaining to the agricultural science. I want to get involved in development projects that focus on the sustainability, food problems, and border issues. My future career aspirations involve my current long term pathways internship with the Natural Resource Conservation Service, where I'm being trained as a district soil conservationist in the state of Texas.

Skill Set: -Management tactics -Conservation Reserve Program -recognition of different grass types -Toolkit -identifying pests -networking -E-Zeal

The impact of my career experience: My career experiences have impacted my future by broadening my zeal for a deeper understanding in the natural sciences and other related fields. My greatest concern is the food problem. These are issues that will impact my future education, future employment, and career goals. My focus currently is border issues, addressing the poverty situation and how small sustainable agriculture can improve a community. As for long term goals, I look forward to building a career with the USDA, while attributing it with works that better improve the lives of others; how, what, and where that will be, only God knows.

Name: **Jenni Medina**
Hometown: **Taos, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces New Mexico**
Rank: **Junior**
Major: **Wildlife Science**
Expected date
of graduation: **May 2015**
Degree: **Bachelor of Science in Agriculture**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **jenni92@nmsu.edu**

Career experience/location: This summer I worked with an NMSU graduate student on her project on burrowing owls in Las Cruces, New Mexico.

Description of career experience (what I learned): This summer I got an inside look at what graduate school will be like. I learned how to properly handle burrowing owls. I learned radio telemetry and GPS. This experience also taught me that anything can happen in the field, and to always be prepared.

What is your perception of agriculture now: Agriculture has so many aspects to it and is often overlooked in everyday life.

How has this career experience broadened your employment opportunities: This experience has provided me with a variety of new skills which will allow me to be more competitive when applying for future jobs.



Career and research aspirations: I am aspiring to attend a graduate school program after completing my degree here at New Mexico State University. I would like to be able to obtain a long-term position with the Forest Service as a wildlife biologist.

Skill Set: -Hiking -camping -fishing -GPS -ATV operation -Microsoft Word -Microsoft Excel -radio telemetry

The impact of my career experience: My experience this summer has helped to solidify that this is the field I wish to pursue a career in. I enjoyed the work I got to do this summer, and am looking forward to continuing in this field of study and someday making a career out of it. It has given me further insight into what field research actually entails. It gave me an idea of what to expect in graduate school, allowing me to be better prepared for when it comes time to apply and conduct my research. This experience has expanded my skill set, which will make me more desirable to future employers when applying for jobs.

My experience this summer has helped to solidify that this is the field I wish to pursue a career in. I enjoyed the work I got to do this summer, and am looking forward to continuing in this field of study and someday making a career out of it.

Name: **Angelina Munoz**
Hometown: **Alamogordo, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Senior**
Major: **Conservation Ecology**
Expected date of graduation: **December 2014**
Degree: **Bachelor of Science in Conservation Ecology**
USDA Agency of interest: **United States Forest Service USFS**
Email: **anm@nmsu.edu**

Career experience/location: This summer I worked in recreation on the Trails Crew for United States Forest Service in Cloudcroft, New Mexico.

Description of career experience (what I learned): The most important thing in trail work is your well-being and safety. I have gained experience in managing and preserving trails, so that the natural beauty and cultural heritage can be shared and enjoyed today, tomorrow, and in the future.

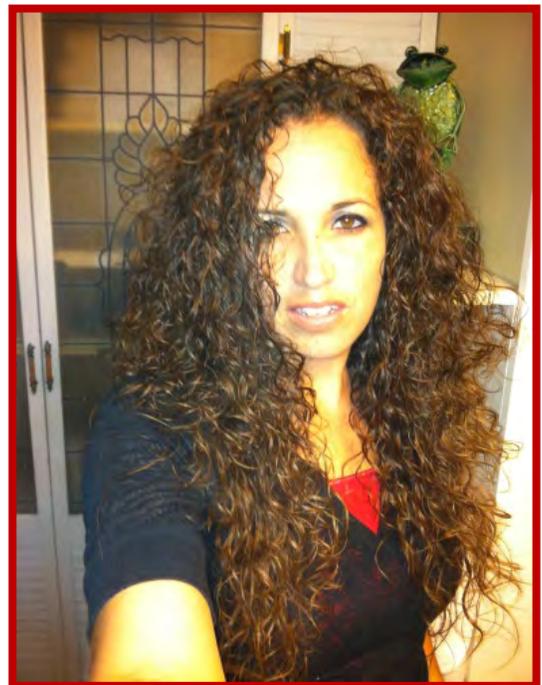
What is your perception of agriculture now: Agriculture has and always will be important to me. We all depend on a wide range of agricultural products; it is central to our livelihoods.

How has this career experience broadened your employment opportunities: This career experience has given me the ability to plan, organize, and lead crews to complete various tasks. It has given me the training and certifications needed for future employment. Also, I was able to gain new skills, gain fresh ideas, and build relationships with other key employees in the district.

Career and research aspirations: I want to obtain a permanent position with United States Forest Service.

Skill Set: -Camping for extended period of times -operation of chainsaws -ATV -horsemanship -assisting in logistic and problem solving -active listening -map reading -knowledge of hand tool use and care -professional communication skills
-First Aid -CPR -Microsoft Word

The impact of my career experience: Having the privilege to work with one of the biggest well known agencies, I have gained knowledge and experience, but most importantly I have enjoyed the work that I have done and all it has to offer. I plan to successfully finish my college education, and apply and obtain a permanent position with the agency. I will then continue my part to sustain the health and diversity of the forest to meet the needs of present and future people.



Agriculture has and always will be important to me. We all depend on a wide range of agricultural products; it is central to our livelihoods.

Name: **Jacob Naranjo**
Hometown: **Santa Fe, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Junior**
Major: **Wildlife Science**
Expected date
of graduation: **May 2015**
Degree: **Bachelor of Science in Agriculture**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **Jacob.naranjo@ymail.com**

Career experience/location: I had a 2013 summer internship at Los Alamos National Laboratory as a student research assistant.

Description of career experience (what I learned): During my internship I was exposed to a professional and scientific environment in which I got the opportunity to perform both lab and field work. I learned the effects of implemented climate change and how it affects tree mortality in the juniper and pinon shrub lands of northern New Mexico.

What is your perception of agriculture now: My idea about agriculture has evidently evolved around hydrology due to the importance of how all living things need water, which is now becoming a scare resource.

How has this career experience broadened your employment opportunities: Having this work experience in the lab, as well as in the field, has given me an idea of what to expect in the near future. The majority of wildlife related occupations require a decent amount of experience and I feel like I have enough experience to get my foot in the door for hiring agencies to continue to build on my experience.

Career and research aspirations: A few of my current goals are to remain on the Dean's List, graduate on time, and eventually continue my education into graduate school. I hope to work for a government agency in the future as a wildlife field researcher. Eventually, I would like to coordinate big game research projects within the Rocky Mountains ranging anywhere from Canada down to New Mexico.

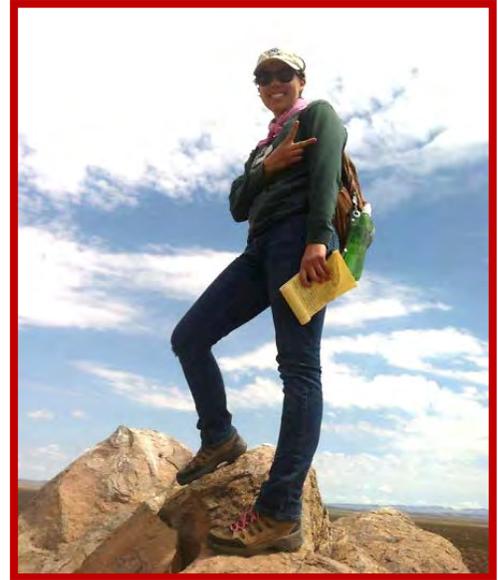
Skill Set: -ATV experience -CAD -camping -chainsaw abilities -fishing
-GPS -GIS(some) -extended hiking -horseback riding -hunting -Microsoft
Office -telemetry(minor) -truck and trailer operation -4WD driving



My idea about agriculture has evidently evolved around hydrology due to the importance of how all living things need water, which is now becoming a scare resource.

The impact of my career experience: Due to the contributions of the NRCT program, I was able to gain an incredible experience during the school year, working for a professor and his graduate students. I am getting a chance to work in the field as a graduate assistant and to see what it takes to conduct a graduate research study. This experience and previous experiences will definitely impact my future educational and career goals. I will be more prepared on what to expect when entering graduate school and taking on my own project. I will have the experience and knowledge that employers will be looking for when it comes to qualifying for a permanent position.

Name: **Grecia Nuñez**
Hometown: **Las Cruces, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Junior**
Major: **Geography/ Spanish**
Expected date of graduation: **May 2015**
Degree: **Bachelor of Arts**
USDA Agency of interest: **United States Forest Service USFS**
Email: **ngrecia3@nmsu.edu**



Career experience/location: I did “The Rivers, Trails, and Conservation Assistance Program and Student Conservation Association Fellowship” with the National Park Service in Las Cruces, New Mexico.

Description of career experience (what I learned): Through this fellowship I learned about project management, volunteer coordination, strategic planning, how to plant trees and remediate erosion on a trail, and about archaeological inventories. This fellowship threw me miles outside of my comfort zone and helped me overcome many of my personal/professional fears.

What is your perception of agriculture now: Through the agriculture exposure that the NRCT program has provided, me I see the need for agriculture to become more sustainable and local.

How has this career experience broadened your employment opportunities: Through this career experience I have been able to network and make connections with influential people. My career experience helped me realize that I want to explore agencies within the USDA.

Career and research aspirations: I aspire to work in a career with a federal agency doing conservation work. My passion is to connect youth from diverse backgrounds to the environment. In five years I would like to be finishing my masters in either Urban Planning or Landscape Architecture. I haven’t though as far as ten years because my faith keeps me grounded and many things may change.

Skill Set: -Project management -non-profit administration -volunteer coordination -tree planting -data management/organizing -event planning -partner relations -community outreach -proper tree planting -environmental training -computer literacy -meeting facilitation -program development -youth outreach -leadership

The impact of my career experience: My career experience has allowed me to aspire to not only become a professional, but to make an impact in my community. My career experience has exposed me to many great people that inspire me to want to better myself. They showed me it can be done. I have learned that it isn’t easy to obtain a job, but the better grades and more experience you have will help you compete. In regards to my future education, my career experience has allowed me to see that getting a masters is a smart move and will better prepare me for a job. As to future employment, my career experience has allowed me to network with people that may serve as references in the future, or let me know of opportunities they that fit with my set of skills. My long term objectives are to succeed in whatever it is I end up doing. My career experience has provided me with a set of job skills that will allow me to succeed and be able to make a difference with my work. I want to continue to explore the different agencies, especially within the USDA, and find the right fit for me.

My career experience has allowed me to aspire to not only become a professional, but to make an impact in my community.

Name: *Alfonso Orenday*
Hometown: **El Paso, Texas**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **May 2016**
Degree: **Bachelor of Science in Biology**
USDA Agency
of interest: **US Forest Service USFS**
Email: **aorenday33@yahoo.com**

Career experience/location: This summer I worked as a Research Assistant, working in the Biology Department at NMSU with Gizelle Hurtado.

Description of career experience (what I learned): This summer I was fortunate enough to learn so many different things. I learned how to do grid work, vegetation sampling, animal handling, data entry, and much more. It was a great experience. I gained a lot of experience out in the field and in the lab.

What is your perception of agriculture now: Agriculture is essential to our everyday living and is a crucial part of our society that is too often over looked.

How has this career experience broadened your employment opportunities: This career experience gave me the chance to see what I could potentially be doing in the near future. It allowed me to not only see, but experience it firsthand.



Career and research aspirations: I want to be able to obtain a long-term job with the United States Department of Agriculture. I would like to work as a biologist working anywhere in the U.S.

Skill Set: -Bilingual -proficient in physical, road and topographic maps
-hiking -camping

Agriculture is essential to our everyday living and is a crucial part of our society that is too often over looked.

The impact of my career experience: The career experience I completed has given me the chance to gain experience, and helped me decide what I want to do as a career. It gave me the hands-on experience I needed, and the opportunity to further pursue a career in a field similar to the one this summer.

Name: **Lynette Rincon**
Hometown: **El Paso, Texas**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Senior**
Major: **Range Science**
Expected date
of graduation: **December 2013**
Degree: **Bachelor's of Science in Agriculture**
USDA Agency
of interest: **US Forest Service USFS**
Email: **rinclyn@nmsu.edu**

Career experience/location: This summer I had the title of Range Technician with the Forest Service in Watford City, North Dakota.

Description of career experience (what I learned): I worked with the range crew, performing tasks such as herbicide application, field plot analyses, and GPS point plotting. I participated in public events involving the Forest Service including Fishing Derby, Fourth of July Parade, attended job related trainings, and training refreshers.

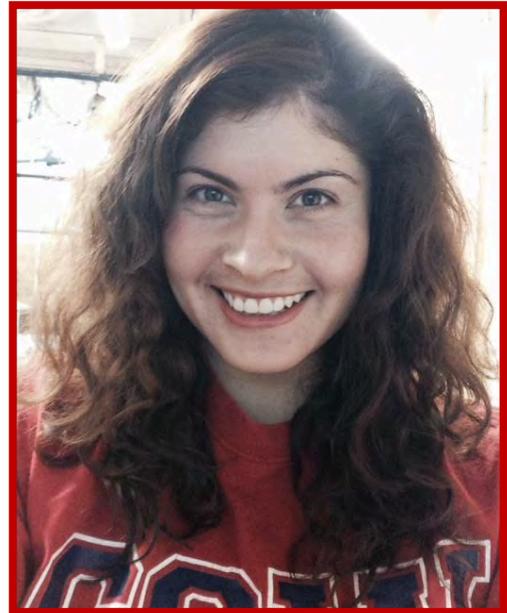
What is your perception of agriculture now: Without agriculture there is no supply for the demand. It plays an important role in our supply of food and clothing and ultimately our survival.

How has this career experience broadened your employment opportunities: Just like in school, there is always competition amongst fellow students, as well as the general public. Having the chance to gain experience related to the path in pursuit, provides a stepping stone closer to achieving the end goal.

Career and research aspirations: I plan to travel wherever I need to in order to acquire a long term position within the USDA Forest Service. I'm aiming for the position to be range or recreation related, or close to that.

Skill Set: -Corral building -hiking -lifting -running -familiar in identifying plants, grasses, as well as some insects by scientific names as well as common names -computer skills: Excel, Access, Power Point -familiar in performing pasture checks, field plot analysis, as well as application of herbicide to weeds

The impact of my career experience: With these various internships with USDA Forest Service and NRCS, it has assured my belief in how important the ecosystems around us are. The success or failure of these systems affects everyone directly, as well as indirectly. Pursuing a career that's purpose is to restore, maintain, and keep all these ecosystems sustainable for our use is very important. We enjoy what we understand. We protect what we enjoy. Helping more people to understand more of nature and what goes on around them is the key.



Without agriculture there is no supply for the demand. It plays an important role in our supply of food and clothing and ultimately our survival..

Name: **Janelle Roybal**
Hometown: **Pojoaque, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Senior**
Major: **Environmental Science**
Expected date of graduation: **December 2014**
Degree: **Bachelor of Science**
USDA Agency of interest: **Natural Resources Conservation Service NRCS, United States Forest Service USFS**
Email: **jroy33@nmsu.edu**

Career experience/location: I gained experience as a Beaver Restoration Intern for Wild Earth Guardians in Santa Fe, New Mexico. Most of my field research was conducted in the Jemez watershed.

Description of career experience (what I learned): From this internship, I learned valuable field experience using equipment such as a clinometer and densitometer. I also improved professionally and personally on my writing, communicating, and leadership.

What is your perception of agriculture now: Agriculture, to me, is a very collaborative discipline that requires a lot of teamwork, innovation, and research.

How has this career experience broadened your employment opportunities: This career experience has broadened my future employment opportunities by expanding my social network to a variety of organizations, and enhancing my skills and knowledge needed to pursue a career in environmental science.

Career and research aspirations: My future aspirations include graduating from NMSU by December 2014, gaining employment or another internship for more experience, and hopefully moving out of the state. I would like to possibly work for the Forest Service somewhere within the West Coast, or potentially join the Coast Guard. Ultimately, I would like to pursue a Master's degree in a field that will enhance my Bachelor's and give me better employment opportunities.



Skill Set: -Computer efficient -field techniques -research -technical writing -organization -communication

The impact of my career experience: My career experience impacts my future education by allowing me to focus more on the classes that interest me most within the environmental science realm, which include environmental engineering, chemistry, and resource management. As for my future employment and career goals, this summer's internship now has an impact on the areas of interest I would like to work in most. I enjoyed working in the field and being outdoors, working with experienced individuals I was able to learn from, and learning about what impacts the environment.

From this internship, I learned valuable field experience using equipment such as a clinometer and densitometer. I also improved professionally and personally on my writing, communicating, and leadership.

Name: **Megan Stovall**
Hometown: **Socorro, New Mexico**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Senior**
Major: **Soils Science**
Expected date
of graduation: **May 2015**
Degree: **Bachelor's**
USDA Agency
of interest: **US Forest Service USFS**
Email: **meganshae.stovall@gmail.com**

Career experience/location: I am currently a lab technician at New Mexico State University in Las Cruces.

Description of career experience (what I learned): Over time and through my work experience, I have acquired skills ranging from working with files and databases, navigational systems like GPS and topographic maps, working with various tools and different equipment, and the value of collaboration and teamwork, as well as self-sustainability.

What is your perception of agriculture now: Agriculture is an extremely important and broad field. Its importance is undeniable, as well as its connection to the world as a whole and every individual.

How has this career experience broadened your employment opportunities: My experience has not only provided me the means I need to compete in the search for positions, it has also given me the opportunity to grow and, through exposure, form a better idea of what I want from myself and a career.

Career and research aspirations: After graduate school, I hope to continue my education in a Master's program geared towards agricultural research. Within five to ten years I would love nothing more than to find myself working in my field of interest and continuing to broaden my knowledge and experience.

Skill Set: -Computer skills -operation of 4WD vehicles -experience with GPS and topographic maps -certified a sawyer -lab technique -experience with various tools and other field and lab equipment

The impact of my career experience: Through my past career experience I have learned many skills, as well as grown as an individual. My interests have grown and the connections I have made between past experiences and knowledge, and pending experiences and knowledge have become vast. These past experiences have helped establish my roots and foundation, and have helped in encouraging me to pursue passions. I know that my past work experience will aide me in future obstacles that I may encounter. As my interests have grown and strengthened, expanding my personal and academic knowledge means more to me and I will take any opportunity I feel will hold true to that notion. I now have a better idea of where I want my education to take me as well as where I would like to find myself later in a career based environment. My goal is to look back someday and realize that I am exactly where I want to be and working towards something that is important to me.



Agriculture is an extremely important and broad field. Its importance is undeniable, as well as its connection to the world as a whole and every individual.

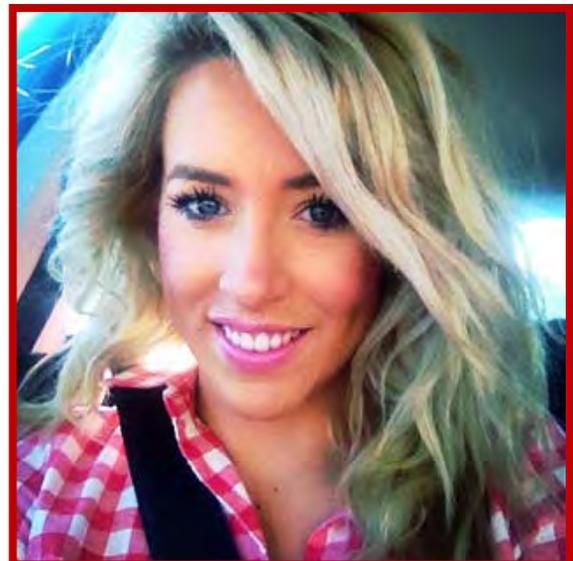
Name: **Madeline Voldahl**
Hometown: **El Paso, Texas**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Junior**
Major: **Range Science**
Expected date
of graduation: **May 2015**
Degree: **Bachelor's**
USDA Agency
of interest: **Bureau of Land Management BLM**
Email: **madelinevoldahl@yahoo.com**

Career experience/location: I currently work as a GIS intern for the Bureau of Land Management in the Las Cruces district office. I have worked for the BLM since March 2011.

Description of career experience (what I learned): In this position I have learned how to use GIS and ArcMap for natural resource planning, gained a variety of field experience, and have worked on various projects in many different fields of study, from range, to wildlife, to archeology, and oil and gas.

What is your perception of agriculture now: Agriculture is much more complex and important than much of the public realize, and more extension and education on agriculture would benefit our society.

How has this career experience broadened your employment opportunities: I already have two years of experience working as a government employee, and the variety of tasks and skills I have developed will make me a well-rounded and diverse employee with practical knowledge and field experience.



Career and research aspirations: My current aspirations include continuing to expand my skills with GIS and gain more experience in the Range department of my office. In 5 years I hope to be pursuing a graduate degree in Range Science and working as SCEP or similar position with a government agency. In 10 years I hope to be a full time Range Conservationist or Park Ranger.

Skill Set: -Experienced GIS user: digitizing, data input, geospatial analysis -GPS skills -variety of field surveying -provided general technical support to office -performed administrative secretarial duties -creation of cartographic products

The impact of my career experience: My career experience was the influence of my education. Through my GIS work I was introduced to Range science and decided to pursue a career in it. I have first-hand experience in the day-to-day operations of a federal office and have seen what my job would entail as a Range specialist. I have had the opportunity to meet and work with a variety of other government employees from various agencies, and learned about various positions and duties I can perform with my degree. The most important thing I have learned is the importance of managing public lands.

Agriculture is much more complex and important than much of the public realize, and more extension and education on agriculture would benefit our society.

NM-RP NRCT New Mexico State University - Las Cruces Graduate Students

Name: **Heberto Chaparro**
Hometown: **El Paso, Texas**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Graduate**
Major: **Wildlife Science**
Expected date
of graduation: **N/A**
Degree: **Bachelor of Science in Agriculture**
USDA Agency
of interest: **Animal and Plant Health Inspection Service APHIS**
Email: **heberto@nmsu.edu**

Career experience/location: This summer I was a Wildlife Biologist with the Animal and Plant Health Inspection Service, Wildlife Services branch in the State of Wisconsin.

Description of career experience (what I learned): This summer I was exposed to several WS Wisconsin programs. I was part of the nuisance bear relocation effort. I learned how to properly test Newcastle Disease on Canada geese. I also learned of the impacts that beaver have on roads, water systems, and the ecosystem.

What is your perception of agriculture now: Agriculture is often taken for granted, however, people do not appreciate it and often neglect the hardships associated to it.

How has this career experience broadened your employment opportunities: This career experience gave me more knowledge regarding the agency I want to work for. I was able to see firsthand what is needed in order to, in the future, obtain a position there.

Career and research aspirations: I want to be able to obtain a long-term job with the United States Department of Agriculture. I am fluent in Spanish and Portuguese and would like to work as a wildlife biologist outside of the United States. Ideal job opportunities would include international cooperation and monitoring of foreign diseases.



Skill Set: -Hiking -topographic map reading -GIS maps -camping -manual labor -virus inoculation -serum extraction -swab sampling -Microsoft Office -animal husbandry -trilingual (English/Spanish/Portuguese)

The impact of my career experience: The career experience I completed further clarified what I want to do with my career, and at the same time exposed me to new projects. I was able to work on projects like disease sampling that I had not even remotely thought about doing. With this career experience, I was able to determine the benefits and disadvantages of the work space while giving the agency a better idea of who I am. After working there, I also realized that in order to advance in my career, I need to work on graduate courses beyond my bachelor degree. I plan to obtain a USDA job and gain more liberal experience. Once I feel confident, I will return and continue on graduate coursework.

This career experience gave me more knowledge regarding the agency I want to work for.

Name: **Armando De La Cruz**
Hometown: **Hutchinson, Kansas**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Graduate**
Major: **Civil Engineering**
Expected date
of graduation: **December 2013**
Degree: **Master's in Civil Engineering**
USDA Agency
of interest: **United States Forest Service USFS**
Email: **delacruz@nmsu.edu**

Career experience/location: I have spent the past two summers training for a long-term pathways position as a civil engineer in Dubois, Wyoming. I am working with the US Forest Service in Region 2.

Description of career experience: I learned how to write and revise contracts, use a level to calculate elevations, design roads in order to mitigate water issues, and use a turbidometer to analyze stream quality. I was also trained as an inspector on various projects. I have improved my professional attitude and personal relationships with co-workers.

What is your perception of agriculture now? Agriculture is a very important part of our everyday lives and everyone is affected by how we manage it.

How has this career experience broadened your employment opportunities? This career experience has influenced my future employment opportunities by allowing my superiors to see what I am capable of. It will allow them to make a sound decision on whether or not to hire me as a permanent employee. This experience has a direct connection to pursuing employment because I am eligible for a non-competitive, full-time position upon graduation.

Career and research aspirations: I am planning on graduating in December 2013 with a M.S. in Civil Engineering. I plan on being hired as a full-time employee by the US Forest Service. I will move to Dubois, WY. in January 2014. I will work there for a minimum of one year, and then I will begin to search for another position, so that I may move up on the GS scale. I also want to work under a professional engineer for at least two years, so that I may qualify to take the PE examination. I would like to move up in the rankings as far as I can go.

Skill set: -Computer skills -surveying skills -chainsaw certified -crosscut certified -Type II firefighter -horsemanship training -CPR/first aid -ATV certified -FHWA bridge inspection certified

The impact of my career experience: My career experience has allowed me to relate what I have learned in the classroom and apply it in real world situations. It has given me the opportunity to gain knowledge in my field, and valuable experience working with veterans in it as well. This experience allows me to obtain employment upon graduation, which is what most people strive for.



Agriculture is a very important part of our everyday lives and everyone is affected by how we manage it.

Name: ***Eboni Duke***
Hometown: **Oakland, California**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Graduate**
Major: **Wildlife Science**
Expected date
of graduation: **May 2014**
Degree: **Master of Science in Wildlife Science**
USDA Agency
of interest: **US Forest Service USFS**
Email: **esduke@nmsu.edu**

Career experience/location: This summer I was a Wildlife Biologist Trainee with the Lincoln National Forest in Ruidoso, New Mexico.

Description of career experience (what I learned): This summer I lead the wildlife field crew in surveys for threatened, endangered, and forest sensitive species. I learned how to supervise a crew and also how to schedule surveys according to priority.

What is your perception of agriculture now: Even though agriculture is taken for granted, it is an important part of our daily lives that we heavily depend on for food and other resources.

How has this career experience broadened your employment opportunities: This career experience gave me more knowledge regarding how the forest service runs, and also what skills and trainings I will need in order obtain a position with this agency.

Career and research aspirations: I want to be able to obtain a long-term position with the United States Department of Agriculture (Forest Service). I would like to work as a wildlife biologist for the Forest Service. My goal is to one day be a regional biologist.

Skill Set: -Hiking -topo map reading -GIS maps -compass -camping -manual labor -horsemanship -telemetry
-bird banding -ArcMap -Microsoft Word and Excel

The impact of my career experience: The career experience that I have completed thus far has only solidified what I want to do with my career, as well as exposing me to other possible careers. I learned how to supervise a crew, organize a schedule, and effectively write a report on our findings for that year. This experience that I have gained will help me transition smoothly into a permanent position with the USDA.



Even though agriculture is taken for granted, it is an important part of our daily lives that we heavily depend on for food and other resources.

Name: **Gizelle Hurtado**
Hometown: **San Jose, California**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Graduate**
Major: **Biology**
Expected date of graduation: **December 2016**
Degree: **Ph.D.**
USDA Agency of interest: **United States Forest Service USFS, Animal and Plant Health Inspection Service APHIS, Agricultural Research Services ARS**
Email: **gmh11@nmsu.edu**

Career experience/location: New Mexico State University, Graduate Research, Las Cruces, New Mexico.

Description of career experience (what I learned): I learned that there is more to surveying and monitoring than just collecting data. There are many things that need to be considered before collecting data, such as time management, communication, scheduling, coordinating, and certifications to be obtained.

What is your perception of agriculture now: Agriculture is a broad field that encompasses a variety of disciplines; food crops, food safety, fodder crops, animals, forests, biotechnology, molecular studies, and other fields.

How has this career experience broadened your employment opportunities: My summer experience has broadened my employment opportunities greatly by giving me hands on experience with project and people management skills. I planned daily field excursions, created work schedules, and held bi-weekly crew meetings.



Career and research aspirations: My goal is to use research to aid in the long-term management of wildlife and natural resources. I am interested in the impact of urbanization on wildlife genetics, parasites, and behavior. In addition to my research interests, I am involved with science education and undergraduate mentoring. Ideally, I would like to be in a position that utilizes research to inform management and incorporates human dimensions.

Skill Set: -GIS -GPS -crew leading -designed a preliminary internship handbook -learning fragstats -learning molecular techniques -CDC training in flea and tick identification -small mammal handling experience

Agriculture is a broad field that encompasses a variety of disciplines; food crops, food safety, fodder crops, animals, forests, biotechnology, molecular studies, and other fields.

The impact of my career experience: My career experience has impacted me by increasing my skill set, giving me leadership experience, and reaffirming my desire to utilize research to directly inform management. In addition, my career experience has given me undergraduate mentoring experience. This undergraduate mentoring experience has been a great learning experience for me, in my future career I plan to continue conducting mentoring and outreach activities.

Name: **Brian Small**
Hometown: **Era, Texas**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank: **Graduate**
Major: **Wildlife Science**
Expected date
of graduation: **May 2015**
Degree: **Master's in Wildlife Sciences**
USDA Agency
of interest: **US Forest Service USFS**
Email: **basmall@nmsu.edu**

Career experience/location: This summer I was lucky enough to work on my Master's thesis in the Carson National Forest in Taos, New Mexico.

Description of career experience (what I learned): I learned the joys and difficulties of vegetation surveys and measurements in the field. I gained experience in the permitting process, as well as how to coordinate and work between wildlife departments. I learned how to enjoy today in the field while sweating the logistics of tomorrow.

What is your perception of agriculture now: Agriculture is an immeasurable, unseen part of everyday life for everyone, and it has more faces than just the dairy cow.

How has this career experience broadened your employment opportunities: Having experience in the field and being able to demonstrate to a hiring manager that I already have proven to be capable of holding my own is how this experience has helped me. I can now firmly state that being a contributing member of the scientific community is what I want to do.

Career and research aspirations: I hope that my time in the NRCT program will give me the leadership experience to become a productive, effective, fulfilled researcher/biologist within the public sector of wildlife management. I will show the public how to become informed decision-makers on policy, as well as having them become better stewards of the land.

Skill Set: Small-mammal trapping -managing deadlines -computer skills -hiking -extended stay camping -welding -fence construction -ATV operation -GIS skills -GPS proficient -radio telemetry -mist netting -chainsaw use -4x4 driving -some CO₂ dart guns -working with the public -supervisor experience -professional etiquette

The impact of my career experience: My career experience has allowed me to get a taste of what to expect when I reach the workplace. I have been able to see what my job will entail, and make lifelong decisions as to what I want to do within the Forest Service or other USDA agencies. It has also given me the confidence to apply for jobs I otherwise would have thought were out of my experience range. I have been put into a leadership position that will give me experience into how to supervise co-workers effectively.



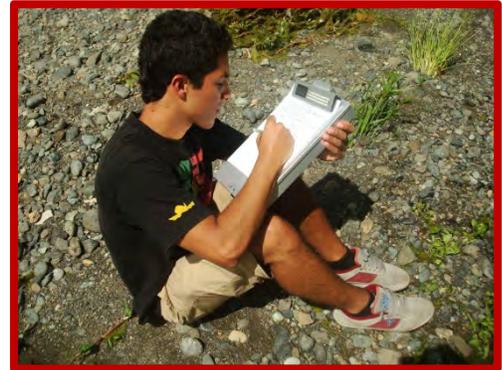
Agriculture is an
immeasurable, unseen part of
everyday life for everyone,
and it has more faces than just
the dairy cow.

NM-RP NRCT Polytechnic University of Puerto Rico Undergraduate Student_____

Name: **Enrique I. Lucca Santana**
Hometown: **Caguas, Puerto Rico**
Institution: **Polytechnic University of Puerto Rico**
Campus: **Puerto Rico Campus**
Rank: **Junior**
Major: **Environmental Engineering**
Expected date
of graduation: **May 2016**
Degree: **Bachelor**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS**
Email: **eluccasan@gmail.com**

Career experience/location: Assistant at the Project of Nutrient Levels Associated with Ecological Thresholds of Impairment in Reservoirs of Puerto Rico, Natural Resources Career Tracks (NRCT), Department of Agronomy & Soils, University of Puerto Rico Agricultural Experiment Station.

Description of career experience (what I learned): During this career experience I have visited and collected data from six reservoirs in Puerto Rico learning their physical and chemical properties, and how they behave. This data was collected using a YSI meter, Secchi Disk, and a Van Dorn. The water parameters evaluated in this project were nitrogen, phosphorus, dissolved oxygen, pH, temperature, etc.



What is your perception of agriculture now: Agriculture is the base of our society and we have to understand it, to take advantage of all of its resources, without harming the environment.

How has this career experience broadened your employment opportunities: This opportunity has improved my knowledge and experience that is acquired in the practice, and has supported the theoretical information given in my courses. Also it has prepared me for further job opportunities, by giving me more confidence in the working area. I have also made great relationships with professionals that would recommend me for future job opportunities.

Career and research aspirations: My short-term goal is taking a Leadership in Energy & Environmental Design certificate on Building Design and Construction, from the US Green Building Council, and my future goals are completing a Master's degree in Environmental and Water Resources Engineering, and in the professional area, building an Environmental Engineering consulting firm and working with the Natural Resources Conservation Service (NRCS).

Agriculture is the base of our society and we have to understand it, to take advantage of all of its resources, without harming the environment.

Skill Set: -I have great skills using Microsoft Word and Excel -communicating in Spanish and English
-managing and analyzing data -measuring water parameters -precise and meticulous with laboratory task

The impact of my career experience: Has made more clear in what field of the environmental science I want to work, once I finish my degree. This impacted my future education by motivating me to continue my studies to achieve a master's degree in the water resources field. Also the career experience has improved my resume, giving me more options on the working area and being considered for future jobs. Also it will help me get a job with the USDA.

NM-RP NRCT University of New Mexico - Undergraduate Students

Name: **Justin Martinez**
Hometown: **Grants, New Mexico**
Institution: **University of New Mexico**
Campus: **Main campus**
Rank: **Junior**
Major: **Computer Science**
Expected date
of graduation: **May 2015**
Degree: **Bachelor's**
USDA Agency
of interest: **US Forest Service USFS, Park Service
USPF, Fire**
Email: **Justin24@UNM.edu**



Career experience/location: I worked with the forest service recreations department on two separate occasions, first with the Hood-Canal district in Quilcene, WA. and finally with the Tongass district in Craig, AK.

Description of career experience (what I learned): Being employed with the forest service has taught me many valuable professional and personal skills, from the proper way to fall a tree, to working with coworkers in a pleasant, professional manor. This is of course a very short summary of what I learned while working with the Forest Service.

What is your perception of agriculture now: I had a general idea of what agriculture was until I worked with the professionals in the field, since then I've gained a refined understanding of agriculture.

How has this career experience broadened your employment opportunities: Given the opportunity to work in such diverse fields of the USDA has offered me an exceptional reference for my resume, thus giving me some preference in the market. I now have connections with the Forest Service, and in a matter of speaking, my foot is in the door with the Federal Government.

I had a general idea of what agriculture was until I worked with the professionals in the field, since then I've gained a refined understanding of agriculture.

Career and research aspirations: I have always seen myself working in the computer technology field, but since I've been introduced to agriculture, forestry, wildlife management etc. my career goals might have a slight change. I would like to see myself working a field dealing with some type of data either GS mapping, fire behavior, really anything that merges technology and the wilderness.

Skill Set: -Computer skills -electronic skills -carpentry -mechanical skills -data retrieval/entry -proficient with most hand tools -wild land fire trained -survival trained -GPS/Map proficient -user support trained

The impact of my career experience: My career experiences have given me a first-hand account of what to expect while working with the Forest Service. What I've learned from them is that education, above all, is most important and without an education they most likely would not hold the positions they do. Because of these individuals' influences on me, I too have fortified my educational endeavors and began to pursue a career with one of these organizations. I would like to complete my degree and see what employment options are available. I would like to become a permanent employ with the Forest Service and possibly try a job with the park service. These opportunities have given me a leg up with the federal government and I now have a better idea of what type of employment would suit me best. Never before have I had such an amazing experience, and had been completely wrong of what the USDA umbrella consisted of. When I think of long term goals, I would like to work with the Forest Service, Park Service and if possible with the Navajo Nation. I am very grateful for these experiences as they have influenced my professional and personal life tremendously, and have become a corner stone of a maturing endeavor.

Name: **Jenna Padilla**
Hometown: **Albuquerque, New Mexico**
Institution: **University of New Mexico**
Campus: **Main- Albuquerque**
Rank: **Junior**
Major: **Earth and Planetary Sciences (Geology)**
Expected date of graduation: **December 2014**
Degree: **Bachelor of Science in Earth and Planetary Sciences**
USDA Agency of interest: **US Forest Service USFS**
Email: **jpada92@msn.com**

Career experience/location: The past two summers I have worked as a Minerals Technician (Engineering Aid) for the Black Hills National Forest in South Dakota.

Description of career experience (what I learned): This summer I was exposed to several different fields of the Forest Service. I directed and completed the active and reclaimed mine inspections for the three districts of the forest. I organized and surveyed campgrounds to measure campsite, bathroom, and hydrant accessibility for the disabled. Finally, I completed forest resident inspections for the Northern Hills district.

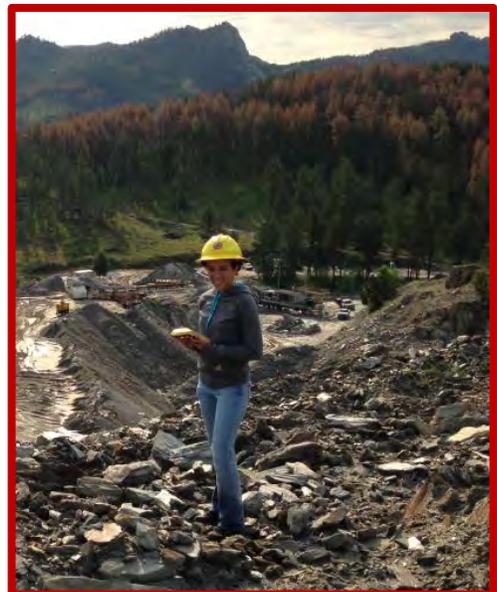
What is your perception of agriculture now: I do not have a perception on agriculture. However, I do have a perception on the United States' forests that could relate to agriculture as well. I believe that public awareness on the subject of forest management, as well as agricultural management, needs to increase. The majority of the public only knows what the media tells them, and the lack of information causes dire issues in advancing the health of our nation's forests.

How has this career experience broadened your employment opportunities: This career experience gave me more knowledge regarding the agency I want to work for. Not only was I able to work the field I want to concentrate on, but I was exposed to other aspects of the Forest Service Agency as well.

Career and research aspirations: I want to obtain a long-term job within the United States Forest Service. I want to further care for the land and serve the people by working as a geologist for any forest in the United States.

Skill Set: -Hiking -map reading -ArcGIS mapping -Microsoft Office (Especially in Excel) -mineral identification

The impact of my career experience: Career experience during college studies is significant in future employment, obtaining my career goals, and achieving my long term objectives. Being a permanent employee for the United States Forest Service is my career goal and long term objective. I am gaining work experience now as a college student, in order to be the best candidate for being a permanent employee in the future. From working with mentors in the field of work that I want to participate in the future, I am fully preparing myself to be the most competitive candidate when the times comes to enter the workforce.



I do have a perception on the United States' forests that could relate to agriculture as well. I believe that public awareness on the subject of forest management, as well as agricultural management, needs to increase.

NM-RP NRCT University of Puerto Rico - Bayamon Undergraduate Student_____

Name: **Juan G. Vega Salas**
Hometown: **Manatí, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Bayamon**
Rank: **Senior Student**
Major: **Biology**
Expected date
of graduation: **May 2015**
Degree: **Bachelor's**
USDA Agency
of interest: **Natural Resource Career Track NRCT Program**
Email: **juan.vega9@upr.edu**

Career experience/location: I participate in USDA Natural Resource Career Track Program at the University of Puerto Rico - Bayamon Campus.

Description of career experience (what I learned): In this internship I sorted leaf litter fall per tree species from the Guanica State Forest in a 4 hectares plot. Also, I went to field trips to gather samples of leaf litter fall.

What is your perception of agriculture now: After this experience, I understand better the importance and role of plants in the biosphere, and agriculture is one way to protect it and improve our environment.

How has this career experience broadened your employment opportunities: This career experience has showed me the importance of being responsible and professional in our respective responsibility. Also, with this experience I will be able to find a job opportunity related to forest conservation.

Career and research aspirations: I am looking forward to study a career related to plants and how to protect the environment. I see myself in 5 years completing my Master's degree possibly in Ecology, and in 10 years working for the welfare of the environment and doing research.

Skill Set: I know how to work with Microsoft Excel, Microsoft Word, Microsoft PowerPoint and Microsoft OneNote. Also, I know how to use a microscope, and to prepare cross sections of plant tissues using a scalpel.

The impact of my career experience: When I initially started my undergraduate studies, I was interested in pharmacy. I have since developed a keen interest in natural sciences. I want to better understand the environment and do what I can be done to manage its resources. During an undergraduate research course last semester, I participated in a project similar to the one I did this past summer where I gained knowledge of plant species in the Guanica State Forest and prepared a paper about phenological changes in leaf litter production due to changes in temperature. I enjoyed the course and asked to continue participating in the research. The Natural Resources Career Tracks opportunity will strengthen my skills and knowledge about conducting research and help expand my budding interest in ecology. This internship will be a key to achieve this goal and help me decide if a career in ecology would be an equally satisfying career choice. In addition, I expect this will be a great opportunity to increase my field research skills, which in turn will contribute to my formation as a hard working professional.



After this experience, I understand better the importance and role of plants in the biosphere, and agriculture is one way to protect it and improve our environment.

NM-RP NRCT University of Puerto Rico - Cayey Undergraduate Student_____

Name: **Damaris V. Méndez Valléllanes**
Hometown: **Trujillo Alto, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Cayey**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **May 2015**
Degree: **Bachelors in Science**
USDA Agency
of interest: **Forest Service**
Email: **damaris.mendez@upr.edu**



Career experience/location: Summer research internship at the Phytopathology Laboratory-Agricultural Experimental Station-Botanical Garden, Rio Piedras PR.

Description of career experience (what I learned): This summer I decided to study the molecular level of my opponent. Its name was whitefly, a parasitic predator that introduces toxic saliva into agricultural crops and transmits disease. I collected infected plant tissue samples and extracted DNA and RNA in order to sequence and characterize the virus's genome and the primer Rbcla. If we figure out the parasite's crop selectiveness for viral transmission, it would save valuable food production.

What is your perception of agriculture now: Just like our scientifically motivated ancestors, my obsession is to find ways to improve and prolong our life expectancy. I realize its human nature to use intellectual advantage to solve our limited capacities. One of these obstacles is food, the practice of agriculture is our solution to this problem.

How has this career experience broadened your employment opportunities: Overall it polished my lab skills, introduced me to new equipment and various DNA extracting techniques. Thanks to this experience I have gained confidence to work in laboratory research, interpret data and collaborate with others on the same project.

Career and research aspirations: If I had to put a title to my life's goal it has to be research scientist. Choosing this path gives the awesomeness to create and improve science. It satisfies my quench on keeping intellectually stimulated. Most importantly it is my nature's call to have a passionate desire to be purposeful and share my information to those that need it most. Getting more valuable research experience and mentoring, is important to me when I aspire to make scientific contributions and be respected in the academia. Nothing excites me more than the mystery of being human and the strict laws of nature.

Skill Set: -Public speaking -motivate others -microbiological techniques -invasive plant species management
-educational video maker -forest surveys -bilingual

The impact of my career experience: I have an addiction, an addiction to understand and manipulate biological processes for the greater good. This can only be achieved by effective communication of knowledge and the cooperation needed to apply it. With that in mind I decided to develop an ecological worldview that integrates all natural resources including humans. I figured that if I was truly committed to studying this planet, I would have to get familiarized with its components. Nature is our only inventory; my priority is to preserve life and help identify unrecognized benefits for our mysterious humanity. With my career experiences I intend to exercise my critical thinking skills, gain knowledge and apply it successfully.

Just like our scientifically motivated ancestors, my obsession is to find ways to improve and prolong our life expectancy. I realize its human nature to use intellectual advantage to solve our limited capacities. One of these obstacles is food, the practice of agriculture is our solution to this problem.

NM-RP NRCT University of Puerto Rico - Humacao Undergraduate Student_____

Name: **Lelanee Ortiz-Rivas**
Campus: **University of Puerto Rico at Humacao**
Rank: **Undergraduate**
Major: **Wildlife Management**
Internship: **Forestry Aid Technician, US Forest Service Sulphur Ranger District's Timber Crew, Granby Colorado**

Narrative: During my years as an undergraduate student, I have had the opportunity to participate in academic activities such as internships, research and workshops which have enriched my academic and professional life. In 2007, as part of my research experiences, carry out studies of behavior and aquatic birds in the nature reserve of Humacao with Dr. IRIS Velasquez. From 2009 until the present 2012, I have been participating in research projects related to the reproductive ecology of the “coquí llanero” (*Eleutherodactylus juanariveroi*) an endemic species of Puerto Rico, which is under threat of danger of extinction. In 2010, I had the experience of completing one semester of academic studies in tropical biology in Costa Rica. For the 2011 participate in an REU (Undergraduate Research Experience) in our national forest El Yunque - the green. At the beginning of 2012, participate in a workshop of amphibian husbandry in captivity in our in our neighboring Republic Dominicana-Santo Domingo. This same year 2012, I was chosen within the first cohort of students to participate in the New Mexico-Puerto Rico Natural Resources Career Track program. And my goal is to be part of the full team of forest service or one of the organizations within the natural resources and environmental.



During my years as an undergraduate student, I have had the opportunity to participate in academic activities such as internships, research and workshops which have enriched my academic and professional life. In 2007, as part of my research experiences, carry out studies of behavior and aquatic birds in the nature reserve of Humacao with Dr. IRIS Velasquez.

NM-RP NRCT University of Puerto Rico - Humacao Graduate Student

Name: **Betzy G. Rossi-Ortiz**
Hometown: **Humacao, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Medical Sciences**
Rank: **Graduate**
Major: **Environmental Health**
Expected date of graduation: **June 2014**
Degree: **Master of Science**
USDA Agency of interest: **US Forest Service USFS, Natural Resources Conservation Service NRCS, Office of Environmental Markets OEM**
Email: **betzy.rossi@upr.edu**

Career experience/location: My first experience was with the Forest Service in the Black Hills National Forest, South Dakota. The second one was in Culebra National Wildlife Refuge (US Fish and Wildlife Service), Culebra, Puerto Rico.

Description of career experience (what I learned): With the first experience I learned how to identify trees for timber sale, practiced the use of a GPS, the use of a radio and how to read maps. Also, I understood some aspects of federal jobs. In my second experience I had both field and office work. I monitored bird and sea turtles nest, did wildlife surveys, collaborate with reforestation projects (of endangered species) and provided assistance with the plant nursery. Likewise, I prepared one brochure of the amphibians and reptiles, and another brochure of birds present in Culebra Island and prepared a standard protocol to monitor the Virgin Island Boa.



What is your perception of agriculture now: I believe that dealing with agriculture is very important in our society and is a very interesting subject.

How has this career experience broadened your employment opportunities: These experiences has given me important field practice and has taught me some skills I can use in a workplace.

Career and research aspirations: I see myself in five years working in one of the agencies I mentioned above. I will prefer if I'm doing field work (monitoring plants, animals or ecosystem's resources) or research related to forest health, restoration of ecosystems or endangered species or even educating the public of our natural resources and how to protect or manage them.

Skill Set: -Computer skills -GPS -GIS -PCR -electrophoresis -HPLC -research in data bases

The impact of my career experience: My career experiences positively impacts my future because it gives me some of the knowledge I need to have for a good performance in a job. I acquired the necessary experience in agencies I love, doing something I really enjoyed. These career experiences contributed on my personal and professional growth. I really hope this help me with my career aspirations.

I believe that dealing with agriculture is very important in our society and is a very interesting subject.

NM-RP NRCT University of Puerto Rico - Mayaguez Undergraduate Students_____

Name: Doris Laguer
Hometown: Aguadilla
Institution: UPR
Campus: Mayaguez
Rank:
Major: Geology
Expected date of graduation: May 2016
Degree:
USDA Agency of interest: NRCS, Forest Service USFS
Email: doris.laguer@upr.edu

Career experience/location: During my first internship I was able to work with nanotechnology and (low concentration) explosives. I was able to experience what was like to work in a real lab and look at chemistry at a different angle. My research project consisted in the synthesis and growth of Zn Oxide nanoparticles and detection of these particles using a mass spectrometer. Also, I was able to work with graduate students and learn more about chemistry. I loved so much working with Dr. Samuel Hernandez that I have continued my research with him since then. I also worked in Explosive Characterization in Soil using Infrared Spectrometry with Dr. Samuel Hernandez.



Description of career experience (what I learned): I learned about different soil properties, bio-remediation techniques and explosive characterization.

What is your perception of agriculture now: I have been able to relate with agriculture, specifically agronomy because I have been able to work with soil analysis and soil taxonomy. Furthermore I have been able to relate it with geology fields like stratigraphy and sedimentary geology.

How has this career experience broadened your employment opportunities: I have been able to meet and interact with different chemical companies like DOW and Exxon Mobil.

Career and research aspirations: I wish to continue my graduate studies in Agronomy or Soil Science and to work in research areas that involve soil taxonomy, especially with clays and mud size particles and soil chemistry.

Skill Set: -Chemical analysis and instrumentation
-MATLAB -GIMP -OPUS -Word -Publisher -Power Point and Excel

I have been able to relate with agriculture, specifically agronomy because I have been able to work with soil analysis and soil taxonomy. Furthermore I have been able to relate it with geology fields like stratigraphy and sedimentary geology.

The impact of my career experience: It has helped me grow as an individual and as a professional. I have had the opportunity to collaborate with experts and professors in my area of interest.

Name: **María A. González Morales**
Hometown: **Maunabo**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Junior**
Major: **Crop Protection**
Expected date of graduation: **Fall 2015**
Degree: **Bachelor**
USDA Agency of interest: **USFS, FDA, APHIS, FWS**
Email: **maria.gonzalez63@upr.edu**

Career experience/location: Summer 2013 Internship experience as a Biological Science Technician with USDA Forest Service at El Yunque National Forest in Rio Grande, Puerto Rico.

Description of career experience (what I learned): I worked with Invasive species, Agroforestry, Parrot Habitat Improvement of *Amazona vitata*, Puertorican parrot. Besides this I wrote proposals for improvement of a water supplier box and the construction of a compost box. Also, I worked with Fisheries to classify and count river species.

What is your perception of agriculture now: Agriculture is a versatile science that allows me to develop as a person, professional and scientist to become an efficient citizen.

How has this career experience broadened your employment opportunities: This career experience showed me different job positions that I did not even imagined. It proved to me that I truly have many options to choose in the future in different federal agencies.

Career and research aspirations: My future aspirations are disseminating the importance of agriculture in my home country in different ways. In five years I picture myself coursing a Master's degree in Agricultural Sciences. In ten years I want to be fulfilling my aspirations as an educator by raising awareness of how we can make the world a better place using agriculture.

Skill Set: -Adaptable to any environment and/or work conditions -leadership skills -knowledge in media technology -Microsoft Word, Power Point, Excel -bilingual: fluent in Spanish intermediate speaker English

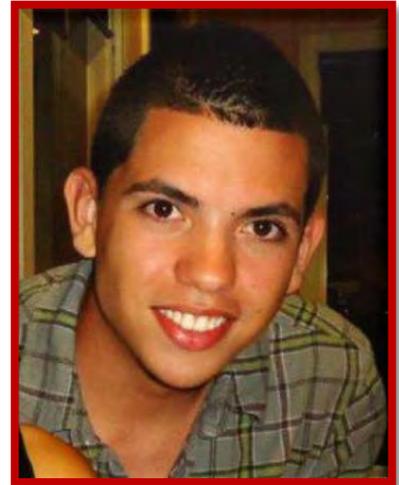
The impact of my career experience: The career experience at El Yunque National Forest helped me develop myself as a person, student, leader and professional. It has made me aware of how important and vital my career is in Puerto Rico and the world. I know that this experience has opened employment horizons in my present and future in the USDA Agency and many more. It left a very deep foot print in what I want to be when I work as a professional. I believe that if everybody had opportunities such as this the world would be different because the people would work for vocation.



Agriculture is a versatile science that allows me to develop as a person, professional and scientist to become an efficient citizen.

Name: ***Eddie Rivera Olivencia***
Campus: **University of Puerto Rico at Mayaguez**
Rank: **Senior**
Major: **Civil Engineering**
Internship: **Rio Bravo Archaeological Survey, Belize C.A.**

Eddie Rivera Olivencia was born on March 5 of 1991 in Moca, Puerto Rico. His parents Edelmiro Rivera and Ileana Olivencia had always lived in San Sebastian, PR, with her only sister Anaeli Rivera who is 3 years older. Eddie attended all of his elementary studies and high school at the Central Adventist Academy (AAC) in San Sebastian. There he was recognized as an exceptional athlete playing both basketball and volleyball in which he was team captain all of high school achieving 3 straight championships for AAC. Also he was an honor student graduating from high school in 2008 with a class high valedictorian (4.00). On August 2008 moved to Mayaguez to begin with his current studies on Civil Engineering. In his first four years he has been a very active student participating in several extracurricular activities. The most notables are the ASCE Concrete Canoe and Hydraulic Rocket competition and as part of the ASCE UPRM Team that won the first regional championship in the last 10 years in march 2012 at Florida State University and the Florida A&M University College of Engineering competing against 30 universities of the south east region from United States. Just after that he was chosen by the Natural Resources Career Tracks (NRCT) to participate in this new program. As part of the program he participated in field activities and seminars including one week at El Verde Experimental Station at El Yunque where he and the other participant received value information and seminars related to natural resources. On summer 2012 the NRCT also gave him the opportunity to participate in an internship at Belize Central America for 4 week. There he worked as Surveyor for the Rio Bravo Archaeological Survey with project director Dr. Stanley Walling an archaeologist from the Community College of Philadelphia. Such things opened big opportunities as he is now on his last year of study the current president of all Civil Engineering Department Student Associations and also part of the 2013 ASCE Steel Bridge Team and Outreach Committee that will be competing on March 2013 at the Florida International University and the University of Miami.



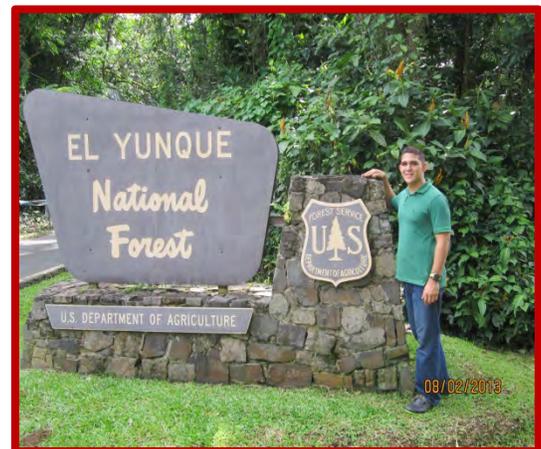
Name: **Manuel F. Olmeda-Saldaña**
Hometown: **Utuaado, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Junior**
Major: **Biology**
Expected date
Of graduation: **May 2015**
Degree: **BS in Biology**
USDA Agency
Of interest: **Forest Service USFS**
Email: **manuel.olmeda@upr.edu**

Career experience/location: Summer Career Experience as a Biological Science Technician with USDA Forest Service at El Yunque National Forest, Rio Grande, Puerto Rico.

Description of career experience (what I learned): I worked with the Parrot Habitat Improvement of *Amazona vitata* closing the nests during their off-breeding season for conservation. Also, I worked with Fisheries to classify measure and count river species to therefore enter the data.

What is your perception of agriculture now: I understood that Agriculture is a multi-disciplined science that can be integrated in every natural resource and is vital for a healthy life.

How has this career experience broadened your employment opportunities: Learning Fisheries techniques I counted, measured, and classified water fauna and its water quality. Experiences such as this have broadened my employment pursuit in Agencies such as Fish and Wildlife and USDA Forest Service.



Career and research aspirations: Find research and career experiences in which I can develop my professional skills and learn new techniques that help me be more competent. Besides graduating from my Biology bachelor I see myself in five years finishing a master's degree in Marine Sciences. In ten years I already visualize myself as a Marine Biologist for a USDA agency such as Fish and Wildlife

Skill Set: -Adaptable to any environment and/or work condition -leadership skills -excellent interpersonal skills
-bilingual: fluent in Spanish and English

The impact of my career experience: The career experience I had in USDA Forest Service at El Yunque National Forest impacted my current and future education because every theoretical knowledge learned in my Biology courses such as Ecology, Botany and Zoology were applied in a Rainforest varied ecosystem. This experience gave me an advantage in future employments with practices such as Habitat Improvements, Fisheries, Reforestation planning, Volunteer work at 4-H, promoting AgroForestry and further more to acquire employments in agencies such as USDA Forest Service, Fish and Wildlife. Since my career goals are to have career experiences and acquire a Master's and PhD degree in Marine Biology or Hydrology this career experiences are truly essential for me to have a good performance in this areas.

I understood that Agriculture is a multi-disciplined science that can be integrated in every natural resource and is vital for a healthy life.

Name: **Jose J Rivera**
Hometown: **Hatillo**
Institution: **University of Puerto Rico**
Campus: **Mayaguez**
Rank: **Undergraduate**
Major: **Civil Engineering**
Expected date
of graduation: **May 2014**
Degree: **BS**
USDA Agency
of interest: **USDA**
Email: **jose.rivera79@upr.edu**

Career experience/location: University of Puerto Rico, Mayaguez.

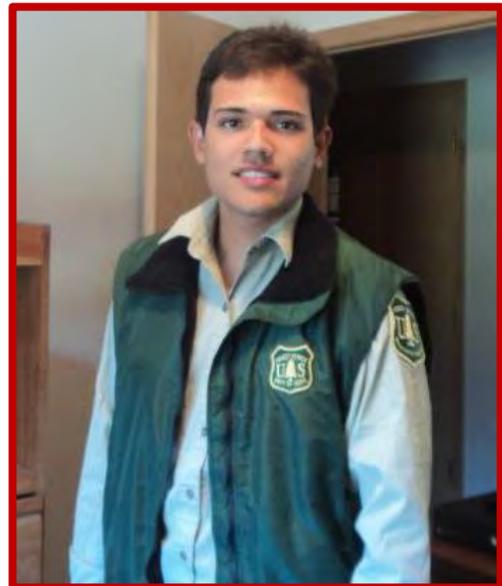
Description of career experience (what I learned): My experience was as representative of the program during activities and promoting the program to students interested to apply.

What is your perception of agriculture now: Agriculture in Puerto Rico has the necessity of increase the lands available for this use. As Civil Engineers our mission is to make the cities grow but sustainable using more space bur growing vertically saving the space for agriculture land use.

How has this career experience broadened your employment opportunities: This experience will help broad my employment opportunities because of the opportunities we had by networking with other students, professional potential future employers, such as the USDA and other agencies involved in agriculture.

Career and research aspirations: Pursue a doctoral research program in a civil engineering or related area in the United States or Puerto Rico where I can use my engineering knowledge and experience to solve the toughest challenges in engineering.

Skill Set: -OSHA -Outreach Training Program (General Industry and Construction) December 2011 -computer skills: AutoCAD, SAP 2000, Google SketchUp, C language, MS Office -fluent in Spanish and English



The impact of my career experience: The trip to Colorado in 2012 was a temporary job of the U.S. Forest Service. I was located in Rio Blanco County, Colorado in the White River National Forest for eight weeks. My position was "Forestry Aid" where I have the opportunity to work in different positions within the forest. My main job was to keep in good shape the forest trails. In this occupation I was working 60 miles of trails cleaning the debris and giving the required maintenance for them. In addition to work as "Wilderness Ranger" where different areas of the forest patrol delivering information to people especially on restrictions established in the forest fire. I had the opportunity to work in the machine shop where I provided maintenance to the tools used in the field. In addition to these major tasks in the maintenance work horses and mules, conduct a biological study of a riparian creeks and among other tasks. This opportunity allowed me to get my enriching experiences different concentration in Civil Engineering and the opportunity to meet a permanent job opportunity for my professional future.

This experience will help broad my employment opportunities because of the opportunities we had by networking with other students, professional potential future employers, such as the USDA and other agencies involved in agriculture.

Name: **Fabio L. Tarazona**
Hometown: **Añasco, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayagüez**
Rank: **Junior**
Major: **General Biology**
Expected date
of graduation: **May 2015**
Degree: **Bachelor**
USDA Agency
of interest: **US Forest Service USFS**
Email: **fabio.tarazona@upr.edu**

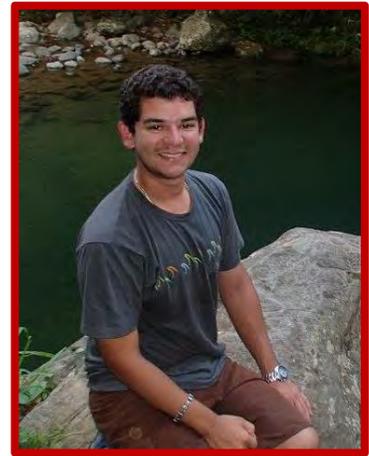
Career experience/location: I have not had an internship experience yet. I have had some research experience done at the University of Puerto Rico.

Description of career experience (what I learned): Throughout this research experience, I have learned useful techniques used in field work and also, practices used in the laboratory for data transfer and interpretation. Some of the work in the laboratory involved the use of Microsoft Excel for data analysis and development of tables and graphs for a better interpretation of the work done.

What is your perception of agriculture now: Agriculture is a very important part of our daily lives, unfortunately it is not given its rightful place and the important it deserves in society.

How has this career experience broadened your employment opportunities: This career experience has allowed me to work under both field and laboratory conditions. This has given me a good view in my near future for an employment opportunity.

Career and research aspirations: My current career aspirations include finishing my bachelor's degree successfully and acquiring as much knowledge as possible in my field of study. In a near future I aspire to enter graduate school and develop a research question that focuses on critical and new areas of study. In the future, I see myself as a person willing to share the knowledge I have acquired and interested in linking people and wildlife conservation through education.



Agriculture is a very important part of our daily lives, unfortunately it is not given its rightful place and the important it deserves in society.

Skill Set: -Bird identification by ear -field work skills -computer skills -general microbiological techniques -willing to work in an environment with other people -preparation of PowerPoint presentations -good with oral talks -given poster presentations in national conferences

The impact of my career experience: If there is one thing I am sure my career experience has helped me with is to choose the path I want to take my life and future. I have been able to discover my virtues and my limitations, what I like and what I dislike, and finally it has given me the chance to work with different people. People that sometimes are fully committed to the work they are doing, and people that do not have any commitment. All of this has helped me discover what I prefer in a work environment and where I can do best as a worker. I have also learned of the importance of a strong academic education, which provides knowledge and changes (in a positive way) what we see and expect in life. I have learned not to settle for less and always strive towards excellence and high standards of professionalism both in work and with the daily interactions with other people.

Name: **Carlos Javier Arzola Torres**
Hometown: **Cidra, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayagüez**
Rank: **Undergraduate**
Major: **Animal Sciences**
Expected date
of graduation: **May 2016**
Degree: **Junior**
USDA Agency
of interest: **Ecosystem Services from National Grasslands**
Email: **carlos.arzola@upr.edu**



Career experience/location: During summer 2013 I worked in the Central Laboratory Analytical that belongs to Agricultural Experimental Station of the University of Puerto Rico on Rio Piedras. My position during the internship was of assistant laboratory technician.

Description of career experience (what I learned): During my internship I was part of the efforts of the lab, assisting and learning the different techniques and methods for performing the various analyst and field trips. Too, I used the different equipment to realize the different analyst and interpret the results obtained after the tests.

What is your perception of agriculture now: Ever, my perception about agriculture is that it is the only way to maintain an alimentary security for any country and we need to be better educated and related with it because will help to increase the economy and stability of a society.

How has this career experience broadened your employment opportunities: In the future I will be an agronomist, my work will be to give advice and help farmers with different problems they encounter to dairy in their farms. Know how analyze soil, water, vegetal tissues and fruits, and interpret these results help to do better my future work.

Career and research aspirations: My future career aspiration is to obtain a *Philus Doctor* in animal sciences or in horticulture, because I plan to get a minor in the same. In the next 5 years I will be finish my mastery or I've started very doctoral program, maybe working at the same time if the opportunity is present. In 10 years I hope have completed all my studies and to be working with the federal government, doing any investigation of field or like professor in the some university.

Ever, my perception about agriculture is that it is the only way to maintain an alimentary security for any country and we need to be better educated and related with it because will help to increase the economy and stability of a society.

Skill Set: -Computer skills -QuickChem® 8500 -automatic tritator -titration using a buret -distillation equipment -pH and conductivity meter -spectrophotometer -block digester -microwave oven digester -reagent inventory program -electrophoresis -PCR machine

The impact of my career experience: The internship experience gives the opportunity of see that things really are of interest in the fields of studies and if you like these experiences you can to take classes related with the work and direct your preparation toward what you really like. The career experience exposes to one to different practices like laboratory skills, relationships with co-workers, themes related you interest's studies, put in practice your different abilities and gain knowledge. The experiences acquired during internship is very important, not only for obtain knowledge, also to obtain practice in your study area and in the moment that you go to search work, in your resume, have previous experience. The experience obtained gives you most possibilities to found a better and faster job, and give you more capacity in your position job. To long time gives you the necessary tools to achieve your goals academic, professional and socially, you become in an useful person. To long time I will be glad that the experience acquired during the internship help me to focus my academic preparation and make me better person taking good decisions with respect personal and professional life, help to maintain a balance between both, giving a better professional in agricultural area, with better ideas and serious commitment with the agriculture of his island.

Name: **Miguel A Torres-Torres**
Hometown: **Orocovis, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Biology**
Expected date
of graduation: **December 2016**
Degree: **Student**
USDA Agency
of interest: **NRCS**
Email: **Miguel.torres20@upr.edu**

Career experience/location: Use the GIS and GPS to calculate the farms areas. (internship), Agricultural Experimental Station, UPR

Description of career experience (what I learned): Through this internship I could learn to work with Arcmap and Trible GPS programs.

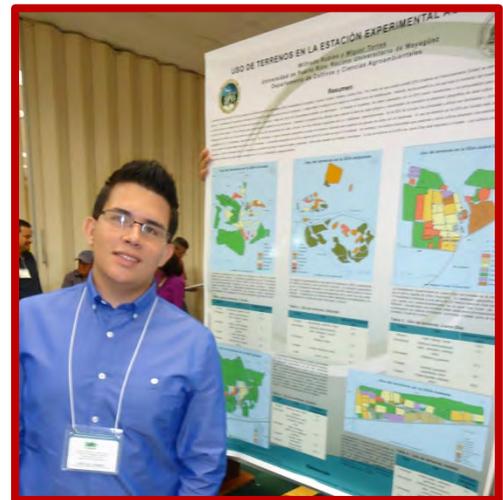
What is your perception of agriculture now: After the implementation the GPS and other technologies in agriculture I saw the need for updating the working methods.

How has this career experience broadened your employment opportunities: Thanks to this experience now I am part of an investigation on which calculate the density of weeds and grasses in the milk dairy's in Puerto Rico.

Career and research aspirations: In the future I see myself as part of the team of NRCS. I plan to work with weed control and help farmers to control them.

Skill Set: -Techniques in GPS -ArcMap -ArcPad -GIS -field works

The impact of my career experience: This experience opened many doors for me. Thanks to the work done and I am part of research and upcoming publications. I also have an opportunity of masters in weed control and use of technology, global positioning to better land use which will help to achieve my dream of helping farmers to control them, upgrade agriculture and use effectively the agricultural lands.



After the implementation the GPS and other technologies in agriculture I saw the need for updating the working methods.

NM-RP NRCT University of Puerto Rico - Río Piedras Undergraduate Students_____

Name: *Stella V. González Alfonso*
Hometown: **Bayamón, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Río Piedras**
Rank: **Senior**
Major: **Environmental Science/Geography**
Expected date of graduation: **May 2016**
Degree: **BS**
USDA Agency of interest: **Forest Service USFS, Natural Resources Conservation Service NRCS**
Email: **stella.gonzalez.alfonso@gmail.com**

Career experience/location: Project of forest ecology in Belize from Dr. Brokaw in summer 2012. REU from Clarkson University, NY, with Dr. Bird as a social researcher in summer 2013.

Description of career experience (what I learned): Research in forest ecology and Mayan archaeology, studying Mayan influences in the forest changes. Studied forest diversity, structure, species identification, soil surveys, and archaeological settlements. Second research was in environmental policy of hydraulic fracturing in United States. Learned about policy variation, human rights and groundwater protection.



What is your perception of agriculture now? My perception in agriculture is that more environmental outreach and efficient programs are necessary to focus on sustainability to provide a conscience among the society.

How has this career experience broadened your employment opportunities: The combination of ecology, society and policy has provided me an overview of the future I want to pursue. These experiences have broadened my interest in sustainability as an option for graduate school and employment opportunities.

Career and research aspirations: In my fifth year of university, I want to study abroad in New Mexico and Ecuador. I want to graduate from my baccalaureate with many experiences because I want to focus more my interests in sustainability, ecology, and cultural geography. In the next years, I want to impulse communities toward environmental outreach. A Ph.D. is in my plans to contribute to research and education.

My perception in agriculture is that more environmental outreach and efficient programs are necessary to focus on sustainability to provide a conscience among the society.

Skill Set: -Bilingual -computer skills -communication skills -social surveys -policy analysis -research presentations -field skills -hiking -adaptation to changing environments -team work -leadership -service -organization of activities

The impact of my career experience: As a young scientist I have a constant thirst of change, to imagine a better world, and for this I'm acquiring the knowledge and discipline by working in diverse researches. The opportunities to work in research have helped me to expand my interests in a positive way. This has been really essential for me to growth and desire to contribute to the society and sciences. Among my goals, I want to continue working in research, presenting my results in conferences, and providing this information to communities. I see myself in the future as a social ecologist and geographer, traveling and learning from different cultures, environment, philosophies and lifestyles, while I grow as a better person. To achieve this, I expect to have experiences in diverse works in the areas of conservation through NGOs and federal agencies.

Name: **Ruby Rivera Cruz**
Hometown: **Bayamon, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Rio Piedras**
Rank: **Senior**
Major: **Environmental Science**
Expected date
of graduation: **May 2 014**
Degree: **Bachelors of Science in ES**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS**
Email: **rarc29@hotmail.com**

Career experience/location: Recreation Technician for the United States Forest Service (USFS) @ Flathead National in Montana, USA. Lab Technician for the United States Forest Service (USFS) @ International Institute for Tropical Forestry in Puerto Rico

Description of career experience (what I learned): From my experience in the Flathead National Forest I learned to work with ArcGIS and with the Juno Trimble (GPS system) and Terrasync program. From the IITF, I learned to analyze soil, wood and other organic samples for Carbon and Nitrogen percentage. Also, I learned to work with the TruSpec Micro Series Carbon, Nitrogen, from LECO.

What is your perception of agriculture now: Now, I see agriculture as a field with a lot of employment opportunities and because of this I am considering this field for my graduate studies.

How has this career experience broadened your employment opportunities: Basically, these experiences have helped me meet other professional that have offered me jobs and graduate study opportunities.

Career and research aspirations: As of today I want to become an Environmental Planner with area of emphasis in Sustainable Agriculture. My research interests include urban agriculture, and sustainable cities and food systems.

Skill Set: -Computer skills -bilingual: fluent in Spanish, spoken and written -learning French -basic knowledge in Map Viewer 7 and data base mgmt -full domain of ArcGIS, Leco CN, Juno Trimble(GPS) -leadership and organizational skills

The impact of my career experience: I believe career experiences are an integral part of the education process. With these experiences one can learn not only how to work in a professional environment but if you really belong in this field of work. My professional experiences have just done that and more; I have learned about new fields of work that I have never imagined before. And also, because of these experiences I have met so many different people which now are part of my professional network and because of some of them now I have new plans for graduate school.

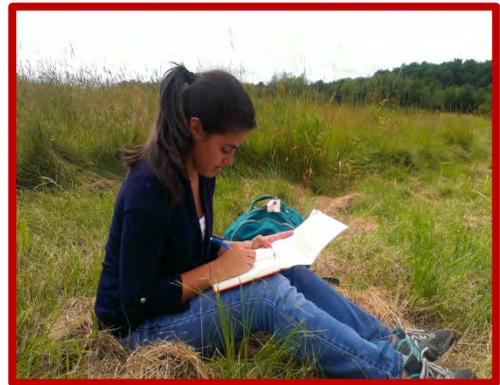


I believe career experiences are an integral part of the education process. With these experiences one can learn not only how to work in a professional environment but if you really belong in this field of work.

Name: **Lorianny Rivera**
Hometown: **Carolina, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Rio Piedras**
Rank:
Major: **Environmental Science**
Expected date of graduation: **May 2015**
Degree: **Bachelor's degree**
USDA Agency of interest: **Forest Service USFS, Risk Management Agency RMA, Natural Resources Conservation Service NRCS and the Office of Environmental Markets OEM**
Email: **loriannyrivera@hotmail.com**

Career experience/location: I have been in the University of Vermont (summer internship 2012), Clarkson University (summer internship 2013), US Forest Service in El Yunque Rainforest Puerto Rico (2013- to present)

Description of career experience (what I learned): The Vermont experience was a laboratory and field experience. I had the opportunity to collect samples, work with it in the lab and analyze it. The Clarkson University experience helps me to improve my computer skills and develop my organizational skills. Working with the Forest Service has been an excellent experience, I have the opportunity to work with different professionals that are in the same area of interest as me also have learned about the agency and participate in the different projects that they are developing.



What is your perception of agriculture now? Agriculture is an important practice related to all different science fields. For me is a field that continues improving every day. New technology and science research helps to bring better practices for the benefit of all of us.

How has this career experience broadened your employment opportunities? The opportunity to do different internships and work with the Forest Service helps me to meet different professionals that could be my mentors for graduate school. Also bring me the opportunity to talk to them and tell about my interest of working with a Federal Agency after completing my PhD.

Career and research aspirations: I will like to finish my bachelor degree in Environmental Science and a minor in Business Development. Then I will be pursuing graduate studies in the states. After my PhD I see myself working in a Federal Agency, resolving, and working with different environmental problems and doing my best to find solutions for it.

Skill Set: -Bilingual (English and Spanish) -laboratory skills -field skills -composting expert -environmental education -computer skills -leadership -multi tasking

The impact of my career experience: All the career experience that I have helps me reaffirm that this career is the career that I feel passion. It also gives me different views related to environmental science, giving the opportunity to see what universities and Federal Agencies are doing. Been in this project as an undergraduate helps me to be sure that I want to go to graduate school. This is really important to me because it also helps me to identify in what I would like to continue graduate studies and expose me to different projects related to it. This experience impacts my future employment because now I know that I want to work for a Federal Agency and I continue meeting people that I am sure can give and help me with it.

Agriculture is an important practice related to all different science fields. For me is a field that continues improving every day. New technology and science research helps to bring better practices for the benefit of all of us.

Name: **Paloma Rodriguez Rivera**
Hometown: **San Juan, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Rio Piedras Campus**
Rank: **Senior**
Major: **Environmental Science**
Expected date
of graduation: **May 2014**
Degree: **Bachelor**
USDA Agency
of interest: **NRCS**
Email: **paloma.rodriquez4@yahoo.com**

Career experience/location: This summer I worked for the Soil and Plant Department of the University of Vermont in Vermont.

Description of career experience (what I learned): I worked with soils and different test to determine the concentration of several elements present in each of the samples and how it was affecting the Lake Champlain with eutrophication.

What is your perception of agriculture now: Agriculture is one of the most important aspects of our lives. We eat every day and we need the agriculture to satisfy our needs.

How has this career experience broadened your employment opportunities: This experience opened doors for my future career in soil science and connected me to different professionals in the field.

Career and research aspirations: What I want to pursue in my graduate studies is soil science and in 5 years I see myself still making my doctorate degree in soil science. In ten years I see myself working for a federal agency like the USDA or NRCS.

Skill Set: -Research- leadership -verbal communication -writing skills -initiative-planning/organizing -problem solving-

The impact of my career experience: My career experience was an awesome experience in which I got knowledge, skills, team work practice, and much more. The opportunity I had was very useful because what I want to do in my future was exactly what I did this last summer. As I see myself working in a laboratory analyzing samples of soils with different nutrients. I also see my self helping farmers to increase their land potential for the production of food, but always keeping in mind how to use the resources in a healthy way for the best of the environment. I got the chance to help farmers and analyze their soils in order to look at their soils nutrients levels and after this they could go to their farms and add the necessary nutrients to their crops and obtain everything they needed to grow. This is want I want and this experience was exactly what I needed to reinforce my decision to study soil science.



My career experience was an awesome experience in which I got knowledge, skills, team work practice, and much more. The opportunity I had was very useful because what I want to do in my future was exactly what I did this last summer.

Name: **Sharleen M. Ortiz Rivera**
Hometown: **Manatí, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Río Piedras**
Rank: **Senior**
Major: **Environmental Sciences**
Expected date
of graduation: **May 2014**
Degree: **Bachelor's in Science Degree**
USDA Agency
of interest: **Natural Resource Conservation Service
NRCS, Forest Service USFS**
Email: **s.ortizrivera@gmail.com**



Career experience/location: I worked as a Forestry Technician with the USDA-Forest Service at the Columbia River Gorge National Scenic Area, Hood River, Oregon.

Description of career experience (what I learned): Provided information about resource management practices in the area, recreation regulations, opportunities, and current restrictions to park visitors. Certified collection officer at designated fee sites stations. Also, maintained recreation area and trails in accordance with standards.

What is your perception of agriculture now: Since I was a young girl I always found myself intrigued by how different natural environments surrounding me interacted with each other. As an Environmental Sciences major student, I am always thrilled to learn how other fields of science interrelate with others. Before the program I only knew the basic about agriculture but thanks to the different experiences the program, *Natural Resources Career Tracks* (NRCT) has offered me I have now a greater understanding of the relationship between agriculture sciences and the environment. Agriculture sciences seek to feed world's population while preventing biosafety problems that may affect human health and the environment. This requires promoting good management of natural resources together with the respect for the environment and wellbeing of all concerns in the food production and consumption system.

Before the program I only knew the basic about agriculture but thanks to the different experiences the program, *Natural Resources Career Tracks* (NRCT) has offered me I have now a greater understanding of the relationship between agriculture sciences and the environment. Agriculture sciences seek to feed world's population while preventing biosafety problems that may affect human health and the environment.

How has this career experience broadened your employment opportunities: The opportunity to interact with people all around the world, providing them the right information about the resource management practices in the area, together with making sure every site was well maintained in accordance to standards has provided me a greater understanding of how essential this type of job is to any Scenic Area or other National Parks that receives thousands of visitors a year. It provided me many tools and knowledge to be a better candidate for Peace Corps and my future employment.

Career and research aspirations: I am currently aiming to extend my experience in my field overseas and looking forward to volunteer with Peace Corps after graduating next year. After completing my time with such an outstanding program I will get my Masters Degree in Environmental Management to pursue a career with the United State Department of Agriculture.

Skill Set: -Interpersonal Skills -active listening -computers and electronics -teamwork -integrity -self awareness -flexibility -Soft skills -self management skills -transferable skills

The impact of my career experience: My career experience confirmed the importance of how well you manage to integrate people's need and the conservation of our natural resources is key for success in the type of job I achieved. Thanks to my career experience I will pursue my professional career with the United States Department of Agriculture to be able to serve the people encouraging conservation ethics by promoting the health, productivity, diversity, and beauty of forests and other natural resources.

Name: **Mónica Salazar**
Hometown: **Bayamón, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Rio Piedras Campus**
Rank: **Senior**
Major: **Environmental Sciences**
Expected date
of graduation: **May 2015**
Degree: **Bachelor's Degree**
USDA Agency
of interest: **Forestry USFS**
Email: **monica.salazar@upr.edu**

Career experience/location: In Summer 2013, I went on an internship with the RISE program at Rutgers University in New Jersey. I worked with green energy technology.

Description of career experience (what I learned): Unfortunately, I have yet to work in a lab or with current research concerning natural resources and endangered species. For January, I plan to be working in a project finally.

What is your perception of agriculture now: Agriculture is obviously important to maintain a stable economy as well as feed the local population. I agree with promoting local agriculture as well as ecological conscious agriculture.

How has this career experience broadened your employment opportunities: As soon I start working with a local research, I know I will make the right connection with my potential future bosses and probably enhance my knowledge on the working field.

Career and research aspirations: If I get this job, I hope to eventually work with them or probably add this working experience in my resume and hopefully find a job with local natural resources agencies or research.

Skill Set: With the work I did on my internship, I developed a set of skills like the following: -using excel to create graphs -ANOVA -experimental planting plots -use NIR spectral machine

The impact of my career experience: Unfortunately, I haven't started working since funding was restored recently. In January I plan on starting to work and hopefully write about my career experience.

Agriculture is obviously important to maintain a stable economy as well as feed the local population. I agree with promoting local agriculture as well as ecological conscious agriculture.



Name: **Monica Velez**
Hometown: **San Juan, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Rio Piedras**
Rank: **Senior**
Major: **Environmental Sciences**
Expected date
of graduation: **May 2014**
Degree: **Bachelor of Sciences**
USDA Agency
of interest: **NRCS**
Email: **monica.velez.o@gmail.com**



Career experience/location: My internship was with USDA-NRCS in Ashland, OH. I participated as a student trainee in soil conservation during the summer of 2012.

Description of career experience (what I learned): My major duties consisted on plan and develop coordinated practices for soil erosion control, moisture conservation, and land use: Conduct surveys on rural or urban planning, agriculture, construction, forestry on measures needed to maintain or restore proper soil management. Plan soil management practices, such as crop rotation, reforestation, permanent vegetation, contour plowing, or terracing as related to soil and water conservation. Preparing soil conservation plans in cooperation with state, county, or local government, farmers, foresters, or urban planners to provide for use and treatment of land according to needs and capability.

What is your perception of agriculture now: I became more concerned about sustainable agricultural practices, crop rotation, practices for soil erosion and conservation. I feel more knowledgeable about agriculture and its conservation practices in US.

How has this career experience broadened your employment opportunities: This experience has influenced my career development because I've had great opportunities after this internship. I had the opportunity to attend the MANRRS conference and learn more about careers in this field and meet with great people in my area of interest with whom I've been networking for future internships and/or employment.

I became more concerned about sustainable agricultural practices, crop rotation, practices for soil erosion and conservation. I feel more knowledgeable about agriculture and its conservation practices in US.

Career and research aspirations: I am senior undergraduate who will be graduating in spring 2014 and I am applying to Graduate school. In five years from now I see myself in graduate school. I would like to pursue a PhD in a natural resources related field. In 10 years, I see myself working either in Academia or a Federal Agency doing research and developing management programs concerning our natural environment.

Skill Set: -Computer skills such as GIS, ENVI, Microsoft Office -laboratory skills -field skills -reliable -organized

The impact of my career experience: I believe all these experiences I have had as an undergraduate student has broadened my career objectives and has made me a more mature student. These experiences have contributed to my professional growth significantly and have helped me decide which field of research I will pursue in graduate school. Since I have experienced a variety of fields within environmental sciences I know what I like and what I do not like. This is why I am coming into this field with a great deal of commitment and willingness to work hard for it. Seeing myself as a graduating senior I feel more mature, more committed and dedicated to my career development and with all the experience I've had I feel more comfortable and knowledgeable about the natural resources field. I believe these experiences and college courses will make a more competitive graduate student who will succeed in this profession.

NM-RP NRCT University of Puerto Rico - Río Piedras Graduate Students

Name: ***Arelis I. Arocho***
Hometown: **San Juan Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Rio Piedras**
Rank: **PhD**
Major: **Environmental Science**
Expected date
of graduation: **May 2015**
Degree: **PhD**
USDA Agency
of interest: **NOAA**
Email: **arelis.arocho@gmail.com**

Agriculture has many aspects that involve many actors and the effort of different stakeholders. The possibilities through the agriculture are endless and creativity, compromise and resources are key components for any related project, no matter the size of it. As a marine biologist and planner, my major research interests include different but integrated themes such as marine conservation, gentrification of traditional coastal communities, changes in environmental public policy, the uses of land on coasts and the effects of degradation of marine habitats on the human coastal communities. My future career aspirations include a research position in a governmental agency or NGO.

Agriculture has many aspects that involve many actors and the effort of different stakeholders. The possibilities through the agriculture are endless and creativity, compromise and resources are key components for any related project, no matter the size of it.



Name: **Christina De Jesus**
Hometown: **Rio Grande**
Institution: **University of Puerto Rico**
Campus: **Rio Piedras**
Rank: **Graduate**
Major: **Biology**
Expected date
of graduation: **December 2014**
Degree: **Masters in Science**
USDA Agency
of interest: **US Geological Survey USGS**
Email: **christina.dejesus@upr.edu**

Career experience/location: I Worked with the USDA Forest service in Puerto Rico assisting the Forester in the revision of the management plan.

Description of career experience (what I learned): I learned the value of interacting with other agencies, experts on the subjects and the importance of community involvement in planning decisions.

What is your perception of agriculture now: That it is a very wide ranging and diverse agency. Before I believed that it was just the forest service but I now see that it is much broader.

How has this career experience broadened your employment opportunities: I believe that it has strengthened my ability to communicate with professionals in the USDA as well as given me the opportunity to understand the mechanisms under which they work.



Career and research aspirations: Currently I aim to influence management of invasive species. In the future I want to complete my degree and enter into a career that allows me to manage invasive from both the planning and execution perspectives.

Skill Set: -Knowledge of Microsoft office suite and operating system
-data management -molecular genetic skills -tropical forest ecology
field skills -proficient in Spanish and English writing and speech

The impact of my career experience: My career experience has enabled me to become focused in my studies. I can see more clearly where I'm going and am more determined to get there. I want to become a research scientist, I want to do community outreach and I want to impact management. For all these reasons, a career in USDA USGS has become one of my long term goals and one that I'm working towards as I write this sentence.

My career experience has enabled me to become focused in my studies. I can see more clearly where I'm going and am more determined to get there. I want to become a research scientist, I want to do community outreach and I want to impact management.

Name: **Natalia B. Alvarez Negron**
Hometown: **Aibonito**
Institution: **University of Puerto Rico**
Campus: **Rio Piedras**
Rank: **Graduate**
Major: **Environmental Sciences, interdisciplinary option**
Expected date of graduation: **Summer 2014**
Degree: **Masters**
USDA Agency of interest: **Natural Resources Conservation Service NRCS**
Email: **natalia.alvarez78@gmail.com**

I am a graduate student, my experience has been working on my own research studying the potential for the development of urban agriculture in the Rio Piedras Watershed Area in Puerto Rico.

Through this research experience I have been working in the development of a spatial analysis of available area. I also have been able to visit some urban agriculture projects as well as communities around them performing surveys. This has allowed me to better understand our urban area's status in relation to this topic as well as the needs present.



Urban Agriculture in the study area could serve many purposes, ranging from food production and availability to aiding in the further development of community initiatives that would provide tools and skills for empowerment. It is important since Puerto Rico is importing the majority of the food consumed in the Island and working in agriculture is not a priority.

I see myself working on community initiatives education related to my research area.

Proficiency in English and Spanish -Computer based knowledge
-Word -Excel -PowerPoint -GIS -NVivo

I haven't made an internship but developing my own research has given me the opportunity of experiencing what is our real status in terms of food production in urban areas and also about community perceptions and the extreme need of education related to the importance of producing our own food. I hope that this can serve as a great tool to develop a coherent urban agriculture program in our island. I would really love to be part of it and I expect that this research is only the beginning of a larger initiative.

Urban Agriculture in the study area could serve many purposes, ranging from food production and availability to aiding in the further development of community initiatives that would provide tools and skills for empowerment.

Name: **Yamilis Ocasio**
Hometown: **Caguas**
Institution: **University of Puerto Rico**
Campus: **Rio Piedras**
Rank: **PhD**
Major: **Environmental Sciences**
Expected date
of graduation: **May 2016**
Degree: **PhD**
USDA Agency
of interest: **USDA**
Email: **yamilis.ocasio1@upr.edu**

Career experience/location: University of Puerto Rico, Rio Piedras Campus.

Description of career experience (what I learned): My experience was in an administrative position and involved helping undergraduate students in to achieve their career experiences.

What is your perception of agriculture now: Nature provides for us to eat and we have developed techniques to improve this service from the ecosystem in agriculture to the benefit of the human kind. The way we manage agriculture towards a sustainable vision, will help us increase food security in a minimum environmental damage.

How has this career experience broadened your employment opportunities: I believe this experience will help broad my employment opportunities because of the opportunities we had by networking with other students, professional potential future employers, such as the USDA and other agencies involved in agriculture.

Career and research aspirations: I aspire to become a researcher and professor in the environmental sciences areas. In 5-10 years, I see myself working in this area to help manage natural resources to improve the ecosystem services for the benefit of the people and the environment.

Skill Set: -Water and soil sampling and chemical analysis -hazardous waste management -scientific instrumentation (pH, CE, UV-Vis, AA, ICP, GC, GC-MS) -statistics (including computer program SAS System) -spatial analysis (including computer program ARCGIS)

The impact of my career experience: My participation in the New Mexico-Puerto Rico Natural Resources Career Track Program (NM-PRNRCTP) had being full of enriched experiences and educational growth. As a graduate student in the program, I was able to participate more close to undergraduate students during their educational experiences. At this moment, I am developing a K-12 curriculum to create an Ecological Network where students from K-12 are connected to undergraduates through the knowledge of the natural resources. This approach will be used to educate students about our natural resources, the importance of preserve green areas in the cities and the careers involved. This experience will give me the opportunity to more close experience as an educator.



Nature provides for us to eat and we have developed techniques to improve this service from the ecosystem in agriculture to the benefit of the human kind. The way we manage agriculture towards a sustainable vision, will help us increase food security in a minimum environmental damage.

Name: **Angel G. Rivera-Colón**
Hometown: **Bayamon, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Rio Piedras**
Rank: **Graduate**
Major: **Evolutionary Biology**
Expected date
of graduation: **May 2015**
Degree: **Master of Biology**
USDA Agency
of interest: **Agricultural Research Service ARS**
Email: **arcolon14@gmail.com**

Career experience/location: Internship as a Biological Technician at the Agricultural Research Service's US Horticultural Research Laboratory (USHRL) in Ft Pierce, FL.

Description of career experience (what I learned): Worked both in the lab and in the field to develop biocontrol methods for the Asian Citrus Psyllid. Utilized a wide range of tools, from techniques in molecular biology like qPCR, behavioral assays in olfactometry, to population surveys in citrus groves.

What is your perception of agriculture now: Lead me to understand the relationship modern agriculture has with science and how research is being implemented to get solutions to agricultural problems.



How has this career experience broadened your employment opportunities: It helped me to realize that I could potentially work in a research environment outside academia, while still being a scientist that actively publishes and work with cutting edge biological problems.

Career and research aspirations: Currently I am a graduate student at the UPR, Rio Piedras, completing a Master's Degree in Evolutionary Biology. My current career aspiration is to finish my Master's Degree and eventually my PhD either at UPR or another institution in the US. After obtaining my degree I aspire to become an active researcher, contemplating a position in the Agricultural Research Service or academia.

Skill Set: -Nucleic acid extraction -quantification and purification
-protein expression and purification -PCR -RT-PCR -qPCR -ELISA
-bacterial transformation -tissue culture -primer design -sequence alignment -BLAST

My experience at the USHRL had lead me to understand that, as a scientist, I have find a way to bring the impact of my research into the general population, for example, utilizing science to develop new techniques that could impact agriculture and the nation's food supply.

The impact of my career experience: My experience at the USHRL had lead me to understand that, as a scientist, I have find a way to bring the impact of my research into the general population, for example, utilizing science to develop new techniques that could impact agriculture and the nation's food supply. This, and my prior academic background, inspires me to continue with graduate education to become a more prepared professional, with moor skills and ideas to develop new ways to impact the general population.

Name: **Betzy G. Rossi-Ortiz**
Hometown: **Humacao, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Medical Sciences Campus**
Rank: **Graduate**
Major: **Environmental Health**
Expected date of graduation: **June 2014**
Degree: **Master of Science**
USDA Agency of interest: **US Forest Service USFS, Natural Resources Conservation Service NRCS, Office of Environmental Markets OEM**
Email: **betzy.rossi@upr.edu**

Career experience/location: My first experience was with the Forest Service in the Black Hills National Forest, South Dakota. The second one was in Culebra National Wildlife Refuge (US Fish and Wildlife Service), Culebra, Puerto Rico.

Description of career experience (what I learned): With the first experience I learned how to identify trees for timber sale, practiced the use of a GPS, the use of a radio and how to read maps. Also, I understood some aspects of federal jobs. In my second experience I had both field and office work. I monitored bird and sea turtles nest, did wildlife surveys, collaborate with reforestation projects (of endangered species) and provided assistance with the plant nursery. Likewise, I prepared one brochure of the amphibians and reptiles, and another brochure of birds present in Culebra Island and prepared a standard protocol to monitor the Virgin Island Boa.

What is your perception of agriculture now: I believe that dealing with agriculture is very important in our society and is a very interesting subject.

How has this career experience broadened your employment opportunities: These experiences has given me important field practice and has taught me some skills I can use in a workplace.

Career and research aspirations: I see myself in five years working in one of the agencies I mentioned above. I will prefer if I'm doing field work (monitoring plants, animals or ecosystem's resources) or research related to forest health, restoration of ecosystems or endangered species or even educating the public of our natural resources and how to protect or manage them.

Skill Set: -Computer skills -GPS -GIS -PCR -electrophoresis -HPLC -research in data bases

The impact of my career experience: My career experiences positively impacts my future because it gives me some of the knowledge I need to have for a good performance in a job. I acquired the necessary experience in agencies I love, doing something I really enjoyed. These career experiences contributed on my personal and professional growth. I really hope this help me with my career aspirations.



I believe that dealing with agriculture is very important in our society and is a very interesting subject.

Texas A & M University - Kingsville

STEP UP to USDA Career Success: Science, Technology and Environmental Programs for Undergraduate Preparation to USDA Career Success

Project Director:

Dr. Shad Nelson: Texas A&M University Kingsville

Kingsville Co-PDs: Randy Louis Stanko, Tanner Machado, & Greta Schuster

Project Manager: Consuelo Donato M.

Co-PDs:

South Texas College: Debbie Villalon

Del Mar College: Jonda Halcomb

Texas State Technical College: Judith A. Ybarra

University of Texas Pan American: Michael W. Persans

This multi-institutional project addresses USDA NIFA priorities by student experiential learning and recruitment and retention of underrepresented students of South Texas for careers in USDA agencies. Students from five degree granting HSI institutions will receive training in the agricultural and natural resource sciences from Texas A and M University Kingsville (TAMUK) faculty through a series of targeted summer short courses in the soil, animal, and natural resource sciences. This project creates a seamless transition of moving students receiving Associates degrees from three regional south Texas community colleges (South Texas College, Texas State Technical College, and Del Mar College) to obtaining baccalaureate degrees in the agricultural and biological sciences at a four year degree granting institution (TAMUK or University of Texas Pan American).

Undergraduate students will have experiential learning and career track development in agricultural sciences through summer internships with USDA agency partners and research projects under the direction of faculty mentors. Graduate students at the master and doctoral level will serve as research mentors and advisors to undergraduates performing research in lab. This project will produce 50 undergraduates with baccalaureate degrees in the sciences that meet minimum qualification requirements to be hired by the USDA agencies (NRCS, AMS, ARS, APHIS) upon graduation. Furthermore, the grant will fund a minimum of eight masters and one doctoral level Hispanic graduate students for advanced career path development in the agricultural sciences. The NRCS is the main USDA collaborator targeted in this project, but some students will be prepared for employment with other USDA agencies such as AMS, ARS, and APHIS upon graduation. Undergraduate students will have had a minimum of two summer internships with emphasis placed on working with USDA agencies. At least 58 students that are underrepresented in science careers will benefit from this collaborative project with B.S., M.S., and Ph.D. degrees in the agricultural and biological sciences.

Texas A & M University STEP UP - Del Mar College Undergraduate Students_____

Name: **Amber Sky Alaniz**
Hometown: **Corpus Christi, Texas**
Institution: **Del Mar College**
Campus: **East Campus**
Rank: **Sophomore**
Major: **Biotechnology**
Expected date
of graduation: **2015**
Degree: **Biotechnology**
USDA Agency
of interest: **USFS**
Email: **amberskyalaniz@yahoo.com**

Career experience/location: This past Summer I worked at The Natural Toxins Research Center researching the effects of two disintegrins derived from snake venom. These disintegrins successfully inhibited many factors of Human Pancreatic Carcinoma cells (BXPC-3)

Description of career experience (what I learned): I was in a Culture lab growing cancer cells in an incubator. I learned to change media, and work under a hood in sterile conditions. I also performed many experiments such as Proliferation Assay, migration assay, defrosting and growing a new cell line, migration assay, splitting cells, Adhesion assay, growing and purifying bacteria, sonocating, and operating a flow cytometer.

What is your perception of agriculture now: Agriculture is, and will, continue to be a major aspect to humanity. It's essential to our survival.

How has this career experience broadened your employment opportunities: This internship has broadened my career opportunities by a lot. The research I did will show what I'm capable of working in a lab.

Career and research aspirations: I was really happy that I got to work with cancer cells in a research lab, because that's exactly what I wanted to do. I've had friends and family that I've lost to cancer. I hope one day to take it a step further and start studying in oncology.

Skill Set: -Microsoft Office specialist -phone -culture -splitting -growing cells -bacteria -purifying -flow cytometer -organization -multitask -hood -phage -adhesion -migration -proliferation

The impact of my career experience: My experience made me even more curious about cancer. I'm interested to see what I'll learn in the future!



Agriculture is, and will, continue to be a major aspect to humanity. It's essential to our survival..

Name: **Aaron Beach**
Hometown: **Waxahachie, Texas**
Institution: **The University of Texas/Del Mar College**
Campus: **Dallas/Corpus Christi**
Rank: **Junior/Alumni**
Major: **Molecular Biology/Biotechnology**
Expected date
of graduation: **May 2015/May 2013**
Degree: **BS Molecular Biology/Cert. Biotechnology**
USDA Agency
of interest:
Email: **apbeach87@gmail.com**

Career experience/location: Internship/independent undergraduate research, UT Dallas Richardson, Texas.

Description of career experience (what I learned): I've learned different methods and protocols of a variety of different laboratory procedures that I was previously familiar with, but have gained the knowledge of different ways to approach these protocols.

What is your perception of agriculture now: I feel that people in the US take agriculture for granted, and that with the knowledge I've gained I can help change that perception in my sphere of influence.

How has this career experience broadened your employment opportunities: This experience has given me the opportunity to stay in the lab as an independent undergraduate researcher while pursuing my undergraduate degree. With the experience and publications I will be a part of, I will be able to have an exemplary CV when applying to graduate school and future employment.



Career and research aspirations: Currently I'm seeking my undergraduate degree and will be finished in a year and a half, after which I plan on attending UNT Health and Science Centers Masters of Forensics and Investigative Genetics program and obtaining my Master's Degree. In five years I see myself working for the Dallas Institute of Forensics in Fort Worth, while continuing to raise my here children with my wonderful wife!

Skills Set: -DNA -isolation/purification -centrifuges -SDS -page -aseptic technique -mammalian cell culture -laboratory calculations -bacteriophage isolation -purification & analysis -pH meter -comparative genomics -high performance liquid chromatography -PowerPoint -Excel -bioinformatics -DNA master -Qubit

The impact of my career experience: This experience has given me the knowledge and skills required to successfully complete my undergraduate degree while working in a research lab and continuing to gain valuable experience. Overall I have gained experience required for my future educational aspirations of graduate school and my future career goals of working in a crime lab after completing the master's program at UNTHSC.

I feel that people in the US take agriculture for granted, and that with the knowledge I've gained I can help change that perception in my sphere of influence.

Name: **Brenda Calles**
Hometown: **Corpus Christi, Texas**
Institution: **Del Mar College**
Campus: **West Campus**
Rank: **Senior**
Major: **Biotechnology**
Expected date
of graduation: **May 2014**
Degree: **Associates in Applied Science of Biotechnology**
USDA Agency
of interest: **NRCS**
Email: **brendac78405@yahoo.com**

Career experience/location: DNA Extraction of Mycobacteriophage GC Frank. Biotechnology Department-Del Mar College Corpus Christi, Texas.

Description of career experience (what I learned): Isolation of bacteriophage

What is your perception of agriculture now: N/A

How has this career experience broadened your employment opportunities: Yes

Career and research aspirations: I want to work for the Federal Bureau of Investigation

Skill Set: -DNA -RNA -protein studies -plant transformation
-cell culture

The impact of my career experience: Important.



Name: **Alby Lynn Cartwright**
Hometown: **Corpus Christi, Texas**
Institution: **Del Mar College**
Campus: **Texas A&M AgriLife**
Rank: **Junior**
Major: **Geographic Information Systems**
Expected date of graduation: **May 2014**
Degree: **Associate in Applied Science: Geographic Information Systems**
USDA Agency of Interest: **NRCS, RMA, FNS, CNPP**
Email: **albycartwright@yahoo.com**

Career experience/location: GIS technician, Texas A&M AgriLife Research Service, Corpus Christi, Texas.

Description of career experience (what I learned): As an intern at Texas A&M AgriLife Research, I led the project, *Crop Landscape and Insect Risk Assessment Patterns*. I learned to use my GIS skills to build a tool for predicting seasonal populations of the Verde plant bug, *Creontiades signatus*, in cotton fields along the Gulf Coast. This experiment is in the very beginning stages of developing a pest control tool.

What is your perception of agriculture now: I had no idea how much effort goes into agriculture within our civilization. I have a great respect for Integrated Pest Management (IPM) Agents who help farmers grow the food we eat every day.

How has this career experience broadened your employment opportunities? It is easier to understand more concepts in my classes after my training as an intern. I have real life experience and a publication on my resume.



Career and research aspirations: I aspire to use my degree in G.I.S. to pursue a career involving disaster relief, urban development, sustainability, water resources, transportation, and conservation.

Skill Set: -Strong computer skills -trying new things -team player -time oriented -friendly -Microsoft Office (Excel, Word, Power Point) -ArcGIS (ArcMap, ArcCatalog, ArcView, Python)

The impact of my career experience: After graduating from Del Mar College with an Applied Science Degree in Geographic Information Systems, I plan to attend Texas State University in San Marcos for the fall semester of 2014. There, I want to sharpen my GIS skills and learn more about transportation, natural resources conservation, water resources, and sustainability. I would love to specialize in transportation for a major postal company like FedEx or UPS. I aim to improve deliveries and help develop more accurate maps for the drivers to follow. In an agriculture aspect, I am just as interested in the packaging and shipping of vegetables and fruits. My career goals include building a long-term career in technology and geoscience. It is important for me stay current on revolutionary innovations that will be developed in the future. My objective is to use my skills to be helpful to my peers, superiors, and promote team work and unity. It is essential to for me to remain educated on how I can solve problems in a fast and creative manner. In the future, I hope to travel the world, and help people understand how essential it is to take care of the Earth.

I had no idea how much effort goes into agriculture within our civilization. I have a great respect for Integrated Pest Management (IPM) Agents who help farmers grow the food we eat every day.

Name: ***Kourtney Cochran***
Hometown: **Rockport, Texas**
Institution: **Del Mar College**
Campus: **Del Mar College**
Rank: **Junior**
Major: **Biotechnology**
Expected date
of graduation: **2014**
Degree: **Associates in Applied Science-Biotechnology**
USDA Agency
of interest: **NRCS**
Email: **kcochran5188@Gmail.com**

Career experience/location: Incell Corporation, San Antonio. I worked with different types of human cells and grew them in incells production media.

Description of career experience (what I learned): I learned that skin cells grow very differently from other cell types and that cells will grow how they want to regardless of what you do to them.

What is your perception of agriculture now: I didn't work with anything to do with agriculture so I have no real opinions on it.

How has this career experience broadened your employment opportunities: I want to work with cells in the future so this has given me more experience.

Career and research aspirations: In five years I hope to be working on my graduate work and in ten years I hope to be a post doc.

Skill Set: -Cell counting -culturing cells -media testing

The impact of my career experience: This experience has solidified my want to work with cells in the future. And I have a part time job if I go to school in San Antonio.



I learned that skin cells grow very differently from other cell types and that cells will grow how they want to regardless of what you do to them.

Name: **Ashley Ganceres**
Hometown: **Mathis, Texas**
Institution: **Del Mar College**
Campus: **West Campus - Corpus Christi, Texas**
Rank: **Sophomore**
Major: **Biology, Biotechnology, Chemistry**
Expected date
of graduation: **Spring, 2015**
Degree: **AAS of Biotechnology**
USDA Agency
of interest: **ARS**
Email: **aguerrero14@webdmc.delmar.edu**

Career experience/location: Metabolic engineering of plant leaves for production of biofuels. USDA ARS, US Arid-Land Agricultural Center, Maricopa, Arizona.

Description of career experience (what I learned): Basic molecular biology technique, cell culture

What is your perception of agriculture now: N/A

How has this career experience broadened your employment opportunities: I hope it will.

Career and research aspirations: I would like to do research in the fields of cellular and Molecular Biology, with a special emphasis in cancer research.

Skill Set: -DNA -RNA -protein studies -plant transformation -cell culture

The impact of my career experience: Important impact



I would like to do research in the fields of cellular and Molecular Biology, with a special emphasis in cancer research.

Name: **Reynaldo Gonzalez**
Hometown: **Mathis, Texas**
Institution: **Del Mar College**
Campus: **East Campus**
Rank: **Sophomore**
Major: **Physical Therapy**
Expected date
of graduation: **2014**
Degree: **Associate A.A., Bachelor Sci. BS**
USDA Agency
of interest: **APHIS**
Email: **rey.Gonzalez98@yahoo.com**



Career experience/location: Working for Texas A&M Agri-life research and extension, down county road 44, Corpus Christi, Texas, gave me the chance to experience multiple skills.

Description of career experience (what I learned): I learned how to use Microsoft Excel from reading and formulating sugarcane data, I learned how to abstract data from data boxes out in the green house as well as monitoring the amount of water each variety of sugarcane received, and I learned the different processes, methods, and procedures Dr. Fernandez used in his experiments with both sugarcane and cotton. Also, working there, I often assisted Carlos Correa with the weather stations around the local areas and preparing thermal couples for future projects.

What is your perception of agriculture now: After working and gaining experience in the agricultural program, agriculture now is fascinating to me. Before, agriculture was just a place vegetable and fruit came from.

How has this career experience broadened your employment opportunities: Well, physical therapy isn't really related to agriculture but however, I do believe the skills I gained from working at Texas Agri-Life will serve me well throughout my journey in pursuit of my career.

Career and research aspirations: In 5 or 10 years I hope to become a physical therapist, living in place I love and surrounded with the people I love. I hope one day sometime in the future I can help people in need, people who physically and mentally cannot help themselves. I am a firm believer in equality and I believe everyone who wants help should get help.

Skill Set: -Computer skills -roofing -stocking -porting -customer service -lifeguard -handyman -construction work -data analyst -hard worker -loyal -honest

The impact of my career experience: At the age of 15, a friend of mine got me job working with him for his dad at a times market for \$7.50 an hour. The job mostly consisted on stocking goods and cleaning around the area. Then when I was in high school, my freshman and sophomore year, I spent two summers working at the local pool as a lifeguard in Robstown. There I learned how to properly use CPR on both adults and infants as well maintaining proper PH levels in the pool. Every night before closing we would shock the pool with chemicals to filter out bacteria. Then later after I graduated, I worked at Blockbuster for a few months communicating with customers and working the cashier register, but then I eventually left to Access Ford. There I washed cars and transported vehicles. After Access Ford, Dr. Fernandez hired me to help maintain his experiments in the green house. There I was given the opportunity to participate in Dr. Halcomb's 2012-13 internship program. All in all, I believe God has blessed with so many opportunities and because of that I know with these skills he has given me I will do great in the future.

After working and gaining experience in the agricultural program, agriculture now is fascinating to me. Before, agriculture was just a place vegetable and fruit came from.

Name: **Portia Hall**
Hometown: **Mansfield, Ohio**
Institution: **Del Mar College**
Campus: **West Campus**
Rank: **Sophomore**
Major: **Biotechnology, Speech Communications**
Expected date
of graduation: **August 2013**
Degree: **Associates in Applied Science, Associates of Arts-Communication**
USDA Agency
of interest: **ARS**
Email: **portiahall76@yahoo.com**

Career experience/location: Platelet Inhibition properties of *Agistroden piscivorus leucostoma* disintegrin protein. National Natural Toxin Center, Texas A&M University, Kingsville, Texas.

Description of career experience (what I learned): protein isolation and characterization

What is your perception of agriculture now: Could be one of my career choices

How has this career experience broadened your employment opportunities: N/A

Career and research aspirations: Defense against bacterial bioterrorism or bacterial epidemics/prevention.

Skill Set: -DNA -RNA -protein studies -plant transformation -cell culture

The impact of my career experience: Important impact.



Texas A & M University STEP UP - Kingsville Undergraduate Students

Name: **Calan Jacoby Ahrens**
Hometown: **Alpine, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Senior**
Major: **Wildlife Recreational Entrepreneurship**
Expected date of graduation: **May 2014**
Degree: **BS**
USDA Agency of interest: **ARS**
Email: **ahrenscalanj@yahoo.com**

Career experience/location: I had the privilege to work with USDA-ARS Kerrville Knipling-BUSHLAND insect Research.

Description of career experience (what I learned): I learned valuable lab experience along with professional skills.

What is your perception of agriculture now: My perception of agriculture is more science based.

How has this career experience broadened your employment opportunities: I can now analyze laboratory data and derive a thesis from my experiments.

Career and research aspirations: I want to be a wildlife manager for a hunting operation and further my research on feral hogs and soft ticks.

Skill Set: -Data base management -data analysis -research conducting -safety training -chemical awareness

The impact of my career experience: Thanks to the internship with USDA ARS in Kerrville, I have gained valuable experience within a laboratory setting that will help me in my further aspirations in the wildlife field involving IPM and wildlife.



I learned valuable lab experience along with professional skills.

Name: **Leah Cedillo**
Hometown: **La Joya, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Junior**
Major: **Animal Science**
Expected date
of graduation: **Fall 2015**
Degree: **BS**
USDA Agency
of interest: **APHIS, NRCS**
Email: **leahcedillo@aol.com**



Career experience/location: Last summer of 2013, I worked in the Microbiology Laboratory in the Animal Science Department in TAMUK in Kingsville Texas.

Description of career experience (what I learned): I learned how to do IHC-Immunohistochemistry. Other things I learned were different ways of making solutions and how everything works in a lab. I also learned what it was like to be one of her grad students and how everything works around her lab and all the research she has done in her lab.

What is your perception of agriculture now: My perception of agriculture now is that I now know how research is an importance to the agriculture world. It helps with many things like the nutrition of the animals and the animal's wellbeing. Agriculture has many different things to it, and the one I learned was that research is its main thing. During my time in the Microbiology's lab I got to deal with fat tissue and working on seeing fat cells. I got to learn all these different techniques in her lab and it made me appreciate Agriculture so much more.

How has this career experience broadened your employment opportunities: Yes, it showed me a whole new side of agriculture? It showed me all about the science part and not just the dealing with animal's outdoors all the time. I had never done animal research so I really wanted to try it out to see if it would be something I would really be interested in for a future job. However, I realized that I really liked dealing with animals and being outdoors more then being in a lab doing research on the. It was a great experience but it's not something I would really want as a future job.

Career and research aspirations: My future career would be either becoming a vet in rural area and dealing with livestock or dealing with animal conservation. In 5 years I would hope to have finished vet school, if I decide to go the route, and then starting up my own vet clinic somewhere in Texas. If I decide to continue with my other route I would like to travel and continue to help with animal conservation and help protect endangered animals. And in ten years I see myself doing either one of these things either in Texas our out of state, and I would be happy with either one of these jobs.

While working here I had the chance to do many different kinds of research, one of the main one was IHC which is immunohistochemistry and it was a great experience.

Skill Set: -IHC -lab skills -computer skills -surgical skills
-multitasking -data collection -field techniques microbiology skills -data base mgmt -oral communication
-research qualifications -public speaking

The impact of my career experience: The internship was a great experience and I got to learn a lot. I learned lab techniques and I also learned how to deal with animals more, mainly pigs. It was a microbiology lab so we worked with was obesity and other things that dealt with researching animal health and well-being. While working here I had the chance to do many different kinds of research, one of the main one was IHC which is immunohistochemistry and it was great experience. However, while I had this internship I learned that I prefer working with animals outside and treating them more then actually being in the lab all day. So this internship helped me figure out that research isn't for me and that I would prefer something more with animal care and being outdoors. It did help me get techniques that I never had and now I can say I have lab skills and I know how to do certain things that most people can't do, it basically built up my confidence around animals more.

Name: **Adrian Cisneros**
Hometown: **Brownsville, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Senior**
Major: **General Agriculture**
Expected date
of graduation: **Summer 2014**
Degree: **BS**
USDA Agency
of interest: **APHIS PPQ**
Email: **cisnerosadrian_4@yahoo.com**

Career experience/location: On Summer 2013, I worked with USDA APHIS-PPQ in Los Indios, Texas. I worked in the USDA plant inspection station.

Description of career experience (what I learned): During the summer of 2013, I worked in a plant inspection station facility on the border in Los Indios, Texas, and I learned a lot of things about plant inspections. I also got to work with a lot of different types of insects, and seeds. I also got exposed to all the paperwork needed to import propagative plants into the United States.

What is your perception of agriculture now: Agriculture is very important for me, and it should be regulated properly so our environment can be safe.

How has this career experience broadened your employment opportunities: I got many beneficial skills and experiences that will help me get a job with USDA or US Customs and Border Protection. My internship made me rearrange the courses I will take, so I can be more prepared for this job.



Career and research aspirations: My career aspiration is to work with USDA-APHIS or US Customs and Border Protection. I like to work in an agriculture environment; therefore I would like to inspect plants or plant products.

Skill Set: Microsoft Excel -x-ray equipment -laboratory techniques -laboratory equipment -data collection -field work

The impact of my career experience: The career experience I accomplished during my internship made me think differently about my courses. I found out that I needed to take a different route on my courses, in order to be more prepared for the career I

I got many beneficial skills and experiences that will help me get a job with USDA or US Customs and Border Protection. My internship made me rearrange the courses I will take, so I can be more prepared for this job.

am seeking. I am going to take more plant science courses, so I can know more about plants and do the inspections more accurately. I really want to be as prepared as I can be, so I can do a good job in the career I want. The internship I did during the summer helped me get a part-time job working on the outside garden on a home improvement store. In this job, I will get more experience working with plants and plant products.

Name: **Carlos E. DeLeon**
Hometown: **Mission, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Senior**
Major: **Agriculture Science**
Expected date
of graduation: **Spring 2014**
Degree: **BS**
USDA Agency
of interest: **NRCS**
Email: **carlosdl21@yahoo.com**

Career experience/location: This summer 2013 I spent ten weeks as an Earth Team Volunteer for the Natural Resource Conservation Service (NRCS) in Hidalgo County, Texas.

Description of career experience (what I learned): This summer was by far one of the most productive summers I have ever had. I learned what the NRCS is and how they help the producers. Also, about all the resource concerns in the area I was stationed at and how to address the resource concerns.

What is your perception of agriculture now: My perception now is how diverse agriculture is and how it affects everyone in one way or another.

How has this career experience broadened your employment opportunities: My experience with NRCS has broadened my employment opportunities, because before my internship I never looked at NRCS as an option as a career and now it's at the top of my list. I met so many people with the agency and learned so much, that I don't think it would be hard to get an entry level job with the agency.



Career and research aspirations: Once I graduate in May I plan to apply with NRCS and hopefully get hired. If that doesn't work out, I would like to work with any other federal agency that has something to do with agriculture.

Skill Set: While working with the NRCS I learned how to create conservation plans, use GPS, operate survey equipment, and also learned most of the computer programs that they use on a daily basis.

The impact of my career experience: The career experience that I had this summer definitely changed my whole vision of my future. Before this summer I didn't really have a good understanding of what the NRCS was, but by the end of it I was certain that it was what I wanted to do the rest of my life. It gave me drive to do better in my classes, because a lot of the stuff I have learned so far does get put into practice. If I get hired by the NRCS I plan to work with the agency my whole life, and eventually be a district conservationist in charge of my own county.

This summer was by far one of the most productive summers I have ever had. I learned what the NRCS is and how they help the producers. Also, about all the resource concerns in the area I was stationed at and how to address the resource concerns.

Name: **Dante Delgadillo**
Hometown: **Port Isabel, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Senior**
Major: **General Agriculture**
Expected date
of graduation: **Fall 2013**
Degree: **BS**
USDA Agency
of interest: **ARS**
Email: **dantedelgadillo84@yahoo.com**



Career experience/location: This summer I managed to secure a government internship with the USDA-ARS in Greeley, Colorado just outside of Fort Collins.

Description of career experience (what I learned): My duties were primarily concentrated on water conservation and management in corn and sunflower crops. The goal was to realize just how little water we could use without sacrificing yields.

What is your perception of agriculture now: My perception is that even after all the time human beings have been planting seeds in the ground, there are so many improvements that can be made that will ensure that generations down the line, people will be able to raise their own food as well.

How has this career experience broadened your employment opportunities: My experience with USDA has broadened my opportunities because I have actually gone and taken part in this hands-on approach and I feel that this enabled me to actually show my potential co-workers and supervisors my capabilities and work ethic

Career and research aspirations: My career aspirations are still somewhat undecided. I have a passion for agriculture and horticulture but I also have passion for law. I'm pretty sure I will pursue one of these options.

Skill Set: My skill set definitely revolves around plants and soil. For so many years now I have been absolutely enchanted by the look of healthy plants and soil. As I've made my way through college, I have slowly learned more about subjects such as the microbiology in the soil, the use of water and nutrients by plants, and how plants and soil work as one unit for better or worse. While taking part in my internship with the USDA, I used a few different instruments to actually measure things like solar radiation received by plants, moisture content in the soil, and plant water stress. This helped me begin to realize and more intimately understand the relationship between the soil, water, plant, air, CO₂, and light. Working with quality instruments to record accurate data is something I really do well. Hopefully I land a job that enables me to bring awareness to the importance of land stewardship to my community, as well as food.

My duties were primarily concentrated on water conservation and management in corn and sunflower crops. The goal was to realize just how little water we could use without sacrificing yields.

The impact of my career experience: My career experience impacts anyone who realizes food is essential to a great quality of life, and even those who don't. My future education, employment, goals, and objectives will all revolve around showing people starting with my own neighbors, that we can feed ourselves in a responsible, land replenishing manner. My hopes are that the research I do throughout the course of my career will provide scientific support to my theories. The idea that people anywhere don't have enough to eat has never sat right with me. I intend to educate anyone who will listen on what exactly to do to bring green vegetation to a place, no matter how barren it may be. I feel that research based jobs will be the key to my success with respect to my long term objectives. I can delightfully talk about these subjects all day, however, with the scientific tools provided by state of the art laboratories, I will actually be able to tell a story that can even be understood by those who don't have plant and soil science backgrounds.

Name: **Megan Dupnik**
Hometown: **Corpus Christi, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Junior**
Major: **Plant and Soil Sciences-Agronomy**
Expected date of graduation: **December 2015**
Degree: **BS**
USDA Agency of interest: **APHIS**
Email: **megan.dupnik915@gmail.com**

Career experience/location: Mycotoxin Research at Purdue University in West Lafayette, Indiana.

Description of career experience (what I learned): I was given the opportunity to learn how to process different columns, inoculate corn kernels, and learn how to use a Gas Chromatographer (GC). As well as how to analyze data and enhance knowledge I already had with new information.

What is your perception of agriculture now: Agriculture has a wide expanse of information under it, I used to hear agriculture and think about cows and field crops, now I understand it covers everything from animals to trees.

How has this career experience broadened your employment opportunities: This experience has given me the opportunity to meet new people and see new places which can affect where I want to go. It has also given me the chance to discover if lab work is really what I want to do and if Mycotoxin research is for me.

Career and research aspirations: In five years I see myself with a master and hopefully out of school for a time. I want a job and to begin my career, hopefully by then I know for sure what that will be! In ten years, I am planning on running my own lab and helping new students discover what is for them.

Skill Set: -Computer skills -microbiological techniques -data analysis -sterile techniques -GC -equipment maintenance -PCR -cell culture -bacterial plating -people skills -can work proactively

The impact of my career experience: This is not my first internship, it is in fact my third. These internships have helped me to understand different ways of thinking. How to look outside the box for answers. Sometimes you have to make due with lower budgets and that means getting creative. Internships help to learn techniques, which will make you more valuable to companies in the future when you are looking for a job. I have a skill set which I am trying to broaden with these internships to make me a more valuable employee. As well as learn as much as I can which is hard to do in a world which is constantly changing. I hope to do more internships, and continue to get these opportunities so that when it is finally time for me to gain a permanent career I can walk in with confidence and at least have a general idea on where to start.



I was given the opportunity to learn how to process different columns, inoculate corn kernels, and learn how to use a Gas Chromatographer (GC). As well as how to analyze data and enhance knowledge I already had with new information.

Name: **Aaron M. Gutierrez**
Hometown: **Edinburg, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Sophomore**
Major: **Range and Wildlife Management**
Expected date
of graduation: **Spring 2016**
Degree: **BS**
USDA Agency
of interest: **APHIS, NRCS**
Email: **gutierrez1993@sbcglobal.net**

Career experience/location: In 2013 I was located in Laredo, Texas. I had a great experience with the Natural Resources Conservation Services team.

Description of career experience (what I learned): I learned about all the systems on the computer that are required to complete all paper work. I learned how to use the GPS, Range Finder, Auto level, Topography map, Database management, and Map generation.

What is your perception of agriculture now: I have a better understanding about the field that I would like to proceed in.

How has this career experience broadened your employment opportunities: It has open up more doors, I have met more people that I have showed and proven myself to others that I am interested.

Career and research aspirations: Right now I am just looking forward to graduating college with a Bachelor's and with what I learned in five years I would be going for my Master's degree. Ten years from now, I see myself working for an agency of my choosing.

Skill Set: -Computer skills -secondary language
-field techniques -data collection -multitasking
-hard working

I learned about all the systems on the computer that are required to complete all paper work. I learned how to use the GPS, Range Finder, Auto level, Topography map, Database management, Map generation.



The impact of my career experience: With this internship that I completed I have a better understanding of what I need to set my goals for to get where I want to be. It has made me realize that I would want to go for my Master's degree and accomplish more for myself. It has also made me see the other programs that are similar to each other and all the opportunities that are out there for starters, like myself. I enjoyed it I would like to sign up again to do another internship.

Name: ***Ericka Humphrey***
Hometown: **Anahuac, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Junior**
Major: **Animal Science Pre-Vet**
Expected date
of graduation: **December 2014**
Degree: **BS**
USDA Agency
of interest: **ARS**
Email: **humphrey1_2011@yahoo.com**

Career experience/location: During the Summer of 2013, I worked in a Veterinary Clinic as a Veterinary Technician Assistant, in Anahuac, Texas, at Animal Care Clinic.

Description of career experience (what I learned): I learned how a vet clinic is run, what it takes to keep it running, how to run tests (fecal, heartworm); spin blood to separate serum and red blood cells, proper animal care.

What is your perception of agriculture now: That vets have lots to do; all along with the daily appointments, they have to take care of animals that come into the ER.

How has this career experience broadened your employment opportunities: It has shown me that veterinary science is a field possibility for me. But I figured that I really loved doing lab work.

Career and research aspirations: I know that I would like to have a career in medicine research.

Skill Set: Laboratory techniques -analytical skills -and oral communications

The impact of my career experience: This career experience was very helpful to me. I learned a lot about myself that I hadn't known before. It was my very first job and I had no idea what the people would be like or what I would be doing. I proved to me that I need to have an open mind when starting anything new and to not have so many expectations. Starting the job I thought that it was only going to be scooping poop, cleaning kennels and walking dogs. But, to my surprise I was able to do a lot more. I got to assist and observe surgeries, run lab work, hold dogs while they had blood drawn or were getting shots and prepare patients for their appointments, mainly just getting their weights. Being able to see how a Veterinary Clinic operates and all the work that goes into it, proved to me that being a Veterinarian isn't the career for me. My favorite part of the internship was helping out with surgeries and doing lab work. This internship helped me narrow down what I really want to do once I graduate TAMUK.



I learned how a vet clinic is run, what it takes to keep it running, how to run tests (fecal, heartworm); spin blood to separate serum and red blood cells, proper animal care.

Name: **Victoria Longoria**
Hometown: **Kingsville, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Senior**
Major: **Animal Science**
Expected date
of graduation: **May 2014**
Degree: **BS**
USDA Agency
of interest: **APHIS**
Email: **vlongoria123@gmail.com**

Career experience/location: This summer 2013 I worked at the TAMUK Research Farm in Kingsville, Texas.

Description of career experience (what I learned): I learned to successfully manage sows before, during and after farrowing season; to provide a healthy environment for several species of livestock. I learned how to effectively communicate with supervisors, coworkers, exhibit professionalism and working hard pays off.



What is your perception of agriculture now: Research is an important part of the Ag industries, with the goal of improving production efficiency, therefore research animal health and welfare is even more important.

How has this career experience broadened your employment opportunities: I learned that first and foremost professionalism is priority? Secondly I learned that animal husbandry is vital in order to maintain top notch animal welfare.

Career and research aspirations: I would like to eventually obtain my PhD, so I conduct research and teach.

Skill Set: Inoculation techniques -effective communication -organized -documentation of breeding, birthing, illness, death, etc.

The impact of my career experience: I learned a lot about professionalism, communication, accountability, and loyalty during my internship. I'm very passionate about animal science and agriculture. I hope that I am able to provide successful research in the future that can and may lead to bigger and better discoveries as far as better and more sustainable production. My biggest dream is to help show people that the agriculture community does care and is a good thing.

I learned to successfully manage sows before, during and after farrowing season; to provide a healthy environment for several species of livestock. I learned how to effectively communicate with supervisors, coworkers, exhibit professionalism and working hard pays off.

Name: **Charles Martinez**
Hometown: **Dallas, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Senior**
Major: **Ag Business-Ranch Management**
Expected date
of graduation: **May 2014**
Degree: **BS**
USDA Agency
of interest: **AMS**
Email: **charleymartinez@sbcglobal.net**

Career experience/location: My 2013 summer career experience was with Cargill Cattle Feeder in Bovina, Texas.

Description of career experience (what I learned): I learned about intensive agriculture production.

What is your perception of agriculture now: In agriculture, we are becoming advanced with technology and management styles.

How has this career experience broadened your employment opportunities: I gained more respect for people who work in intensive agriculture production and would like to pursue a career in this field. I thoroughly enjoyed my experience at the location this summer and have been offered a position for future employment.

Career and research aspirations: I would like to pursue a Master's degree in Ag Economics in relation to the cattle industry and pursue a career in the cattle industry.

Skill Set: -Computer & database skills -data processing -oral communication -public speaking research -cattle management techniques -management techniques

The impact of my career experience: My experiences in my internship location, and at Texas A&M University Kingsville, have opened my mind up to a diverse agricultural field at a micro level. The experiences took a previous broad level of knowledge and showed me the smaller aspects of industries. Because of this exposure, I have chosen to pursue a Master's in Ag Economics. I hope to better my knowledge and have an impact in the cattle industry as I progress through my career.



In agriculture, we are becoming advanced with technology and management styles.

Name: **Emma R Martinez**
Hometown: **Harlingen**
Institution: **Texas A&M University Kingsville**
Campus: **Kingsville**
Rank: **Junior**
Major: **Agriculture Science**
Expected date
of graduation: **Spring 2015**
Degree: **BS**
USDA Agency
of interest: **APHIS, AMS**
Email: **Emmam956@gmail.com**

Career experience/location: My internship last summer of 2012 was great. I did my internship at the USDA-APHIS in Harlingen Texas. Worked in lab screening Mexican Fruit flies.

Description of career experience (what I learned): I learned and gained so much experience from the USDA APHIS from trapping flies to screening and dissecting Mexican fruit flies. The employees made you feel welcomed and helped you with any question you had.

What is your perception of agriculture now: What I thought of Agriculture then and now is that it has gotten bigger and there are more job opportunities in the Agriculture field.

How has this career experience broadened your employment opportunities: Getting into the Agriculture field has opened many more job opportunities, it has made me see that there is a lot you can do in this field.

Career and research aspirations: Right now I am currently attending Texas A&M University Kingsville in Kingsville, Texas as a transfer junior student. I currently just received my Associate Degree in Applied Science at Texas State Technical College in Harlingen, Texas. In 10 years I see myself working for the US Customs of Border protection in Agriculture.

Skill Set: -Computer skills -work well with others -know how to read a blueprint -welder -carpenter -know how to work heavy machinery

The impact of my career experience: Getting my Bachelors Degree is very important to me because it comes to show me that I can really achieve anything I want, you just have to set your goals high and never quit nor stop and take a break. I never planned to go to college nor thought about it when I was in high school, when the day comes when I go up to receive my Bachelor's degree it's going to be a very emotional day for me this degree will open well-paid jobs for me. Getting an internship with the USDA APHIS last year 2012 has helped me get experience for my future career. I learned so much from being an intern from trapping to screening Mexican Fruit Flies. They showed me what their job is there and what they do when they are in quarantine. My plans after graduating from TAMUK are to pursue my Master's Degree in Agriculture. Once I have obtained my masters I would love to go and work for the U.S Customs of Border Protection in Agriculture or USDA, I really enjoyed the experience and knowledge I received last year from the USDA and I would love to work for them after graduating TAMUK.



I learned and gained so much experience from the USDA APHIS from trapping flies to screening and dissecting Mexican fruit flies.

Name: **Brittany Palacios**
Hometown: **Houston, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Junior**
Major: **Animal Science - Pre-Vet**
Expected date
of graduation: **2014**
Degree: **BS**
USDA Agency
of interest: **ARS, APHIS**
Email: **brittanynicole.bp@gmail.com**

Career experience/location: During the summer I was interning in Weslaco, Texas working with the USDA-APHIS Arundo Project at the Moore Air Base in Mission, Texas.

Description of career experience (what I learned): I learned about field work and also lab research and how multiple projects work together. I also learned how the Arundo donax is a big issue along the river causing many problems for board security and the water levels and vegetation along the Rio Grande River.

What is your perception of agriculture now: I think I have better knowledge and understanding how multiple projects can come together and affect each other rather than just focusing on your own project.

How has this career experience broadened your employment opportunities: This internship showed me how it is to work in a quarantined laboratory with the USDA. It has also showed me that experience in the field is also important to your research.



Career and research aspirations: As of right now I am major in Animal Science with a concentration on Pre-Veterinary Medicine. I would like to go to Veterinary school once I graduate at Texas A&M University Kingsville. I have also considered other options in case I do not attend Veterinary school. This internship opened my eyes to the USDA and gave me more knowledge about their research program and how it works. I am now considering working for the USDA once I graduate, or might possibly go to graduate school and obtain my Masters. I'm not completely certain about what I would get my Masters in and I'm still contemplating it.

I think I have better knowledge and understanding how multiple projects can come together and affect each other rather than just focusing on your own project.

Skill Set: -Field techniques -lab work -patience -independency -oral communication -analytical skills -data collection -microbiological techniques -accuracy -sanitation

The impact of my career experience: This internship has helped me gain better knowledge with laboratory work in a quarantined facility along with field work. It also showed me that with laboratory work that you must be patient and diligent with your work. In a lab some of the tasks can be very reparative. This internship really opened my eyes and now I am thinking about future employment with the United States Department of Agriculture. I have always had my heart set on Veterinary school, but now I am considering other options because other job options are catching my interest such as microbiology. My future is still undecided, and there are so many options out there but soon I will be deciding what option is best for me. I'm glad that I had the opportunity to work with the USDA because it has opened my eyes to many more jobs.

Name: **Patricia Pena**
Hometown: **Mission, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Junior**
Major: **Animal Science**
Expected date
of graduation: **2015**
Degree: **BS**
USDA Agency
of interest: **APHIS, AMS**
Email: **penap23@gmail.com**

Career experience/location: Summer 2013, I worked with USDA-ARS Arundo-Donax Project in Mission, Texas.

Description of career experience (what I learned): Working for the USDA-ARS, allowed me to understand the affects the Arundo Donax has given the river water levels, the security levels (CBP) and even affect the constructions in the International Ports of entry. I have also acquired the acknowledgment that I am not someone to be in in a laboratory.



What is your perception of agriculture now: It has allowed me to actually set myself to what I am pursuing in doing in my future goals. Giving me the motivations and inspiration that hard work does pay off at the end.

How has this career experience broadened your employment opportunities: One of the most important opportunities was expanding my network connections and experience in the field. I realized I'm not someone to be in a lab, but rather all around the field and offices. It has also given me the inspiration to follow my goals and not strive for less.

Career and research aspirations: Ever since I can remember, I have had the passion to rescue neglect and abuse animals, from livestock to pet animals. Becoming a Humane Officers is the one job I can see myself doing for a couple of years and from there stepping it up to bigger job opportunities. Acquiring a Bachelor in Animal Science and a Master in Criminal Justice or Criminology will allow me to accomplish my dreams. "Being the voice for those who need it the most". By then I would also want to run an Animal Shelter in several different states. I have been an active student since I have graduated high school either summer courses or working for an Internship, all this has given me the motivation to not stop in the hardest moments of college (junior and senior level) but to finish strong and with the most inside scoop of what is needed for my future goals.

Skill Set: -Fluent speaker and writer in both English and Spanish -communication skills -agriculture statistics
-research skills -field work -laboratory skills -network connection
-public speaking -computer programming skills

The impact of my career experience: Having the opportunity to find out that by me taking the 2013 summer Internship with USDA-ARS made me realize that working in a laboratory is not a future job application. It might of have been a long summer but at least I did not finish a degree with it and realized it too late in the system. Allowing me to interact with different workers in the field and getting a sight scoop of what their everyday lives consists of, expanding my pros and cons of certain jobs I would and would not see myself applying for. My career experiences have simply modified my future education goals. Still with my head up high for wanting to become a Humane Officers and finishing my Bachelors in Animal Science and continuing my Masters.

Working for the USDA-ARS, allowed me to understand the affects the Arundo Donax has given the river water levels, the security levels (CBP) and even affect the constructions in the International Ports of entry.

Name: **Erica Petropoulos-Justice**
Hometown: **Tomball, Texas**
Institution: **TAMUK**
Campus:
Rank: **Sophomore**
Major: **Agronomy**
Expected date
of graduation: **Spring 2015**
Degree: **BS**
USDA Agency
of interest: **AMS, NRCS**
Email: **justiceerica@gmail.com**

Career experience/location: Texas A&M AgriLife Extension, Weslaco, Texas.

Description of career experience (what I learned): I learned a lot about harvesting fruits and vegetables, including wine grapes. I learned different pruning methods and IPM practices. I also learned a lot about how to collect and compile data to compare varieties.

What is your perception of agriculture now: Agriculture is continuously growing, whether it is in the field or in a lab setting, and the possibilities and opportunities are endless.

How has this career experience broadened your employment opportunities: This internship gave me a great opportunity in terms of networking. I was able to meet a lot of people within the industry that I would not have come across had it not been for the internship.

Career and research aspirations: I hope to either be working for AgriLife as an extension agent or working for a seed/chemical company as a sells rep.



Skill Set: -Computer skills -interpersonal relations -field experience -lab experience

The impact of my career experience: This internship really opened my eyes to all of the opportunities I have in the agriculture industry. I was able to gain experience both within the lab and outside in the field. I learned that lab work is not what I am meant for, like I had believed prior to the internship. I met some truly outstanding figures and had the pleasure of working beside some brilliant people. Overall I believe this internship will help me in the future, both with getting a job, but also in terms of being an employee.

Agriculture is continuously growing, whether it is in the field or in a lab setting, and the possibilities and opportunities are endless.

Name: **Stephanie Rivera**
Hometown: **Mission, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Junior**
Major: **Animal Science, Pre-Vet**
Expected date
of graduation: **December 2014**
Degree: **BS**
USDA Agency
of interest: **APHIS**
Email: **stephriver11@yahoo.com**

Career experience/location: Assistant Zookeeper at the Chattanooga Zoo in Chattanooga, Tennessee.

Description of career experience (what I learned): During this internship I learned about the medicines, and food preparation needed for animals in a zoo. I also got the chance to make presentations to the guests at the zoo while preparing and having enrichments for the animals in my area to help educate the community about our endangered species.

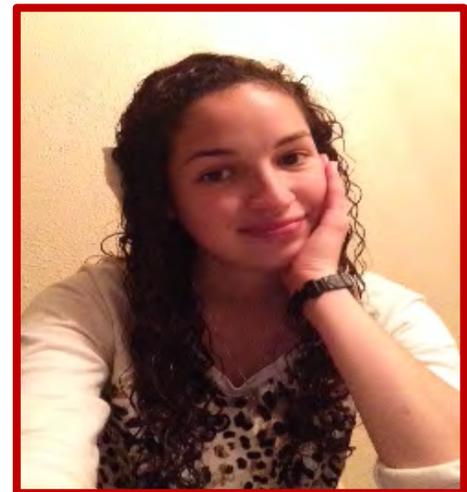
What is your perception of agriculture now: My agriculture perception is the same before I left. I have always been interested in working with exotic animals and this internship helped reassure that I am in the right direction in my career choice.

How has this career experience broadened your employment opportunities: Now that I have had hands-on experience working with exotic animals I am more comfortable in finding a career that follows this internship. I created a lot of contacts with the employees at the zoo and they were more than happy to recommend me to other zoos for future opportunities or return there if I want to.

Career and research aspirations: I hope to attend veterinary school and specialize in the exotic animals that I am passionate about. In five years I can see myself working with these animals whether I am in a zoo, or sanctuary. In ten years I see myself pursuing a bigger dream and going overseas to possibly Africa where I can work on the endangered species in their original habitat alongside others to save what species we have left.

Skill Set: -Computer skills -data base mgmt. -working in teams -oral communication -punctual -data collecting -public speaking -field techniques with exotic animals -multitasking -microbiological techniques

The impact of my career experience: Having the opportunity to do this internship has made the drive to finish that better. I can't wait to see where my career can take me with the experience I have gained through this internship. It was such a good experience that I plan to do another one coming summer. The contacts I received from the zoo have helped me by opening my eyes to other internships and jobs that they can line up for me on the east side of the United States. This internship was mainly to make sure I was on the right career path when I chose to work with exotic animals instead of domestic animals. I now know I am on the right tract and in the future I see myself working with these exotic animals that I am so passionate about.



During this internship I learned about the medicines, and food preparation needed for animals in a zoo. I also got the chance to make presentations to the guests at the zoo while preparing and having enrichments for the animals in my area to help educate the community about our endangered species.

Name: **Sonia Rodriguez**
Hometown: **Warrenton, Missouri**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Senior**
Major: **Animal Science**
Expected date
of graduation: **December 2014**
Degree: **BS**
USDA Agency
of interest: **NRCS, APHIS**
Email: **sonialynn8235@yahoo.com**

Career experience/location: For my career experience, I chose to work with Poplar Hill Dairy Goat Farm. They are located in Scandia, Minnesota; run and operated by the Maefsky family.

Description of career experience (what I learned): Through this internship I learned that I want to work with goats as a career. I also learned that herd health is a number one priority and that is what I would like to focus on. I also had a lot of field experience with taking blood samples, doctoring wounds and tractor work.

What is your perception of agriculture now: There are many different areas of agriculture which are all related in some way. Taking care of one department of agriculture, takes care of agriculture as a whole.

How has this career experience broadened your employment opportunities: I met so many people that would be interested in me working with them. Hopefully once I graduate, I can work with goat dairies permanently.

Career and research aspirations: My career aspirations are to become the Herd Manager of a dairy goat farm. I enjoy working with goats and want to focus my work on herd health. In five years hopefully I will have already been with a dairy for at least two years, improving their overall milk production. In ten years I hope to have my own goat dairy; raising Alpines, Saanens and LaManchas.

Skill Set: -Oral communication -multitasking -computer word processing -field techniques -analytical skills
-critical thinking -complex problem solving -active listening
-operations and systems analysis -sales and marketing

The impact of my career experience: Working at Poplar Hill Dairy Farm opened my eyes to want to be involved with this type of career. After I graduate I may go to the University of Minnesota-Twin Cities to continue my education in Production Systems with emphasis in dairy. Before this experience I didn't even know how much interest I had in this field. Again, my career goals are to work hard with dairies to increase the quality and quantity of their milk production.



Through this internship I learned that I want to work with goats as a career. I also learned that herd health is a number one priority and that is what I would like to focus on. I also had a lot of field experience with taking blood samples, doctoring wounds and tractor work.

Name: **Ruby Saldaña**
Hometown: **Weslaco, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Junior**
Major: **Animal Science**
Expected date
of graduation: **December 2014**
Degree: **BS**
USDA Agency
of interest: **APHIS PPQ**
Email: **Rsal3855@gmail.com**

Career experience/location: USDA APHIS PPQ in Oahu, Hawaii.

Description of career experience (what I learned): Along with being able to discover different careers that are available within USDA APHIS, I was able to gain knowledge in entomology, plant pathology, PPQ regulations in regards to the import/export of agriculture products. Other aspects of this branch of the USDA that I was able to learn from was the research being done regarding the fruit fly population, how they are reared (at a CDFA facility in Hawaii), irradiated, and shipped over to California in order to control the overall population and protect citrus industries.

What is your perception of agriculture now: There's a lot more to this industry that many people do not have the opportunity to understand and because of that, those individuals that are dedicated to becoming a part of agriculture must give 110% so that this industry continues to prosper.

How has this career experience broadened your employment opportunities: This opportunity has shown me that there are many other careers than I had previously imagined and, because of this, I have made it a point not to restrict myself to the confines of South Texas. If we set limitations on our choices because of what we believe is impossible, we begin to make compromises instead of achieving what we truly desire.



Career and research aspirations: Before this internship, I was fairly set on where I wanted to be in regards to my career, but that vision has now taken a new direction into a branch of science that I had not been exposed to before. I have decided to seek a Master's degree and hope to apply my research in entomology and/or aquaponics.

Skill Set: -Computers -data entry -critical thinking -essential laboratory duties -ethics -professionalism -ability to address an audience and prepare learning materials -adaptive to new environments -listening skills

This opportunity has shown me that there are many other careers than I had previously imagined and, because of this, I have made it a point not to restrict myself to the confines of South Texas. If we set limitations on our choices because of what we believe is impossible, we begin to make compromises instead of achieving what we truly desire.

The impact of my career experience: In addition to the changes I have made to my future educational plan, this experience has enabled me to step out of many comfort zones and truly understand that there is such a vast amount of opportunities available throughout the world. It isn't always easy to picture yourself working so far away from home and this can result in setting so many limitations on your future. I choose not to live like that anymore and never to question whether something is achievable.

Name: **Chad Sledge**
Hometown: **Houston, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Senior**
Major: **Plant and Soil Sciences**
Expected date
of graduation: **December 2013**
Degree: **BS**
USDA Agency
of interest: **NRCS**
Email: **chadsledge@yahoo.com**

Career experience/location: This summer, I worked on the Kootenai National Forest as a Forestry Aid with the Timber Division.

Description of career experience (what I learned): I learned about: soil disturbance analysis; Northwest plant I.D.; timber selection/measurements; cadastral survey; coarse woody debris measurement.

What is your perception of agriculture now: American timber production is and will continue to be sustainable. This is largely thanks to steps taken by the USFS and their comprehensive approach to agriculture.

How has this career experience broadened your employment opportunities: Not only with the USFS, but with private timber producers. The survey and environmental analysis skills that I gained will be valuable with any natural resource and land management.

Career and research aspirations: Land and natural resource management. I would like to gain experience and savings to one day farm full time.

Skill Set: -Soil description -disturbance analysis -debris measurement property survey and landmarking -timber survey and timber marking -defoliation analysis

The impact of my career experience: My career experience has given me opportunities to see agricultural production and conservation methods used by the private and public sector in croplands and in rangelands. I have been able to observe the political and practical interactions between federal, state agencies and private landowners. This will help me tremendously in whichever sector of natural resource management I work in after college.



I learned about: soil disturbance analysis; Northwest plant I.D.; timber selection/measurements; cadastral survey; coarse woody debris measurement.

Name: **Higinio Valadez**
Hometown: **Corpus Christi, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Senior**
Major: **Plant and Soil Sciences-Agronomy**
Expected date
of graduation: **December 2013**
Degree: **BS**
USDA Agency
of interest: **NRCS**
Email: **hvaladezdmc@gmail.com**

Career experience/location: Cotton variety trials, mycotoxin application of aflatoxin guard at V6 and tassel, horse spray efficacy trials, potato zebra chip phyllid study Texas A&M University Kingsville, Texas Agrilife extension Lubbock.

Description of career experience (what I learned): Set up research plots, irrigation, use GIS mapping techniques, analytical skills, data collection

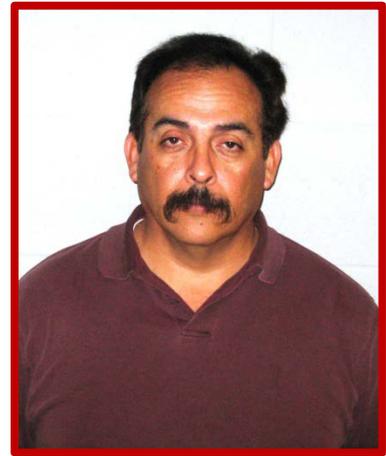
What is your perception of agriculture now: Agriculture uses a multifaceted approach in the handling of problems that are specific in agriculture. Each problem is unique in its own field and answers are not always easily obtained.

How has this career experience broadened your employment opportunities: I feel I can pursue employment in the private sector as well as the government sector which helps widen my opportunities for employment.

Career and research aspirations: My current career expectations can take me either into the private sector or government sector as of right now I am still weighing my options. In five years I hope to have made some headway as far as promotions maybe hopefully promoted at least three times. In ten years I hope to be managing a crew or better.

Skill Set: -Microbiological techniques -GIS -data collection -field techniques

The impact of my career experience: My career experience might send me back to further my education and obtain a Master's degree it is only a thought for now, but if my employment needs or requires that of me I have no quarrel in working to obtain a MS degree. My long term objective is to find a company or agency where I can have my career working long-term for a company or agency.



Agriculture uses a multifaceted approach in the handling of problems that are specific in agriculture. Each problem is unique in its own field and answers are not always easily obtained.

Name: **Cathy L. Weaver**
Hometown: **San Benito, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Junior**
Major: **Agriculture Science**
Expected date
of graduation: **Fall 2014**
Degree: **AA**
USDA Agency
of interest: **APHIS, USFS, AMS**
Email: **countrygirlie_13@yahoo.com**



Career experience/location: United States Department of Agriculture, Animal Plant and Health Inspection Service (APHIS). This agency is located in Harlingen, Texas.

Description of career experience (what I learned): While working with the USDA, I learned about the Mexican Fruit Fly and what harm it does to any citrus trees containing fruit. I learned how to screen in the laboratory using tools such as tweezers, petri dishes, alcohol as well as our safety attire that needed to be worn. I learned how to trap using bait, glycol, and alcohol to sterilize the flies. I also helped with creating files. I noticed how professional you must be in the work environment no matter what the situation.

What is your perception of agriculture now: My perception of agriculture has completely changed because I had no idea what other fields were within this program. Working with this agency has shown me what farmers/ranchers and other agriculturists actually go through to make a living.

How has this career experience broadened your employment opportunities: This experience has influenced me to complete my education and helped me see the other agencies that are within the United States Department of Agriculture (USDA); this experience has given me the opportunity to see what it is really like working with the government. This experience will help me with future employment because they were very pleased with my working abilities and would refer me if needed.

Career and research aspirations: In 5 years I think I would see myself striving to fulfill my dream of working with Equine. I would probably transfer to a different University to pursue a career in Equine Science and hopefully obtain my degree within those 5 years. In 10 years, I could see myself working with Equine and people that want to learn or also work with people with disabilities such as Autism, Scoliosis, and others. I want to make a difference in people's lives and helping anyone I can.

Skill Set: -Computer skills -Microsoft Office -word processing
-PowerPoint -Excel -GPS -multitasking -oral communication -public speaking -phone etiquette -secondary language -data collection- -field techniques laboratory techniques -laboratory equipment -operating tractor equipment -horseback riding -welding

While working with the USDA, I learned about the Mexican Fruit Fly and what harm it does to any citrus trees containing fruit. I learned how to screen in the laboratory using tools such as tweezers, petri dishes, and alcohol as well as our safety attire that needed to be worn.

The impact of my career experience: My career experience has impacted me by helping me see that receiving an education is very important for any kind of employment whether it is within the United States Department of Agriculture (USDA) or simply in another field. Regardless a degree is required now for any job. I could see myself working with this agency in the future because I have gained so much experience and still want to learn more. I've already been offered a position within this agency but have not accepted due to my education. I would like to work in other areas as well such as with equine, cattle, and other animals. I really would recommend this program to other students because you gain so much experience and the people you meet is a plus. It's like your foot in the door and there are a variety of opportunities out there. My long term objectives consist of graduating with my Bachelor's Degree and hopefully transferring to pursue a degree in Equine Science. I really want to work with horses and kids in the future and hopefully this will help me in some way to accomplish my goal.

Name: **Yvonne Sanchez Welther**
Hometown: **Bishop, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Senior**
Major: **General Agriculture**
Expected date
of graduation: **May 2014**
Degree: **BS**
USDA Agency
of interest: **APHIS, NRCS**
Email: **ywelther@yahoo.com**

Career experience/location: My career experience with USDA-NRCS was served at the Golden Meadow Plant Materials Center (PMC) in Galliano, Louisiana.

Description of career experience (what I learned): I learned how each subagency works with each other in order to achieve a common goal. I also learned research skills, worked with farm and greenhouse machinery, tools and equipment and have a better understanding of the NRCS role in conservation and community.

What is your perception of agriculture now: Agriculture is not limited to fields and crops; it is a broad, multifaceted and integral part of our existence.

How has this career experience broadened your employment opportunities: With help of the PMC management they direct me on how to start and prepare research, maintain greenhouse plants and learn how to use specialized equipment, and being involved with the community. These experiences made me gain interest in working with conservation efforts.

Career and research aspirations: My target agency with the USDA for my career would be with the NRCS in Louisiana. In ten years I would like to be employed by the USDA and work in either APHIS or NRCS, working in the field, with farmers and the community.

Skill Set: -Public speaking -oral communication -multilingual
-communication -field techniques-maintenance -community events
-computer word processing -research data collecting -greenhouse maintenance -caring for nursery plants

The impact of my career experience: My career experience made a big impact on my career choices and also gave me a good insight of what to expect and what is to be expected from me as an employee of the USDA. I was able to apply what I have learned in college and applied it to my job during my internship. My goal is to work for the USDA and continue with the NRCS objectives to improve the soil, air, water quality and other conservation efforts.



I learned how each subagency works with each other in order to achieve a common goal. I also learned research skills, worked with farm and greenhouse machinery, tools and equipment and have a better understanding of the NRCS role in conservation and community

Name: **Andrew White**
Hometown: **Richmond, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Senior**
Major: **General Agriculture**
Expected date
of graduation: **May 2014**
Degree: **BS**
USDA Agency
of interest: **Food Safety and Inspection Services FSIS**
Email: **aw5271@swbell.net**

Career experience/location: I worked in USDA-NRCS, Rosenberg, Texas.

Description of career experience (what I learned): I learned about the different programs the USDA-NRCS provided. I also learned about what the geologists in the NRCS have to do in order to keep government dams and spill ways in working order.

What is your perception of agriculture now: There has to be agriculture in order to feed the world.

How has this career experience broadened your employment opportunities: This has broadened my employment by skills learned while working for the NRCS. I know how to use survey equipment, AutoCAD and land leveling software.

Career and research aspirations: I plan when I graduate to use my agriculture business side of my degree to work my way up to a managerial position at HEB. I would like to have the opportunity to work for Duck Unlimited it would be a great experience.



Skill Set: -Customer service skills -field experience in rice field leveling -hands on experience in geodetic surveys -using trimble surveying equipment -experience performing wetland determinations

The impact of my career experience: The impact of my career experience was that I met a lot of great people and they taught me a lot of useful tool to take with me after graduation. I got the chance to travel and see all the different projects that NRCS work on. They showed me all the different ways they help ranchers and producers with conserving there land. That is what I like about working for the NRCS is helping others help the land.

This has broadened my employment by skills learned while working for the NRCS. I know how to use survey equipment, AutoCAD and land leveling software.

Texas A & M University STEP UP - Kingsville Graduate Student

Name: **Amanda C. Garcia**
Hometown: **Brownsville, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Graduate**
Major: **Animal Science**
Expected date of graduation: **December 2012**
Degree: **Masters**
USDA Agency of interest: **APHIS**
Email: **Amanda.c.garcia13@gmail.com**

Career experience/location: Veterinary clinic internship, Gladys Porter Zoo, Brownsville, Texas.

Description of career experience (what I learned): I learned the daily happenings of a zoo veterinary clinic. I participated in administering vaccines, conducting x-rays, behavioral and illness observations, and in several necropsy examinations. I shadowed and assisted the veterinarian in minor surgeries, amputations, blood drawing and other medical tasks that arised.

What is your perception of agriculture now: There are so many aspects of agriculture and the agriculture practices are very well researched and calculated to maximize efficiency. It is a great field to be a part of.

How has this career experience broadened your employment opportunities: This experience has diversified my veterinary career experience with exotic animals that I would not have gained otherwise.

Career and research aspirations: My future aspirations are to continue my studies into veterinary school where I will eventually work on conservation studies and breeding programs for endangered animals. Upon graduation, I would enjoy to travel abroad to research large animals, particularly elephants in Africa.

Skill Set: Computer skills -microbiological techniques -diet preparation -animal husbandry -sample collecting -PCR -DNA/RNA extraction -media preparation -plant breeding -scientific writing -southern blot -DNA fingerprinting -public speaking

The impact of my career experience: These experiences I received have helped to add over 400 hours of veterinary hands on experience with exotic animals in a zoo setting. This is especially crucial when applying to veterinary school. I have also witnessed the daily routines of a veterinary clinic over time to understand the management process and the upkeep of materials as well as the importance of scheduling. I hope with this experience my future employer would consider further training my skills. My career goals have been further cemented because I enjoyed my internship fully. I want to work in population studies and conservation of endangered animals. I have witnessed how breeding programs are managed and would enjoy having a part in the planning and understanding of the program. I would like to be able to travel abroad to study large animals in their natural habitat.



I learned the daily happenings of a zoo veterinary clinic. I participated in admisitering vacciniies, conducting x-rays, behavioral and illness observations, and in several necropsy examinations. I shadowed and assisted the veterinarian in minor surgeries, amputations, blood drawing and other medical tasks that arised.

Texas A & M University STEP UP - South Texas College Undergraduate Students_____

Name: **Amy Ruiz**
Hometown: **Mercedes, Texas**
Institution: **South Texas College**
Campus: **Mid-Valley Campus**
Rank: **Sophomore**
Major: **Biology**
Expected date
Of graduation: **May 2013**
Degree:
USDA Agency
Interest:
Email: **A_Ruiz@baylor.edu**

Career experience/location: Under the STEP-UP grant, I conducted research at the Texas A&M Citrus Center in Weslaco, Texas under the supervision of Dr. Madhura Kunta.

Description of career experience (what I learned): Throughout my time I learned diagnostics techniques such as DNA and RNA extractions, PCR, and gel electrophoresis. I learned how to take a leaf or fruit sample and use these different techniques to test for a specific disease or virus. I also learned, at a molecular level, the difference and sensitivity of DNA vs. RNA.

What is your perception of agriculture now: When I began my work I had very little knowledge of the citrus industry but by the end of my internship I understood the importance of having scientists/teams working in both the fields and in the laboratories testing plants and fruits. I have a new respect for the citrus industry and perhaps I will one day become an advocate for the industry.

Career and research aspirations: I plan on attending PA school afterwards and specify in pediatrics. Although I consider myself a humanitarian, I will always leave the door open for another opportunity to conduct research of any kind.

The impact of my career experience: This experience has assured me that I am in the right field of study. The research sparked an interest in me to perhaps one day go back and continue working in the lab. I am currently a sophomore finishing my Biology degree at Baylor University in Waco, Texas.

Throughout my time I learned diagnostics techniques such as DNA and RNA extractions, PCR, and gel electrophoresis. I learned how to take a leaf or fruit sample and use these different techniques to test for a specific disease or virus.



Name: **Jose A. Treviño**
Hometown: **Weslaco, Texas**
Institution: **South Texas College**
Campus: **Weslaco East High School**
Rank:
Major: **Biology**
Expected date
of graduation: **May 2014**
Degree: **Associates in Biology**
USDA Agency
of interest: **Anything that has to do with the environment**
Email: **jose.jatman@yahoo.com**



Career experience/location: My career experience was in the STEP UP program and involved working at the Texas A&M University Kingsville Citrus Center 312 N International Blvd, Weslaco, Texas, 78570.

Description of career experience (what I learned): What I learned from this whole experience was how much Citrus is valued among not just growers, but as well as researchers through the discovery of new methods to preserve quality Citrus for the everyday person. As well as how this industry supports a lot of people and companies in terms of finances.

What is your perception of agriculture now: My insight of agriculture during my involvement with this program has showed me that agriculture is an important field to have knowledge about because it entails a skill that should be practiced and that is cultivation. That in turn is responsible for there being an array of crops for the general public.

How has this career experience broadened your employment opportunities: By having gone through this program I feel that my opportunities in the future in regards to employment will be a bit easier due to the work experience that was gathered. It will most definitely have an affect towards my career goal of doing something environmentally related because of the different vantage points I was able to see through and thus piece together as a whole solid foundation for continued learning.

Career and research aspirations: A future career aspiration that I have in mind is to do something environmentally related. The cause of that is because of my continued exposure to scientific research that revolved around the environment and how it should be preserved for future generations to fully appreciate. In five years I see myself already working in my career conducting research. In ten years I see myself starting a family and instilling the same loving qualities in them as my parents did to me, which I truly value and appreciate and in effect has helped me have an immense passion in scientific research.

Skill Set: -Time management -organization of data and information - efficient ways to approach problems
-quality laboratory skills

The impact of my career experience: This experience is one that is no doubt going to affect my future education, future employment, career goals and long term objectives. As well as having a concrete background of Science which will feed into me being able to make connections and realizations more quickly and fully. Future employment for me through this experience feels like a reality in whatever it is that I choose. It makes me aware that I have valuable insight from the STEP UP program that will pave the way for my future. My career goals I am aware will involve some stress and demanding work, but I feel that this foresight in the field of environmental research will prove to be a valuable asset to be able to handle some of those external factors. Not to mention that I have a clear and concise picture of what it is that I plan on doing later on in my life and understand as I converse with other scientists'. Overall this program is one that should continually be offered because of its knowledge that it gives to young ones in how not only they will be empowered, but have enough foresight for other courses that they will take later on in life and obstacles that will arise in the near future.

My insight of agriculture during my involvement with this program has showed me that agriculture is an important field to have knowledge about because it entails a skill that should be practiced and that is cultivation.

Texas A & M University STEP UP Texas State Technical College Undergraduate Students

Name: **David Coy**
Hometown: **Raymondville, Texas**
Institution: **Texas State Technical College**
Campus: **Harlingen**
Rank: **USDA Student Intern**
Major: **Agricultural Technology**
Expected date
of graduation: **Summer 2014**
Degree: **Associates**
USDA Agency
of interest: **APHIS**
Email: **dcoy@mymail.tstc.edu**

Career experience/location: Lab Assistant and Trapper, USDA/APHIS/PPQ in Harlingen, Texas at 4909 E. Grimes, Suite 103.

Description of career experience (what I learned): I learned how to properly inspect Mexican Fruit fly, identifying sterile or wild flies. I also learned how to use GPS, run compliance checks with vendors, and capture outside samples.

What is your perception of agriculture now: I now understand the importance of agriculture in our everyday lives, and how we must succeed in protecting our agricultural resources.

How has this career experience broadened your employment opportunities: I believe this internship has given me a great perception of working for the USDA and how interesting and rewarding these careers may be. I received plenty of experience and knowledge which will help me pursue my career in agriculture.

Career and research aspirations: I'm currently about to graduate with an associates in Summer 2014, and I plan to transfer to Texas A&M Kingsville for my bachelors in agriculture at least, although I am really shooting for a master's degree. In 5 years I can see myself just graduating with a master's degree, and possibly internships in chance of a career ahead. In 10 years I believe I will have established an amazing career with the USDA.

Skill Set: -Leadership skills -management -Microsoft programs -GPS/GIS -ARC PAD -pesticide application -operate machinery -welding - agricultural safety -animal reproduction -artificial insemination -feed rations -soil preparation -planting practices -entomology -soil conservation -water conservation -animal health -animal castration -treating wounds -dehorning -CPR certified -defensive tactics -firearms training

The impact of my career experience: I have felt that I have found my calling, I came to college after a temporary position with the USDA. I enjoyed my short experience and now have had the opportunity, in my field of study, to receive more experience through internships. My internship allowed me to grasp knowledge of different departments of the USDA and what they are responsible for. This knowledge has helped me with deciding the career path I plan on choosing. And has pushed me to pursue higher goals in education than I would have normally planned. In the long run, I plan on proudly graduating from Texas A&M Kingsville with a masters and finding an occupation with the USDA.

I now understand the importance of agriculture in our everyday lives, and how we must succeed in protecting our agricultural resources.



Name: **Richard O. Garcia**
Hometown: **Lyford, Texas**
Institution: **TSTC**
Campus: **Harlingen**
Rank: **Sophomore**
Major: **Agriculture Technology**
Expected date
of graduation: **August 2013**
Degree: **Associates**
USDA Agency
of interest: **APHIS (Cattle Fever Tick Center)**
Email: **richard_garcia_titans@yahoo.com**



Career experience/location: I did my internship at the USDA APHIS office in Harlingen Texas. Here is where I learned about the Mexican fruit fly and the procedures they do to help bring the spread of the fruit fly and contaminating the entire valley citrus.

Description of career experience (what I learned): While working for them I learned to set out traps to try and catch as many fruit flies as we could. When I wasn't setting up traps I was in the lab counting vials of flies and making sure that we didn't have any new flies come from Mexico. If we did we would have to tell our boss (Lupita Gracia) and she will take us out to the location and inspect the tree that fly was on. I also learned how to spray Spinosad onto the citrus trees and this was to help the flies stay away from that certain tree.

What is your perception of agriculture now: My perception of agriculture has always been the same ever since I was younger. Because I have grown up around it and now plan to have a career in the agriculture field.

How has this career experience broadened your employment opportunities: Seeing the different agencies and how they work made me pursue further in finding a job with the USDA. But the field I want to be in is the tick riders and work with cattle. The reason I want to work with the cattle side of the USDA is because I have a lot of experience with them from what I learned at TSTC and also by helping my grandpa at his ranch when I was younger.

Career and research aspirations: I have another career goal and that is to be a feedlot manager. The way I know about this career is because in the summers I would work at a feedlot and I would see what the manger would do and the way he ran the feedlot and once I saw that I knew that I would want to have that as a career. In the next ten years I plan to have an agriculture related career and have my own home and ranch. On the side I want to have my own cattle and hay baling business. I would have these two side business to buy and sell and bring in profits but the real reason I want to do these things is because I enjoy doing them.

Skill Set: -Ranch experience -computer skills -farm machinery experience -cattle experience -animal vaccination experience -people skills. I have acquired these skills over time and some of these skills I have learned from my younger years and some of them as I was enrolled in TSTC.

While working for them I learned to set out traps to try and catch as many fruit flies as we could. When I wasn't setting up traps I was in the lab counting vials of flies and making sure that we didn't have any new flies come from Mexico.

The impact of my career experience: The impact of my experience has come from both of my parents because they want me to have a good job and be able to provide for my family when it comes times for one. Ever since I was younger they taught me to work for what I want and I appreciate that because with that in my mind, it makes me work harder and smarter for the things I have today. I see some of my friends today and they are in the oil rigs making money and they see me always studying for school. But in the long run having an education to fall back on can really pay off. I just appreciate my parents being there when there were times I wanted to give up on school and in return when I get my career I plan to help them as much as they helped me through school.

Name: **Alfonso Sandoval**
Hometown: **Los Fresnos, Texas**
Institution: **Texas State Technical College**
Campus: **Harlingen, Texas**
Rank: **USDA Student Intern**
Major: **Agriculture Science**
Expected date
of graduation: **Summer 2014**
Degree: **Agriculture**
USDA Agency
of interest: **APHIS**
Email: **asandoval17790@mymail.tstc.edu**

Career experience/location: The experienced I received was from APHIS PPQ Mexican Fruit Fly in Harlingen Texas. I got to inspect sterilized flies and run routes of traps used to catch the flies. I also got to follow the process of storing pupae and then the time of release. I would also spray trees with a pesticide.

Description of career experience (what I learned): I learned some lab experience when we were inspecting the flies under the purple light. I also learned how to use a light microscope to inspect the flies. I also learned how to mix Glyco a chemical used in the traps. I learned how to rebait and service traps.

What is your perception of agriculture now: I think agriculture is big and very important. I believe that without agriculture there wouldn't be life. Agriculture is being innovative and I can see it growing over the years.

How has this career experience broadened your employment opportunities: I think this experience has open new doors for me and it has given me a taste of real life experiences in a workplace. It has a connection because it connects with agriculture in controlling pests and protecting one of our commodities.

Career and research aspirations: In 5 years I can see myself either working in an agriculture related job, or maybe continuing school to higher my education. In 10 years I see myself with a secure and permanent job, with plenty of experience and knowledge in agriculture. Although still continuing to learn more about agriculture.

Skill Set: -Computer skills -operate farm equipment -mig/stick welding -soil preparation -record keeping -pest management -entomology -food marketing -animal reproduction -agricultural safety management -administer injections -agribusiness management -commodity identification -forages & pasture management -cattle identification -pesticide application -OSHA standard knowledge



I think agriculture is big and very important. I believe that without agriculture there wouldn't be life. Agriculture is being innovative and I can see it growing over the years.

The impact of my career experience: I think my career experiences impact my future education by teaching me new skills and learning new useful information that I will use. These experiences will also help me in my future employment because I will put my skills and knowledge in to work. My career goals are set into dedication and determination in agriculture and I believe my experiences will lead to success. In the long term my experiences will help me achieve my goals and give me the enthusiasm to enjoy who I am and what I do.

Name: **Stephannie M. Short**
Hometown: **Edcouch-Elsa**
Institution: **Texas State Technical College**
Campus: **Harlingen**
Rank: **USDA Student Intern**
Major: **Agriculture Technology**
Expected date
of graduation: **Summer 2014**
Degree: **Associates Degree**
USDA Agency
of interest: **APHIS, PPQ**
Email: **smsshort@mymail.tstc.edu**

Career experience/location: My experience with the internship opened up my eyes and many doors to numerous opportunities. The USDA APHIS PPQ is located in Harlingen, Texas.

Description of career experience (what I learned): I learned to communicate well with others, and I learned how to be a team player. I learned what the Mexican Fruit Fly is and what it could do to our citrus. I also learned how to read a hand drawn map for my assigned route.

What is your perception of agriculture now: I've learned to appreciate Agriculture. Believe it or not it's everywhere, and it's an everyday use.

How has this career experience broadened your employment opportunities: This experienced has made me to set my goals higher, and I've learned never to settle for less. This experience has made a big impact on my life, and I would love to experience it again, yet I know there are more opportunities.

Career and research aspirations: I see myself doing what I love. Every day I'll be waking up with a smile on my face. The way I see it, I won't be going to work, for I'll make work my life. They say if you love your job and what you do; you'll never work a day in your life. I also plan to continue my dream. I pick up strays off the street, feed, water, clean, nurse, and finding them good homes. In God's time; I shall open up a big shelter called Puppy Love.

Skill Set: -Well organized -fast paced -positive attitude -team player
-self-directed -self-motivated

I've learned to appreciate Agriculture. Believe it or not it's everywhere, and it's an everyday use.



The impact of my career experience: I can go on and on how this career experience has made an impact on me. I love what I do, and I know I'll never get tired of what I do. I'm going to wake up every day working regardless, and life is too short to be negative. I was born with nothing, and I'm going to leave with nothing. But I will have made something out of my life, and my only long term goal is to keep my dream going through my future children and grandchildren. My career is going to be more than work; it's going to be my life.

Texas A & M University STEP UP
University of Texas Pan American Undergraduate Students

Name: **Alexandra Granda**
Hometown: **Pharr, Texas**
Institution: **University Of Texas Pan-American**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **Fall 2014**
Degree: **Bachelor's**
USDA Agency
of interest: **APHIS, ARS**
Email: **agranda@broncs.utpa.edu**

Career experience/location: I am located at the UTPA and investigate population genetics and genomics of bacterial plant pathogens.

Description of career experience (what I learned): I became better at following lab procedures. I learned how to improve my PCR skills in a faster speed and in an efficient manner. I am also improving safety and awareness of lab equipment.

What is your perception of agriculture now: I became aware of many agricultural fields that fit perfectly in my major. I also became aware that agriculture is a broad field in which all of us depend on to live.

How has this career experience broadened your employment opportunities: I have seen many carriers of interest that link science and agriculture together. Plants are my main focus and I have noticed that along with agriculture I will be able to have a broad choice of job opportunities.

Career and research aspirations: After graduation, I will transfer over to College Station and work on my Masters as a Plant Pathologist. I would like to gain more experience as a research student at a laboratory at College Station during grad school. After graduation with a Masters, I would like to work for the USDA.

Skill Set: -Computer skills -bilingual -problem solver -CPR certified -typing skills -microscopy use -staining methods -PCR use

The impact of my career experience: As an intern student, I believe many opportunities are opening for my future. Taking an internship as an undergrad has helped me get better prepare for the future and has set me with better opportunities to further my education. My chances of getting hired in laboratories have increased because I have gained experience through this internship. By gaining work experience in actual laboratories, my hands on work has increased.



I became aware of many agricultural fields that fit perfectly in my major. I also became aware that agriculture is a broad field in which all of us depend on to live.

Name: **Heather M. Hernandez**
Hometown: **Donna, Texas**
Institution: **University of Texas Pan-American**
Campus:
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **May 2015**
Degree:
USDA Agency
of interest: **Entomology**
Email: **hmhernandez@broncs.utpa.edu**



Career experience/location: I am a student research assistant under a USDA internship at University of Texas Pan American in Edinburg, Texas.

Description of career experience (what I learned): This opportunity has enriched my laboratory skills and protocols. Through my individual project in the internship, I became familiar in specific areas such as DNA sequencing and extraction, analysis of gene expression and stereomicroscopy. I enjoyed developing my research skills, working alongside scientists, familiarizing myself with lab equipment and assisting graduate students. Through my lab experience, I am more than familiar with these concepts, and hope to develop them further through this opportunity.

What is your perception of agriculture now: The advances in the field of agriculture and learning how agriculture plays a part in everyone's everyday life, I did become inspired to pursue a career in this field. As a scientist, I want my research to make a significant contribution to the future of the agricultural industry.

How has this career experience broadened your employment opportunities: This experience was an opportunity for enriching my academic experience as an emerging biologist and aligns closely with my future educational goals. In addition to understanding required lab protocol, I have also attended a few conferences in which I learned that a key component of good science is the ability to communicate research findings in a way that is understandable and meaningful through presentations and networking.

Career and research aspirations: After graduation, I would like to continue my education with a Master's Degree in Entomology at the University of Texas A&M. There I will pursue my experience in research, in which I will hopefully be a researcher at the USDA.

Skill Set: -PCR -seed sterilization -gel electrophoresis -restriction digest -ligation -transformation -miniprep- ELIZA kit -microscopy (slide preparation; cell count) -laboratory equipment use (centrifuge; spectrophotometer; flour meter; incubator; autoclave; pipettes) -greenhouse -field work

They have each introduced me to great opportunities and allowed me to grow as a future scientist. This career experience clarified my perspective and allowed me to realize the importance and interconnectedness of agricultural research.

The impact of my career experience: I have had the opportunity to pursue my interest in the research field by being selected as a Student Research Assistant under a USDA grant funded project at my university. This past summer I was accepted to a 10-week program at Texas A&M University for the National Science Foundation-Research Experiences for Undergraduates Expanding Scientific Investigation through Entomology (NSF-REU EXCITE). As a student at an institution where an entomology class is the closest to being agricultural related, it is hard to develop skills and find a field of interest. My research project was on potentially beneficial endophytic fungi that could live asymptotically inside plants and provide protection against herbivores and other stressors. I have learned there are many aspects of entomology that make a significant impact on agriculture in which I want to contribute to and be a part of. They have each introduced me to great opportunities and allowed me to grow as a future scientist. This career experience clarified my perspective and allowed me to realize the importance and interconnectedness of agricultural research.

Name: **Courtney Huston**
Hometown: **Edinburg, Texas**
Institution: **University of Texas Pan-American**
Campus: **N/A**
Rank: **Senior**
Major: **Environmental Science**
Expected date
of graduation: **August 2014**
Degree: **BS**
USDA Agency
of interest: **NRCS**
Email: **cjhuston@broncs.utpa.edu**

Career experience/location: Research Assistantship with Dr. Dirrigl of the Biology Dept. at UTPA though the USDA Step Up Program.

Description of career experience (what I learned): I've gained a lot of knowledge of water quality testing, lab techniques, and self-discipline.

What is your perception of agriculture now: I think agriculture is essential to keep the world-system working properly.

How has this career experience broadened your employment opportunities: The USDA Step Up program has given me priceless networking opportunities in the USDA and NRCS, and helps make me a better scientist.

Career and research aspirations: After graduation from UTPA I would like to go to graduate school in geology related field then get a job with NOAA or the USGS.

Skill Set: -Water quality testing techniques -computer skills -lab techniques -trained in remote sensing and GIS
-knowledgeable in sedimentology and loss on ignition

The impact of my career experience: The USDA STEP UP program has really helped assure me I am on the right degree path. I am very interested in the research I am doing and am looking forward to furthering my education in graduate school. I would like to go to graduate school in a geology related field, tying in my environmental science background. After graduate school I would like to get a job that I can do lab work and field work, combining my interests in science and the outdoors.



The USDA Step Up program has given me priceless networking opportunities in the USDA and NRCS, and helps make me a better scientist.

Name: **Rachelle Matias**
Hometown: **McAllen, Texas**
Institution: **University of Texas - Pan American**
Campus: **Edinburg, Texas**
Rank: **Senior**
Major: **Biology**
Expected date of graduation: **May 2014**
Degree: **Bachelor of Science in Biology and minor in Chemistry**
USDA Agency of interest: **ARS**
Email: **rmatias@broncs.utpa.edu**

Career experience/location: Intern in USDA Step-up Program in University of Texas-Pan America (UTPA), Edinburg, Texas.

Description of career experience (what I learned): I learned about remote sensing/GIS technology under the mentorship of Dr. K. Rod Summy. I learned how to use remote sensing/GIS technology in conducting studies beneficial in rural areas and non-rural areas, such as distribution of mangroves.

What is your perception of agriculture now: Now, I realized that agriculture has various different fields that comprises it, including research

How has this career experience broadened your employment opportunities: The experience broadened my knowledge and skills. The gained knowledge and skills will help me stand out and will show the employers that I have some qualities that they might be interested or looking for.



Career and research aspirations: I see myself continuing for a higher degree from my masters and then doctorate degree. I can see myself working in a research lab and making a difference or doing something that would benefits all of us.

Skill Set: -Computer skills -data base management -GIS technology -remote sensing -microbiological techniques -research -environmental toxicity knowledge -biology background -chemistry background -anthropology background

The impact of my career experience: The experience I had obtained in the USDA Step-Up Program had really opened my eyes and broaden my knowledge about agriculture. Not only that, the things and skills I have learned had really helped perform better in my education and will continue to help me further in the future. My mind had been stimulated from all the things I had learned. It helped me keep an open mind, absorb knowledge much better, and obtain good time management skills. The experience had also showed me that there are plenty of career options available for me, when before I was ignorant of the different USDA agency and the different fields that encompass agriculture. I have enjoyed my learning experience doing research under this internship program. It also made me realize in order to move advance in a career and be skilled in an area, one must further advance one's knowledge and expertise. The different mentors in the internship program, either from UTPA or Texas A&M Kingsville, were all very inspiring.

The experience broadened my knowledge and skills. The gained knowledge and skills will help me stand out and will show the employers that I have some qualities that they might be interested or looking for.

Name: **Susana Ortega**
Hometown: **Monterrey, México**
Institution: **University of Texas Pan-American**
Campus: **Pan-American**
Rank: **Junior**
Major: **Computer Engineering**
Expected date of graduation: **2017**
Degree: **BS**
USDA Agency of interest:
Email: **sortegaco@yahoo.com**

Career experience/location: My internship name was STEP UP, which took place in the AgrilLife Research facility in Weslaco, Texas.

Description of career experience (what I learned): I learned hands-on lab techniques, such as the preparation of culture media, among other things. However, the most valuable lesson for me was the fact that with the right education, I could become someone that uses her talents for the good of the world.

What is your perception of agriculture now: Although I knew agriculture was something completely necessary for human growth and development, I was able to see another side of it during my internship.

How has this career experience broadened your employment opportunities: Due to the different techniques, lessons and ethics I have learned from this internship, better job opportunities will come. These skills could help set me apart from other possible job applicants.



Career and research aspirations: My current career aspirations are to finish my education correctly, and in a way that will teach what I need to become the person I wish. After college, I would like to continue with by obtaining my Master's degree. My ultimate goal is to make something of my career, and to help people who need it, doing so through the things I love.

Skill Set: -Computer literacy -knowledge in programming languages -basic laboratory techniques -efficient writer -basic biotechnology techniques -bilingual (English and Spanish) -good work ethic -basic knowledge of digital circuits -respectful and attentive

The impact of my career experience: The career experience I gained through the internship, and the lab that allowed me to work there, is very valuable. The research being done in the lab got me thinking about what I really wanted to do. I realized that I don't want a job that can promise me a big house, or a luxurious standard of living. I want a job that is meaningful, and helps solve the world's problems. This completely changed what I wanted to study, and what I wanted to be. Instead of choosing a career like Computer Science, I was able to decide on Engineering. It also changed the way I see my education. In the lab, I witnessed just how far you can go when you take your education seriously. Finally, the research being done showed me that, in due time, there will be something I could do about the problems that the world is facing right now.

Although I knew agriculture was something completely necessary for human growth and development, I was able to see another side of it during my internship.

Name: **Stephanie Ortiz**
Hometown: **Laredo, Texas**
Institution: **University of Texas-Pan American**
Campus: **Edinburg, Texas**
Major: **Biology**
Graduation Date: **May 2013**
Degree: **BS**
USDA Agency
of interest: **NRCS, ARS**
Email: **sortiz4@broncs.utpa.edu**

Career experience/location: Through the UTPA-USDA Research Assistantship Program offered at UTPA (Edinburg, Texas), I was able to conduct environmental research in enhancing rooting success of Black Mangrove propagules of the Texas Coastal Islands.

Description of career experience (what I learned): From this experience, I've learned how to effectively develop and execute a research plan by monitoring project development in an indoor laboratory setting and conducting field work in an outdoor setting.

What is your perception of agriculture now: I have become more aware that the agricultural job market embraces engaging research of life science that offers diverse career categories to study.

How has this career experience broadened your employment opportunities: While conducting research at UTPA, I was able to further my exposure of environmental research from being offered the opportunity of working with the USDA-APHIS quarantine at the Moore Air Base (Edinburg, Texas). My prior experience with USDA related research helped me make a smooth transition into the processing phase of arundo scale at the USDA-APHIS quarantine, which reassures me that these experiences will prepare me for my future career endeavors.



Career and research aspirations: I aspire to pursue a career in natural resources conservation at the community level to help others preserve and improve their natural resources through plant and soil research.

Skill Set: -Organizational skills -critical thinking -laboratory teamwork -biology laboratory techniques -technical report writing -manual dexterity -detail attentiveness -analytical & quantitative abilities -oral & written communication -biology theory & practical knowledge

It has been an engaging experience that has helped me enhance my scientific background for my future advanced studies and professional training. It has also developed my ability to work both independently and with others in a lab group.

The impact of my career experience: It has been an engaging experience that has helped me enhance my scientific background for my future advanced studies and professional training. It has also developed my ability to work both independently and with others in a lab group. Overall, this experience has made me well versed in the critical skill sets of environmental research. I trust that my desire and dedication to study science will be the fundamental qualities that will keep me driven to achieve my career goals.

Name: ***Gladis Saenz***
Hometown: **Edinburg, Texas**
Institution: **University of Texas-Pan American**
Campus:
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **Spring 2013**
Degree:
USDA Agency
of interest:
Email: **gsaenzz4@broncs.utpa.edu**

Career experience/location: I have participated in the USDA Program with the University of Texas Pan American in Edinburg, Texas, working on agricultural remote sensing and GIS applications.

Description of career experience (what I learned): Upon joining the program I have developed my time management skills. I practice making time for my research among my school work and classes on a daily basis. Also, I have learned the importance of teamwork and individual responsibilities within the group. My research has also helped me become acquainted with the GIS software and remote sensing equipment.

What is your perception of agriculture now: I have recognized the influence agriculture has on everyday life, from the economy to the food on our plates for dinner.

How has this career experience broadened your employment opportunities: Being a part of the program has made me realize how much I enjoy working in this field. Working with GIS and remote sensing has helped me narrow the career path I want to travel on.

Career and research aspirations: Currently my plans are to attend graduate school for agriculture or GIS. I eventually aspire to work for the Agricultural Research Service (ARS). In 5 years I hope to be part of a research team with the ARS in another area. 10 years from now I hope to have made a contribution to the agricultural field of study.

Skill Set: -GIS software skills -remote sensing software application -teamwork -individual responsibilities
-analyzing data -research skills -motor skills -leadership skills

The impact of my career experience: To date, my current career experience has broadened my view on the area I would like to specialize for my graduate degree. It has allowed for me to narrow down which agency I would like to be a part of within the USDA. In life, I hope to make a difference in the agricultural aspect to benefit areas from the environment to the population as a whole.



I have recognized the influence agriculture has on everyday life, from the economy to the food on our plates for dinner.

Name: **Eric Shah**
Hometown: **Edinburg, Texas**
Institution: **The University of Texas-Pan American**
Campus: **Main Campus**
Rank: **Senior**
Major: **Biology**
Expected date
of graduation: **December 2013**
Degree: **Biology**
USDA Agency
of interest: **APHIS**
Email: **ershah@broncs.utpa.edu**

Career experience/location: I completed a summer internship at the APHIS CPHST labs in Mission, Texas.

Description of career experience (what I learned): The summer internship at the APHIS CPHST labs in Mission, Texas has provided me with a lot of insight and passion towards the field of molecular genetics. It introduced me to the reality of research based problem-solving and quantificational/qualitative data analyses.

What is your perception of agriculture now: This experience has given me a new outlook on agriculture, and it has shown me how it can encompass areas of science that I am greatly interested in (molecular genetics).

How has this career experience broadened your employment opportunities: After working at the APHIS CPHST labs in Mission, I am highly considering a future position within the APHIS agency. This experience has opened up a vast amount of career opportunities that I am now considering.

Career and research aspirations: After my graduation, I will be attending graduate school to peruse my dream of a PhD in Molecular Genetics. Whether my studies will be in plants or animals, I am not sure of at the moment. After completion of my PhD, I would like to bring my studies back to the USDA. I would love to do molecular research for the APHIS agency.

Skill Set: -DNA isolations -PCR (polymerase chain reaction) -electroporesis -image editing software
-microscopy -quantifying PCR -sterile techniques -common lab equipment experience

The impact of my career experience: The USDA Student Research Program has given me an ample amount of valuable experience, and that start of a strong foundation for graduate school. These experiences encompass lab and research techniques, valuable workshops and conferences, and an environment that is submerged in academic principles. Without these treasured lessons, I would have lacked the basic experience behind applied research methods. This would have left me vastly unprepared for my steps in graduate school and achieving a doctorates degree that I am so fervidly after. I have cherished every educational benefit and hardship that the USDA Student Research Program has made me endure, and without this I would be lost in my search for my future career.



Without these treasured lessons, I would have lacked the basic experience behind applied research methods. This would have left me vastly unprepared for my steps in graduate school and achieving a doctorates degree that I am so fervidly after. I have cherished every educational benefit and hardship that the USDA Student Research Program has made me endure, and without this I would be lost in my search for my future career.

Name: **Tess Thomas**
Hometown: **McAllen, Texas**
Institution: **The University of Texas Pan-American**
Campus: **Edinburg**
Rank:
Major: **Biology**
Expected date of graduation: **August 2014**
Degree: **Bachelor of Science**
USDA Agency of interest: **Food and Nutrition Agency FNA, Agricultural Research Service ARS**
Email: **tthomas@broncs.utpa.edu**

Career experience/location: Water quality of irrigation canals in Donna, Texas with the USDA STEP UP program.

Description of career experience (what I learned): I learned how to properly collect samples, and store them. I also gained experience in testing for nutrients and metals as well as CDOM and other parameters. I was also able to work with my mentor in presenting the data we collected at the Texas Academy of Science and USCID Water Management Conference. We also had the wonderful opportunity of publishing our work in a USCID scientific journal.



What is your perception of agriculture now: I knew very little about the field before I started working with the USDA, after doing research with the program and going to conferences, I learned that there are so many different career opportunities in Agriculture.

How has this career experience broadened your employment opportunities: Having worked with the USDA program for almost 2 years now and being exposed to different fields and research at conferences, as well as having the opportunity to present and publish makes me feel very confident about a future employment in the field.

Career and research aspirations: After I graduate, I plan to attend graduate school to study a field that helps me hone my skills and trains for a research position in a field like biotechnology or genetic engineering. I am very interested in agriculture and genetic modification/engineering. I want to be a part of programs that brings nutritious crops and seeds to people in third world countries who rely on root crops with low nutritional value.

Skill Set: -Water quality -nutrient testing -soil nutrients testing -data collection -sample storage -microbiological techniques -developmental mechanism lab techniques -mammalogy lab techniques -computer skills

The impact of my career experience: Working with the USDA STEP UP program boosted my confidence in the lab and in conducting research. I was able to present my research several times at conferences and it taught me the skills to do research, collect data, and present my work. I feel more confident about my future education and employment and know that if I keep working and gaining experience, I will be accepted into a graduate program that leads me to the right career (hopefully one in research). As part of the program, I learned to collect water samples, and to properly store and test them. At times we were outside collecting samples in temperatures in the high 90s to 100s - it gave me a real sense of accomplishment and it truly felt like “field work”. Today, I feel like if I can work out there in searing heat, I can do field work in all kinds of environments! Anything is possible with hard work and dedication, all you need is the right skills and education to help focus your energy and effort into the right fields.

Today, I feel like if I can work out there in searing heat, I can do field work in all kinds of environments! Anything is possible with hard work and dedication, all you need is the right skills and education to help focus your energy and effort into the right fields.

Name: **Megan I. Villarreal**
Hometown: **Alamo, Texas**
Institution: **University of Texas Pan-American**
Campus: **Pan American**
Rank: **N/A**
Major: **Biology**
Expected date
of graduation: **Summer II 2014**
Degree: **Bachelor's in Science**
USDA Agency
of interest: **NRCS**
Email: **mivillarreal@broncs.utpa.edu**

Career experience/location: My program was USDA STEP-UP at the University of Texas-Pan American in Edinburg Texas.

Description of career experience (what I learned): I learned water and soil sampling procedures with testing equipment in the field and how to perform chemical composition tests in a laboratory setting.

What is your perception of agriculture now: I have learned more about how agriculture is vital to our economy and that many people and fields are needed to complete research.

How has this career experience broadened your employment opportunities: This experience has opened my eyes to new possibilities in regards to careers in the USDA and their branches. It has given me ideas as to where I might want to work in the future.

Career and research aspirations: In the next five years I see myself working to achieve a higher academic degree in Biology such as a Master's or PhD while continuing to work in programs like these. In ten years I can imagine that I would work for the USDA in a biological or agricultural field.

Skill Set: -Data analyst -water sampling techniques -computer skills -spectrometer experience -CDOM and HANNA monitoring experience -Powder Pillow testing -TNT testing -phytoplankton collection and filtration -organizational skills -scientific writing -soil filtration

The impact of my career experience: With the experience I am receiving from the USDA STEP-UP program, I will be better able to use my acquired skills when I proceed into graduate school for my Master's and PhD. The research I do may be different, but I will have gained knowledge in how to conduct tests in a laboratory setting.

Future employment will likely be more attainable since I will have had hands on experience in the field and more education that was obtained during my graduate studies. I will also be more familiar with monitoring equipment and sampling techniques. My career goals before this program were mostly based on teaching science in a high school setting. However, after STEP-UP I now know more about other opportunities research in the scientific field. My aspirations for a future career now seem to head more towards working in a USDA branch – most likely in the NRCS. If not, I would still try to find work as a scientist in the biological field. Overall, my long term objectives have taken a drastic turn after participating in the USDA STEP-UP program. I now want to do more in the scientific community and gain more experience in research that will help us to better agricultural practices and our understanding of the natural world.



Overall, my long term objectives have taken a drastic turn after participating in the USDA STEP – UP program. I now want to do more in the scientific community and gain more experience in research that will help us to better agricultural practices and our understanding of the natural world.

Name: **Johnathon Waggoner**
Hometown: **Alamogordo, New Mexico**
Campus: **University of Texas Pan-American**
Rank: **Junior**
Major: **Biology, History**
Expected date
of graduation: **2014**
Degree: **Bachelors**
USDA Agency
of interest: **APHIS**
Email: **Jmwaggoner@utpa.edu**

Career experience/location: I worked in a genetics lab at the USDA-APHIS facility.

Description of career experience (what I learned): I learned a variety of molecular diagnostic techniques.

What is your perception of agriculture now: I learned that agriculture has many different areas of work.

How has this career experience broadened your employment opportunities: My mentor provided me with numerous tools that will help me succeed in obtaining a research job within the USDA.

Career and research aspirations: I currently work on developing different growing techniques for a variety of specialty crops in South Texas. Without my USDA research experience I would not have received this job. I plan to pursue graduate school after graduation.

Skill Set: -Molecular diagnostics -computer skills -DNA amplification -electrophoresis -DNA extraction

The impact of my career experience: More than anything, becoming aware of the numerous jobs within the USDA and the different skill sets necessary for each.



I learned that agriculture has many different areas of work.

Texas A & M University STEP UP - University of Pan American Graduate Students_____

Name: **Yessica Cerino**
Hometown: **Edinburg, Texas**
Institution: **University of Texas-Pan American**
Campus: **Edinburg**
Rank: **Graduate**
Major: **Biology**
Expected date
of graduation: **May 2014**
Degree: **MS in Biology**
USDA Agency
of interest: **ARS, USFS**
Email: **yecerino@broncs.utpa.edu**



Career experience/location: USDA STEP UP, University of Texas-Pan American in Edinburg, Texas.

Description of career experience (what I learned): This experience allowed me to become comfortable in a laboratory setting. My experience has taught me to have confidence when handling delicate tools, or sensitive samples. Additionally, I have been able to become organized so as to complete experiments in a neat and timely manner. Lastly, I learned that patience and slowing down while explaining science is key to having those without a science background gain a better understanding.

What is your perception of agriculture now: Prior to my internship, my knowledge of agriculture consisted of migrant workers leaving for areas needing crop harvesting. Participation in the summer TAMUK workshop aided my understanding of the various areas of agriculture.

How has this career experience broadened your employment opportunities: Prior to gaining an internship with the USDA, a future in applied science was never an option. Attending symposiums and conferences, I have been exposed to different areas of research and science that now seem attainable.

Career and research aspirations: Current career and research aspirations include obtaining a position in a USDA agency to further cement the skills and knowledge I obtained while completing my internship. Future aspirations include teaching and working with the public in an area of conservation. In particular, it would be ideal to demonstrate to the public, especially kids, on how humans can positively impact the conservation or preservation of native plant and animal species.

Skill Set: -Microsoft Office applications -microbiological techniques
-metal analysis -MaxEnt model predictions -transmission and scanning electron microscope sample preparations

Prior to gaining an internship with the USDA, a future in applied science was never an option. Attending symposiums and conferences, I have been exposed to different areas of research and science that now seem attainable.

The impact of my career experience: As a high school student, a Bachelors degree was my only scholastic goal. However after gaining an internship with the USDA during my junior year of college, I was introduced to a completely different world. I am now a second year graduate student working under a USDA research internship and my future aspirations could not seem brighter. Through the research internship, I have gained a skill set I would never have imagined. The skills I have are what I hope will set me apart in my search for employment. After I graduate with a Masters in Biology, I hope to gain employment with a USDA agency working as a research technician. As a research technician I would hope to be exposed to different research settings such a field work that includes sample and data collection. A long term objective would be to become an educator. Not having all the facts and not being informed about options, is something I think is very common in schools of the lower Rio Grande Valley. If it were ever possible, I would like to work with kids in a role similar to a recruiter or educational speaker. I can only imagine how many kids out there will not even attempt college, let alone a career in science, just because of a lack of knowledge.

Name: **Luis De Santiago**
Hometown: **Mercedes, Texas**
Institution: **University of Texas-Pan American**
Campus:
Rank: **1st Year Graduate**
Major: **Biology**
Expected date
of graduation: **May 2015**
Degree: **Master of Science in Biology**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS**
Email: **lmdesantiago@broncs.utpa.edu**

Career experience/location: Microbiology & General Biology Teaching Assistant, Graduate Research Assistant, & Chair for the Conservation Committee for the Society of Conservation Biology (SCB) UTPA Chapter; Edinburg, Texas.

Description of career experience (what I learned): My teaching assistantships have greatly developed my communication skills while encouraging my passion for biology. My Graduate Research Assistantship and position within SCB have provided me with the leadership skills necessary for success within my field.

What is your perception of agriculture now: I considered agriculture to be a field for people interested in food production, and now I perceive it as an integral component in society with many opportunities for personal, technological, and imperative success.

How has this career experience broadened your employment opportunities: My USDA funded graduate research assistantship has motivated me to pursue a PhD and a future career in biological conservation. The multiple workshops attended have provided me with multiple career avenues within the USDA.

Career and research aspirations: My immediate goal is to acquire my Master's Degree in Biology from the University of Texas-Pan American. Future aspirations include directing my efforts into resource conservation by applying myself in environmental research.

Skill Set: -Dark & light field microscopy -bacterial staining -water quality assessments/analysis -DNA & protein isolation and gel electrophoresis -immunoblotting -basic field and laboratory conduct

The impact of my career experience: My experiences have greatly motivated me to seek a career in biological conservation. I am confident in my pursuit of a PhD in the biological sciences and believe it will continue to lead me on a fulfilling path in life. My immediate goals are to acquire my MS while building my skill set in biological and conservation sciences in order to contribute back to my community. Future career goals include working for the Natural Resources Conservation Service and possibility the Food and Nutrition Service within the USDA.



I considered agriculture to be a field for people interested in food production, and now I perceive it as an integral component in society with many opportunities for personal, technological, and imperative success.

Name: **Carlos Tamez**
Hometown: **Monte Alto**
Institution: **The University of Texas-Pan American**
Campus: **Edinburg**
Rank: **Master's Student**
Major: **Chemistry**
Expected date
of graduation: **December 2013**
Degree: **MS**
USDA Agency
of interest: **NRCS, ARS**
Email: **ctamez2@broncs.utpa.edu**

Career experience/location: Graduate Research Assistant under Dr. Jason Parsons at The University of Texas – Pan American.

Description of career experience (what I learned): As a GRA I learned how to prepare samples for elemental analysis using atomic emission/absorbance techniques. Aside from performing elemental analysis, I synthesized inorganic nanomaterials for heavy metal remediation from water. I also gained lab managerial skills supervising the research of undergraduate students.

What is your perception of agriculture now: I have gained a new respect for all the hard work that goes into the agriculture industry and an interest in conducting relevant research.

How has this career experience broadened your employment opportunities: My experience with the USDA Step-Up program has lead me to consider pursuing a career in research that can benefit agriculture. Attending conferences has presented me with the ability to network with potential employers.

Career and research aspirations: Currently I am finishing up my MS in Chemistry at UTPA, with plans to pursue a PhD in Environmental Science. After completing a doctoral degree I would like to seek a post doc position with the USDA, EPA, or state level agricultural/environmental research facility.

Skill Set: -ICP-OES -GFAAS -FAAS -XRD -HPLC -GC-FID -SEM -IR/RAMAN spec -soil, water, and plant sample prep -inorganic synthesis -data collection/processing

The impact of my career experience: My career experience has shown me the importance in pursuing an advance degree in science. The opportunities to attend agriculture based conferences have shown me that there are infinite possibilities when it comes to research opportunities in agriculture. My experience with the Step-Up program also provided me with the opportunity to network with potential employers as well as potential colleagues. I have also seen the need for an increase in public awareness on the importance of agriculture and agricultural based research.



I have gained a new respect for all the hard work that goes into the agriculture industry and an interest in conducting relevant research.

Texas State University Project Page

FATE Food Safety and Agroterrorism Training: Educating Our Future Workforce

PI : Dr. Douglas Morrish
Texas State University
Department of Agriculture
dm43@txstate.edu
512-245-3321

Co-PIs: Dr. Ryan Saucier
Texas State University
Department of Agriculture
ps51@txstate.edu
512-245-3325

Dr. Nora Garza
Laredo Community College
nrgarza@laredo.edu
956-721-5337

This project is a collaboration between 4 higher education institutions in Texas, including Texas State University, Laredo Community College, Northwest Vista Community College, and Palo Alto College. The USDA FATE Grant's objectives include the creation of seamless transition mechanisms to increase the transfer rate of Hispanic students to a 4 year university and to graduate them in a timely manner to be eligible and competitive in the job market with the USDA agencies and to increase K-12 awareness of opportunities in agriculture and the USDA.

The project has allowed Hispanic community college students to develop early linkages with Texas State University through the newly established University Transfer Centers, mentorship websites, summer camps, faculty networking, and experiential learning fieldtrips. All students who started at a community college have since transferred and are enrolled in a program at Texas State University. The grant has trained 50 scholar Hispanic students in the course "Preparing Communities for Agroterrorism" and in "Agriculture Security" offered through the Southwest Border Food Safety and Defense Center in Las Cruces, NM. This training was just one of the many activities that took place on the week long "travelling classroom" component of the grant. Students were exposed to areas of agriculture that are vulnerable to agroterrorism threats such as the Mexico/New Mexico Cattle Crossing, cheese factories, dairies, and others.

One of the major goals of the project is to retain and place 90 percent of the student participants in job shadowing and internship opportunities within USDA agencies and graduate 50 Hispanic students who are well trained and ready to enter employment in the food safety/inspection areas with APHIS, FSIS, or another USDA agency. To date, very valuable connections have been made with the various USDA agencies and all students participating in the project have completed a meaningful learning experience during the summer months.

This grant is the first one awarded to Texas State University since it achieved the status of a "Hispanic Serving Institution", it is housed in the Department of Agriculture and directed by Dr. Douglas Morrish and Dr. Ryan Saucier.

Texas State University - Undergraduate Students

Name: **Mariela Lizbeth Aguilera**
Hometown: **Laredo, Texas**
Institution: **Texas State University**
Campus: **Texas State University- San Marcos**
Rank: **Senior**
Major: **Nutrition and Foods/Dietetics Track**
Expected date of graduation: **December 2014**
Degree: **Bachelor's of Science**
USDA Agency of interest: **Food and Nutrition Service, Food Safety Inspection Service FSIS**
Email: **mariela2010@yahoo.com**



Career experience/location: In June I worked at Camp La Junta Kitchen as a Staff/Dietary Aide for Aramark Food Service. In July I worked with the Laredo Independent School District Child Nutrition Program Food Production Center as an Intern.

Description of career experience (what I learned): Overall I learned the major concepts/aspects involved with the degree I am pursuing, which is Nutrition and Foods. In the month of June, I was assigned the duties of Kitchen Staff and Dietary Aide, which allowed me to have direct contact with Food Service Management and children interaction. In the month of July, I followed another aspect of the field, which is Food Production. Being an intern at a Food Production Center was a different experience, and definitely eye opening. Both are directly linked with Nutrition and Foods and the duties were a learning experience.

What is your perception of agriculture now: To me, Agriculture has always been the foundation of most branches of study. This might sound odd, but Agriculture is everywhere. From farm to the table there is a vastness of fields that make up the whole process. By the same token agriculture encompasses an array of areas like biosecurity, textiles, business, as well as others. From my point of view, it's American's heart and soul and a foundation for other sectors. My interest has increased across the knowledge I have gained, enough to considering pursuing a degree in Agriculture in the future.

How has this career experience broadened your employment opportunities: I have been able to get in contact with future dietetic internship programs, as well as potential employers. I have also made important networking with students involved in my area of study, and met many professionals in my field who can serve as great mentors and or possible employers in the future.

From farm to the table there is a vastness of fields that make up the whole process. In the same token agriculture encompasses an array of areas like biosecurity, textiles, business, as well as others.

Career and research aspirations: I would like to complete my Bachelors of Science degree in Nutrition and Foods successfully. Then after, I plan to apply for the dietetic internship and successfully get chosen to complete my internship requirements. I also hope to pursue graduate school, and get involved with research related to community nutrition and social/economic trends.

Skill Set: -Culinary arts -Associate of Science -bilingual -computer skills -good communication skills -accounting skills -data evaluation and input -leadership skills -student relations

The impact of my career experience: My career experience has marked my path in the correct direction. I have gained experience in sectors related to my major. I have experienced food service as well as food production in a large scale setting. This is essential, being that in order to complete a Registered Dietitian credential, one must be able to complete areas in the scope of practice which include these sectors. I have gained skills and made network connections that will most definitely be of use in the near future.

Name: **Daniela Alcala**
Hometown: **Houston, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Freshman**
Major: **Agriculture**
Expected date
of graduation: **2017**
Degree: **Bachelor**
USDA Agency
of interest: **Undecided**
Email: **d_a117@txstate.edu**

Career experience/location: I have yet to have any work experience since this is my first year in the FATE program. But I look forward to participating in the future to learn what I need to know for my career later in life.

Description of career experience (what I learned): I have not had the opportunity to have an internship yet. But I will utilize what I learn in the future.

What is your perception of agriculture now: Agriculture has opened my eyes to its importance in my everyday life. Since participating in high school, and realizing my potential in the Agriculture community, I know that I want to teach the next generation to prepare a workforce for the future.

How has this career experience broadened your employment opportunities: Since I have no work experience yet, I have been trying to get more involved in ways that I can network more. I have participated in agriculture conferences and it has taught me that there is more to agriculture, there's more behind the scenes than just farming. I have met many new amazing people through this program and I know this program can bring great career opportunities for me.

Career and research aspirations: My current career goal is to receive my bachelor degree in general agriculture with a teaching certificate. In five years, I hope to be looking for a job opportunity as a teacher to come my way. In ten years, I would like to see myself as a beloved teacher and FFA advisor that my students and their parents look up to.

Skill Set: -Receptionist -money management -public speaking -organization

The impact of my career experience: I do not have any work experience yet, but I know that whatever internships and work experiences I gather in my college years, I will use every detail to help me in my future career to teach high school students. I know that agriculture education careers are a growing profession now and it is becoming more and more competitive. I know that I have to keep up with the latest technologies to teach the coming generations. I want to have the best education that I can get so I know that I can teach later in life. My long term objectives are to become the best teacher.



Agriculture has opened my eyes to it's' importance in my everyday life. Since participating in high school, and realizing my potential in the Agriculture community, I know that I want to teach the next generation to prepare a workforce for the future.

Name: **Margarita Barco**
Hometown: **Lasara, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Sophomore**
Major: **Animal Science**
Expected date
of graduation: **May 2016**
Degree: **Bachelor's of Science-Animal Science**
USDA Agency
of interest: **Animal and Plant Health Inspection Service APHIS**
Email: **m_b189@txstate.edu**

Career experience/location: This is my first year being part of this great opportunity but I do have some background experience working with animals.

Description of career experience (what I learned): I've volunteered at an animal hospital and I gained experience in the veterinary field. I learned about specific vaccinations, how a practice is run, and much more.

What is your perception of agriculture now: I believe the agriculture is a very important aspect of the country. It provides us with many of our needs such as food, clothing, and more.

How has this career experience broadened your employment opportunities: It gave me a possible idea of what my future employment opportunities might entail. I'll know if this is the career for me.

Career and research aspirations: In 10 years I see myself finished with all my schooling and working with animal hospital or possibly with the USDA in the Animal and Plant Health Inspection Service as a veterinarian in both.

Skill Set: -Computer skills

The impact of my career experience: If I hadn't volunteered here then I might have studied this type of science, graduated with a degree, and on my first day I might have end up disliking my job. But with the experience I have I known that this is something I see myself doing some day. I possibly see myself one day working with the USDA in the APHIS agency as a veterinarian.



I believe the agriculture is a very important aspect of the country. It provides us with many of our needs such as food, clothing, and more.

Name: **Alyssa Victoria Carrera**
Hometown: **Mission, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Animal Science**
Expected date of graduation: **May 2015**
Degree: **Bachelor's of Science**
USDA Agency of interest: **Animal and Plant Health Inspection Service APHIS**
Email: **avc1@txstate.edu**



Career experience/location: I have not yet acquired an internship with the USDA, but am currently seeking opportunities all over the United States.

Description of career experience (what I learned): What I have learned from the experiences that I have gained through the USDA FATE program is that opportunities are out there for minorities, and all it takes is determination and motivation to get you where you want to be.

What is your perception of agriculture now: Agriculture is a growing industry and vital on a global scale, the advancements that are being developed within the health care fields are a result of the research that is taking place in the labs and field of agriculture.

How has this career experience broadened your employment opportunities: Ultimately, networking has been a valuable experience from this program. I have had the great fortune to meet many respectable people within the USDA as well as other agencies. Being able to communicate with someone and be unique enough to have them remember who you are a tremendous skill to have when job searching. I have had the pleasure of exchanging emails with potential employers for this upcoming summer.

Career and research aspirations: In the next five years my goal is to attain a job within the agriculture industry after attending graduate school where I will pursue my master's degree. Ideally I will have started a career with the United States Department of Agriculture or Texas Department of Agriculture, and I am willing to relocate. A long term goal of mine is to work closely with the USDA conducting research on various diseases. I would love the opportunity to visit the Animal Disease Center, and witness the research that is being conducted on the various diseases that are currently on Plum Island.

Skill Set: -Computer skills -animal vaccinations -customer service
-technical writing -fluent in Spanish -mathematically skilled -health science background

Agriculture is a growing industry and vital on a global scale, the advancements that are being developed within the health care fields are a result of the research that is taking place in the labs and field of agriculture.

The impact of my career experience: While I have not yet attained an internship with the USDA I am certain that the experience will definitely shape the decision that I make in continuing my education as well as deciding which agency I would like to work with. The experiences that I have gained through the USDA FATE program at Texas State University along with the classes that I have taken have strengthened my desire to work with animal health issues in the future. I have received certification in agroterrorism and feel that this will also help my resume and help set me apart from other individuals whom I will be competing against for career opportunities. Making good connections with everyone you meet is also a valuable lesson that I have learned through the many conferences that I have attended since the start of my participation in the program. While I hope to diversify my experience and education through my graduate studies I hope to find the right fit with the agency that I will be working for in the future.

Name: **Jose Miguel Castro**
Hometown: **Laredo, Texas**
Institution: **Texas State University**
Campus: **Main Campus**
Rank: **Junior**
Major: **Biochemistry and Applied Mathematics**
Expected date of graduation: **May 2015**
Degree: **Bachelor of Science**
USDA Agency of interest: **NASS, NIFA, NFC, FSIS, ARS**
Email: **jmc243@txstate.edu**



Career experience/location: In the summer 2013, I worked doing research at Texas State University's first REU (Research Experience for Undergraduates) program in a Biochemistry Lab directed by Dr. Watkins.

Description of career experience (what I learned): I studied how microorganisms with the help of enzymes are capable of extracting sulfur from crude oil cycloculfuric compounds and how this happens. This technique can be used in today's petroleum refinery process to reduce world pollution. I learned biochemical techniques (purification and protein assays, Bradford's, enzyme kinetics). I acquired more knowledge to my chemistry/biochemistry background. Through the program, I assisted with different workshops (GRE classes, Applications in Industry, Ethics in research, and more). I also did a seminar in Business Plan Entrepreneurship. We visited some companies around Austin, Gonzalez and San Antonio that are related to our field of study.

What is your perception of agriculture now: I used to think of agriculture as just the field with crops and harvesting. Now I know that this is just one part of it. Even though the research that I still work on does not have a direct application towards agriculture, I know it helps to reduce contaminants that can affect crops, animal and people that work in agriculture. Everything and everyone is connected.

This experience helped me to create networks with different students that worked in the REU, as well as instructors and scientists that work in companies related to my field

How has this career experience broadened your employment opportunities: This experience helped me to create networks with different students that worked in the REU, as well as instructors and scientists that work in companies related to my field. These connections give me a chance of having an opportunity to work in the future. In addition, the experience gave me another route that I could follow: research. There are infinitely many areas to do research in that will help humanity. Helping others is my number one priority.

Career and research aspirations: My current career aspirations are to graduate with a BS in Biochemistry and applied Mathematics from Texas State University. Meanwhile to be accepted in the University of North Texas OD program in which I will become an Osteopathic Doctor specialized in OB/GYN. Then I will work in a Texas hospital and probably become an Instructor in a major university. I want to give back to my community. The best ways I can think of doing it is by being a doctor and a helpful professor.

Skill Set: -Biochemical techniques (assays, SDS-page, ion exchange chromatography, buffers, etc.) -leadership abilities -entrepreneurship skills -computer skills -tutor skills (science, math) -communication skills -networking skills

The impact of my career experience: The research I did over the summer helped me to experience other opportunities related to my field. I have considered doing research in a biochemical/mathematical area (example the probabilities of methylation on the DNA). In addition on going to med school, I have considered applying to a PhD/OD program in order to continue doing research but in a medical area. Either way I will help people. In the long term, I see myself as a good professor/OB/GYN that will participate in conferences, work at a hospital, at a university and in nonprofit organizations that help Hispanics become better citizens.

Name: **Stephanie Chapa**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Campus: **San Marcos Campus**
Rank: **Junior**
Major: **Animal Science**
Expected date
of graduation: **May 2015**
Degree: **Bachelor**
USDA Agency
of interest: **APHIS**
Email: **snc4@txstate.edu**

Career experience/location: The recent career experience I have done is a Job Shadowing position within the Food Safety and Inspection Service. The job shadowing position took place at the Dallas District in Texas. I participated in this program for 3 weeks during the summer of 2013.

Description of career experience (what I learned): My job entailed observing an Enforcement Inspection Analysis Officer and what they did on a daily basis. An Enforcement Inspection Analysis Officer is someone who goes to different slaughter and processing plants and makes sure the employees at the facility are following their guidelines for their facility. I also was able to observe different veterinarians and inspectors at slaughter and processing plants around the Dallas area. I observed veterinarians and inspectors move through the facilities and thoroughly check each part of the animal being slaughtered making sure it was acceptable for human consumption.

What is your perception of agriculture now: After participating in this job shadowing position, my perception on agriculture widened with more interest. I was intrigued about everything that went on at the slaughter plants I went to.

How has this career experience broadened your employment opportunities: This experience reassured me that I for sure want to pursue a job in Agriculture in a future career. Just being in the environment showed me it is something I am really interested in. I know for sure that being around animals is something I want to do.

Career and research aspirations: Currently my goals are to complete my Bachelor's Degree in Animal Science. After that I want to go to graduate school and continue my studies in Animal Science. Continuing after graduate school I want to go to Veterinary School, not sure yet which one yet, whether it's at Texas A&M University or an out of state school. After all the school is done and I am a veterinarian I want to open my own practice with both small and large animal.

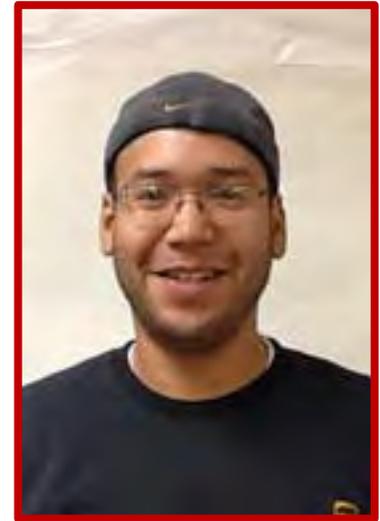
Skill Set: - Computer skills -lab work

The impact of my career experience: With the little career experience I've had, I am sure that a career in agriculture, working with animals is something I want to do. Maybe not specifically working in a slaughter facility, but definitely working in a practice whether it is my own or someone else's. I have not decided whether I want to do just small animals or just large animals or both, but being that I did work with large animal this summer, large animal is an option I am considering. Also with working for the government in FSIS, that has opened my options for future work with the government in a permanent job.



After participating in this job shadowing position, my perception on agriculture widened with more interest. I was intrigued about everything that went on at the slaughter plants I went to.

Name: **Jacob Chavez**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Environmental Science**
Expected date
of graduation: **Fall 2015**
Degree: **Bachelor of Science**
USDA Agency
of interest: **US Forest Service USFS**
Email: **j_c432@txstate.edu**



Career experience/location: Unfortunately, I did not get to work or intern within the USDA but I did work over the summer for a wholesale plant nursery called Color Star Growers out of San Antonio. There I designed, set up, and maintained displays for local department store garden centers.

Description of career experience (what I learned): During my time with the company, of which I am currently still employed, I regularly set up and break down displays according to the flowers that are in season. Also, I had some managerial experience with some temporary workers within the company. I learned how to make arrangements of all types of annual and perennial plants and shrubs, and how to care for the individual species of flowers.

What is your perception of agriculture now: My understanding of agriculture nowadays is more broadened since being a part of the program. Now I know that everyone and anyone is involved with agriculture, from the clothes we wear to the food we eat. Every aspect of my major revolves around agriculture in some way. I know now that it is a vital area of study and living that we all need to understand.

How has this career experience broadened your employment opportunities: I'm not too sure if the job I have now is going to prepare me for my future career but it definitely helped me with getting some extra experience in horticulture, which is my minor. Also, I did get some managing experience while working so that will be a plus when trying to find a job later.

Career and research aspirations: My current goals are to finish up school and hopefully go on to graduate school. As far as having a career after school, that seems to be up in the air still. While there are different options that I consider for work, it is hard to say exactly where I will fall. It is also hard to foresee the future, but I will probably be self-employed and doing tons of field research on different plants and environmental issues.

My understanding of agriculture nowadays is more broadened since being a part of the program. Now I know that everyone and anyone is involved with agriculture, from the clothes we wear to the food we eat. Every aspect of my major revolves around agriculture in some way. I know now that it is a vital area of study and living that we all need to understand.

Skill Set: -GIS knowledge -computer skills -plant identification -pest control -communication skills -leadership -landscape design -nursery operations

The impact of my career experience: I have no career at the moment, but the job I do have will probably not benefit me much in the future. I would most likely prefer to gain some experience in one of the areas of the USDA. I believe that with that experience I could be better prepared for my future goals. Also, my education is effected because there will be classes that need to be taken that will serve to benefit the career path of my choice. My experience did impact my view of what I want to be doing in the future. My work was more of a merchandising position, but my aspirations are to be out in nature, researching and experiencing it first-hand.

Name: **Sergio de Leon**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Senior**
Major: **Nutrition and Foods with a minor in Agriculture**
Expected date of graduation: **May 2014**
Degree: **Bachelor in Applied Arts**
USDA Agency of interest: **Food Safety and Inspection Service FSIS**
Email: **sjd39@txstate.edu**

Career experience/location: I have not, as of yet, had to opportunity to be a part of an internship with the USDA. However, I was able to travel to Washington DC and New Mexico on behalf of the USDA FATE program.

Description of career experience (what I learned): Visiting Las Cruces, New Mexico and our nation's capital was a great learning experience. I was able to view the federal side of our diverse agriculture industry in Washington DC along with the everyday hands-on and hardworking approach in New Mexico.



What is your perception of agriculture now: Agriculture has always been one of the most important industries in the United States but it is often overlooked. It is the main proponent for all of our consumer products and with further development it will continue to improve our way of life.

How has this career experience broadened your employment opportunities: My experiences in being a part of the FATE program have been extremely beneficial. I have been able to setup network ties with individuals that have the same aspirations as myself. This experience has given me the means to further expand my capabilities in achieving my goal.

Career and research aspirations: My goal is be involved in developing an inner city/urban agriculture program for the city of San Antonio, Texas. This type of program will hopefully teach the community about how important it is to consume wholesome nutritionally dense foods and also how agriculture is a huge contributor to our everyday lives.

Skill Set: -Computer skills -communication skills -technical literacy -military experience -correctional officer background -research skills -nutritional background -laboratory techniques -fluent in Spanish

Agriculture has always been one of the most important industries in the United States but it is often overlooked. It is the main proponent for all of our consumer products and with further development it will continue to improve our way of life.

The impact of my career experience: Although I have not attained an internship through the USDA or other federal agencies, being involved with the FATE program has giving me a foundation that I can build upon. Being associated with the FATE program will show future employers about my dedication to the agriculture industry and how I can be a major contributor to their organization. My involvement with the program and my educational background will give me the credibility that many other people may not have. This opportunity has certainly been a privilege and has given me the chance to continue with my education. The training in agroterrorism, the trip to New Mexico and visiting Washington DC has encouraged me to continue pursuing my goal. My long term objective is to be involved in the agriculture world by working on inner city agriculture programs and developing ways to educate my community on the benefits of eating healthy. These recent travels and opportunities will equip me with lifelong experience that I will apply to my everyday life.

Name: **Christina Ditson**
Hometown: **Spring, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Freshmen**
Major: **Agriculture Education**
Expected date
of graduation: **May 2017**
Degree: **Bachelor's**
USDA Agency
of interest: **Department of Agriculture USDA**
Email: **Crd67@txstate.edu**

Career experience/location: This is my first year participating with the Grant and so I have not completed an internship of any kind yet.

Description of career experience (what I learned): I have not had the opportunity to learn from an internship at this time.

What is your perception of agriculture now: My perception of Agriculture has been expanded greatly since I joined the program. It has been made apparent to me that there are so many more aspects that Agriculture is the base of than I had previously thought.

How has this career experience broadened your employment opportunities: This experience has influenced my future employment already because it has given me a better understanding of Agriculture and in doing so it showed me there is more to teach than just how to raise an animal for slaughter. This experience will help me make connections with people already working in my field and allow me to gain my own experience.

Career and research aspirations: My career aspirations include graduating from Texas State University with a Master's degree in Agriculture Education and then working at a high school level as an Ag teacher as well and an FFA advisor. In 5 years, I still see myself in school studying to obtain my Master's degree. In 10 years I see myself working my way up to the head agriculture teacher in my school of choice.

Skill Set: -Computer skills -general animal technical skills -money handling skills -reception skills

The impact of my career experience: My career experience has impacted my future education by showing me that I need to be the best of the best and in doing so I need the best of the best education. It has shown me that future employment will get more and more competitive as the time goes on and in order to keep up I must make sure I have everything necessary and anything that would make me better. The experience I have has impacted my long term goals because it has really taught me how great of an impact Agriculture teachers and advisors have on young adults. I want to be even better than those who have helped me get to where I am today.



My perception of Agriculture has been expanded greatly since I joined the program. It has been made apparent to me that there are so many more aspects that Agriculture is the base of than I had previously thought.

Name: **Abraham S. Garcia**
Hometown: **Laredo, Texas**
Institution: **Agriculture**
Campus: **Texas State University**
Rank: **Senior**
Major: **General Agriculture**
Expected date of graduation: **December 2014**
Degree: **Bachelor's of Applied Science - Agriculture**
USDA Agency of interest: **NRCS**
Email: **asg45@txstate.edu**

Career experience/location: My internship was with Texas Department of Agriculture in Austin, Texas. The division I worked for was Agriculture Consumer Protection.

Description of career experience (what I learned): I communicated with supervisors and coworkers asking if what I was doing was correct or if anything needed to be done. It improved me by using my words efficiently. I improved with Microsoft Word, Excel, and PowerPoint.

What is your perception of agriculture now: I learned that Agriculture is more than just being a farmer, it is about feeding and clothing the world.

How has this career experience broadened your employment opportunities: Having an internship with state government has opened many doors to future employment opportunities. This experience has given me more knowledge about agriculture and what is required besides the basics.

Career and research aspirations: My current aspirations would be to graduate with my Bachelors and be in a state or federal government position under the department of agriculture. My future will be attempting to or already have obtained my master's and PhD while continuing to pursue a career in agriculture.

Skill Set: -Computer skills -basic welding skills -punctuality -plant management -computer construction -basic carpentry skills

The impact of my career experience: I want to learn more because after my internship, I feel like I have only scratched the surface on the knowledge offered. I never understood the importance of an education until after the internship. Communicating with everybody at my internship showed me that without it, obtaining the internship would have been close to impossible. I want to be able to work with state or federal government, they offer so many benefits to employers and with this internship it is a step closer to that possibility. I want to improve my grades, communication skills, and Spanish, I want to improve on as much as I can within a reasonable amount of time.



I learned that Agriculture is more than just being a farmer, it is about feeding and clothing the world.

Name: **Daisy S. Garcia**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Campus: **San Marcos, Texas**
Rank: **Junior**
Major: **Agriculture & Animal Science**
Expected date
of graduation: **May 2015**
Degree: **Bachelor of Science in Agriculture**
USDA Agency
of interest: **APHIS**
Email: **dsg39@txstate.edu**

Career experience/location: This summer I participated as a Herd Leader in the Texas Brigades-Buckskin Brigade in Uvalde, Texas at the Southern Star Ranch.

Description of career experience (what I learned): From those volunteering their time at the camp I learned what kind of person I want to be. They taught us about the whitetail deer, shared their stories about mistakes and triumphs. They gave their time and knowledge so that we could learn something new and didn't ask for anything in return. I know that they are the kind of person I want to be.

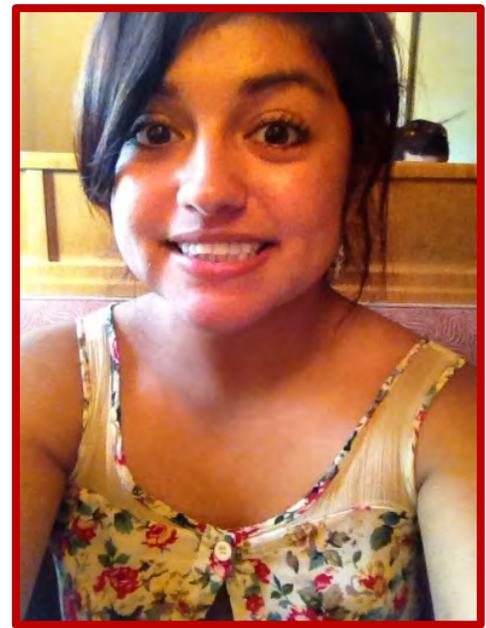
What is your perception of agriculture now: I am more aware of the many ways to be involved in Agriculture, and am even more excited with all of the possibilities.

How has this career experience broadened your employment opportunities: I have a much more clear understanding of what I am interested in and would like to pursue. I would like to pursue employment with an agency/company that has the opportunity to help youth grow and learn about Agriculture.

Career and research aspirations: At present time I am not quite sure where I am headed, but I do know I am working towards a degree in Agriculture. In 5 year I hope to have my degree and have started a career with the USDA. In 10 years, I hope to have the opportunity to be set with a career and along with it have a family of my own.

Skill Set: -Interpersonal skills -communication skills -personal development -compassionate -tolerant -adaptable -flexible -practical -active listener -problem solver -helpful -thoughtful -independent -positive -committed -loyal -computer skills -organization -bilingual -multitask -good attitude -being drug free -willingness to learn -safety -eye contact -cooperation -good personal appearance -valuing education -valuing people

The impact of my career experience: Depending on the experience in my career, everything in my future will change in one way or another. So far my experience with the USDA and Agriculture have been very positive and because of it, I believe my future-with education, employment, career and long term goals will be involved with Agriculture. Although I know I will come across negative experiences, as I have, I will choose to take it with a grain of salt, especially if they are negative-degrading comments. I cannot let someone's thoughts change the way I see things if they are not necessary. I will try my best to become better because of them and just strive to get the best experience possible and learn from situations that may come.



I am more aware of the many ways to be involved in Agriculture, and am even more excited with all of the possibilities.

Name: **Jessica Garcia**
Hometown: **League City, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Sophomore**
Major: **Biology**
Expected date of graduation: **May 2016**
Degree: **Biology**
USDA Agency of interest: **Agriculture Research Services ARS, US Forest Services USFS**
Email: **jdg105@txstate.edu**

Career experience/location: This is my first year in this USDA program and I have not participated in an internship.

Description of career experience (what I learned): I have not completed an internship so I have not had the experience to learn from one thus far.

What is your perception of agriculture now: My perception of Agriculture is that it is a vast field of study that offers a great amount of job opportunities.

How has this career experience broadened your employment opportunities: This experience has opened my eyes to many job opportunities in agricultural industries. It has also helped me meet new people that could potentially help me make connections to people working in fields of agriculture that I find interesting which may help me to gain experience for future job opportunities.

Career and research aspirations: My career aspirations are comprised of applying to veterinary school, graduating Texas State University with a Bachelor's in biology in spring 2016 and then attending veterinary school for four years, pursuing small or exotic animal medicine. In five years I see myself attending veterinary school. Ten years from now I hope to be a veterinarian working on exotic or small animals.

Skill Set: -Money handling -reception capabilities -computer skills -animal handling

The impact of my career experience: I have not yet had the opportunity to complete an internship because this is my first year being a part of the program.



My perception of Agriculture is that it is a vast field of study that offers a great amount of job opportunities.

Name: **Richard M. Garza**
Hometown: **Rio Grande City, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Aquatic Biology**
Expected Date
of graduation: **May 2016**
Degree: **Bachelor's**
USDA Agency
of interest: **Animal and Plant Health Inspection Service APHIS**
Email: **mg86@txstate.edu**

Career experience/location: I work at the University Farm and Greenhouse.

Description of career experience (what I learned): I am new to this program and have not had a career experience yet.

What is your perception of agriculture now: My perception of agriculture is that it's a very important to provide a sustainable life.

How has this career experience broadened your employment opportunities: I am new to this program and have not had a career experience yet.

Career and research aspirations: I strive to receive my BS in Aquatic Biology with a double major in photography, along with a minor in chemistry. I would love to work with USDA to see on how I can bring something not so common to the table and apply out in the field. After I graduate at Texas State, I want to get a job for a while and go back to school to get a degree in Marine Biology. My dream is to become a National Geographic photographer for underwater pictures.

Skill Set: -Friendly -works well with others -computer skills
-photographer -hard-worker -food with technology -exemplary
speech skills



My perception of agriculture is that it's a very important to provide a sustainable life.

The impact of my career experience: I am new to this program and have not had a career experience yet.

Name: **Elizabeth Gomez**
Hometown: **Pearland, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Sophomore**
Major: **Animal Science**
Expected date
of graduation: **May 2015**
Degree: **Bachelor's in Agricultural- Animal Science**
USDA Agency
of interest: **Animal and Plant Health Inspection Service APHIS**
Email: **eg1328@txstate.edu**

Career experience/location: I currently have no career experience with an internship

Description of career experience (what I learned): I have no career experience yet but I do hope to learn more about the programs that the USDA oversees and how I as a person can help animals. I also hope to learn what type of career I truly like to be in.

What is your perception of agriculture now: My perception is that agriculture is monitored by the USDA by different agencies and each agencies controls different aspect of agriculture that keeps animals, plants and humans healthy.

How has this career experience broadened your employment opportunities: Since I don't have any career experiences yet my employment opportunities has not be broadened.

Career and research aspirations: My career and research aspiration is to see myself working with animals and to possibly work for the USDA or at an animal clinic. I would also like to do some type of research that can continue improving the health of animals.

Skill Set: -Leadership -task orientated -determination -works well under stress -organization -works well with others -time management -dependable -creativity -multitasker -computer skills

The impact of my career experience: Though I don't have any career experiences yet and when I complete an internship I hope it impacts me in a positive way. I hope it encourages me to continue a career in animal science and helps me decided what I want my career to be. I also hope its impacts me by the knowledge I will gain and the new things I will be able to know how to do.



My perception is that agriculture is monitored by the USDA by different agencies and each agencies controls different aspect of agriculture that keeps animals, plants and humans healthy.

Name: **Magaly Gomez**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Sophomore**
Major: **Agribusiness Management-Horticulture**
Expected date
of graduation: **May 2015**
Degree: **BS Agribusiness Management - Horticulture**
USDA Agency
of interest: **Natural Resource Conservation Service NRCS**
Email: **m_g12@txstate.edu**

Career experience/location: I was a student intern at NRCS in Hays County, Texas.

Description of career experience (what I learned): At NRCS I learned about what the agency does. I was also taught how to use the GPS system and how to make maps from data collected.

What is your perception of agriculture now: Before coming to Texas State I had no background in agriculture but now that I have studied agriculture and have had a chance to go out into an agricultural field, I understand that agriculture is a huge part of everyday life.

How has this career experience broadened your employment opportunities: By interning with NRCS I have learned that the agency is probably not a place I would like to work for in the future, but the experience taught me a lot about what it takes to make it in the professional world.

Career and research aspirations: In the future I would like to start a career as a botanical garden manager and hopefully be able to do research in that setting. Another goal of mine would be to work as a Forest Service park ranger.

Skill Set: -Taking GPS points -making maps based on GPS points
-surveying -Microsoft Excel -Microsoft Word -propagation of seeds
-propagation of cuttings -making fresh flower arrangements

The impact of my career experience: My experience with NRCS was a great one, I was exposed to the Agricultural world in a way that I would not have been able to if I hadn't done the internship. I learned that the agency may not be where I would like to start a career but that it serves a great purpose by helping people preserve their land. By participating in an internship with NRCS, it was confirmed to me that I chose a major with a lot of potential career paths but the experience also let me realize that a variation in my education might help me by opening up my options a bit more. I might decide to declare a minor in geography and/or pursue teaching certifications. Overall I am very happy to have interned with NRCS and hope to apply to other internships with the USDA as well as with public gardens which are my primary interest.



Before coming to Texas State I had no background in agriculture but now that I have studied agriculture and have had a chance to go out into an agricultural field, I understand that AG is a huge part of everyday life.

Name: **Jessica Gonzalez**
Hometown: **Schertz, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Senior**
Major: **Agriculture Business and Management – Specialization: Horticulture**
Expected date of graduation: **May 2014**
Degree: **Bachelor of Science in Agriculture**
USDA Agency of interest: **APHIS**
Email: **jg1878@txstate.edu**

Career experience/location: I did a job shadow for FSIS in the summer of 2013 at Holmes Food in Nixon, Texas.

Description of career experience (what I learned): I shadowed line inspectors, CSI's and the veterinarian at this facility. When working with the line inspectors I was shown the technique for looking in the chicken carcasses and viscera's, what they are looking for, and what to do with the birds if they are not up to par.

What is your perception of agriculture now: Everything about our lives revolves around agriculture and without it we would not be able to survive. From getting dressed, eating, getting to work and so much more deals with agriculture.

How has this career experience broadened your employment opportunities: I really enjoyed my time working with FSIS and I know I would like to pursue a job working for the USDA after graduation.



Career and research aspirations: I am currently working for a veterinary clinic and I have been there for 7 years. After graduation I would like to apply for a job working for the USDA and I am willing to move to achieve this. I would not mind working for any of the departments of the USDA but my goal is to have a job with APHIS. I want to make this my permanent job that I will one day retire from.

Skill Set: -Computer skills -customer service skills -horticulture knowledge -animal knowledge -animal husbandry -various medical knowledge -teamwork -adaptable -communicates well -writing skills -willingness to learn -flexible

The impact of my career experience: I only had two weeks of job shadowing with FSIS but it was an amazing two weeks. I learned so much about processing that I was oblivious to before this experience. I knew that all of our meat was inspected but I was unaware to what extent. I am very thankful for the men and women that do this job every day to make sure we are consuming healthy food products. I had the opportunity to visit other facilities that FSIS inspectors work at and see the different levels of inspectors. I shadowed inspectors at a chicken plant, beef cattle plant, egg processing plant, and a facility that makes and ships the finished products for us to consume. I witnessed everything from inspectors actually inspecting the carcasses, animal parts, temperatures of meat, clean facilities, appropriate packaging and labeling, to the vehicles our products are shipped in. This has opened my eyes to what all the USDA does and this was just one department within the USDA. I always knew about the USDA but I had no idea how large they are and all the different departments that it is made up of until I had this wonderful experience with my scholarship opportunity. After all the information we have been given and taught during this experience and the opportunity to have a job shadow with the USDA I now know for fact I want to work for this agency. I want to serve the people of the United States and insure their safety when it comes to the foods we consume.

Everything about our lives revolves around agriculture and without it we would not be able to survive. From getting dressed, eating, getting to work and so much more deals with agriculture.

Name: **Jewel Roselle Graw**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Senior**
Major: **Wildlife Biology**
Expected date
of graduation: **May 2016**
Degree: **Bachelor of Science**
USDA Agency
of interest: **US Forest Service USFS**
Email: **jrg187@txstate.edu**

Career experience/location: I had a HACU internship within the U.S. Forest Service in Logan, Utah.

Description of career experience (what I learned): From my experience with the US Forest Service, I gained an extensive amount of knowledge about wildlife and the broad range of areas the US Forest Service covers in order to maintain a balance between the public's needs as well as the conservation of nature.

What is your perception of agriculture now: Since my participation into this program, my perception of agriculture has broadened in that I now realize the impact agriculture has in everyone's life.

How has this career experience broadened your employment opportunities: This career experience has provided important knowledge and skills about the maintainability of wildlife in regards to their environment and has persuaded me to help conserve these species within my future career.



Career and research aspirations: In 5 years, I see myself continuing my education as a graduate student taking part in a wildlife research program to further specialize myself in my field. In 10 years, I intend to participate in a field research team and take on projects that relate to the conservation of wildlife as well as opportunities that involve studying animal behavior and their ecology.

Skill Set: -Conducting wildlife surveys -observing and recording data -data entering -data interpretation -GPS usage -GPS coordinate entering -use of a dichotomous identification key -use of a backpack electroshocker

The impact of my career experience: The knowledge and experience that I obtained from this internship helped me narrow down my options to decide what specific career path to take, thus impacting the educational path that I would need to follow in order to reach my career goals. As far as employment, this internship experience helped me possibly secure a federal job within the US Forest Service in the future or a federal position in this field in general; therefore I am very grateful to be given this opportunity. If not a federal position then a job that would be more related to my field of interest. This experience has also built my confidence in following the right career path that corresponds to my interests such as taking part in a conservation program and assist in educating the public about awareness and how to respect wildlife as well as their boundaries. Overall, it has given me knowledge to pursue my long term objectives of opening a wildlife rehabilitation center and obtaining a teaching degree in child education to teach the incoming generation about how remarkable and astonishing nature's wildlife can be all while demonstrating the importance of the preservation of wildlife.

From my experience with the US Forest Service, I gained an extensive amount of knowledge about wildlife and the broad range of areas the US Forest Service covers in order to maintain a balance between the public's needs as well as the conservation of nature.

Name: **Marcus F. Guerra**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Environmental Science**
Expected date
Of graduation: **Fall of 2014**
Degree: **Bachelor's of Liberal Arts**
USDA Agency
of interest: **Natural Resource Conservation Service NRCS**
Email: **mfg24@tx.state.edu**

Career experience/location: For ten weeks I shadowed the owner of Sandy Oaks Olive Orchard. I experienced all phases of the operation from planting olive trees to olive oil extraction.

Description of career experience (what I learned): The experience I gained over the course was more than I expected. From my previous experience with heavy machinery and power tools I was able to work efficiently throughout the orchard. Working with experienced olive tree consultants from other countries was the best education I could have asked for in this industry.

What is your perception of agriculture now: From my recent experience, I can understand how important education in agriculture is needed. Knowing what I have learned at Texas State made the difference from me and others.

How has this career experience broadened your employment opportunities: After the tenth week when I finished my contract, I was offered a permanent position at Sandy Oaks. Experience and friends I have made in this field has opened many opportunities for me. This venue not only introduced me to something new but, created a new interest for myself.



Career and research aspirations: My original plan is still true to work for the natural resource conservation service. Since nothing in life is guaranteed I have made several inquiries with similar services. In 5 years, I see myself employed within the field of agriculture. In 10 years, I see myself established and feeling rewarded.

Skill Set: -Project management -computer skills -telecommunications -mapping -fiber optics -lab safety -soil sampling techniques -soil conditioning techniques -environmental resource conservation -heavy machinery -carpentry -light welding -auto mechanics -light electrical -plumbing

The impact of my career experience: When I was in high school, a college education was not encouraged by my teachers. They made me feel as if it was my duty to just finish school and get a job. Which I did and learned the hard way. I worked hard to get to a project management position for a company. I had put many long hours in and dedicated myself to learning all that was needed, until I was offered a position as a regional manager. However, it was taken away when they found out I had no college education. I was out of a job and basically starting over in another field since telecommunications was all I had done since high school. When I started Palo Alto College it was clear what I wanted to focus my future on. I studied environmental science where I found a new passion. Today I am a junior at Texas State University and concentrating on my options which have been presented to me by the FATE scholarship. The direction I am leading to will continue to unfold new opportunities with many possibilities for a rewarding career along the way.

From my recent experience, I can understand how important education in agriculture is needed. Knowing what I have learned at Texas State made the difference from me and others.

Name: **Manuel Juarez Jr.**
Hometown: **Laredo, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Sophomore**
Major: **Agriculture**
Expected date
of graduation: **June 2016**
Degree: **Agriculture**
USDA Agency
of interest: **USDA**
Email: **soccer_mej@yahoo.com**

Career experience/location: I have yet to have had an internship experience, however, in January, 2013, I was fortunate enough to attend an agriculture security training in New Mexico and receive a certificate of completion.

Description of career experience (what I learned): My experience in New Mexico with the Southwest Border Food Safety & Defense Center was a very educational and rewarding one. I was able to visit many interesting agricultural places like the Santa Teresa Cattle Crossing, a dairy farm and a cheese factory as well.

What is your perception of agriculture now: I believe that there is room for positive changes in the agricultural industry and I want to help make these improvements and developments happen.

How has this career experience broadened your employment opportunities: The agriculture security training exposed me to a lot of information and experience concerning food safety and our food supply. I will remember to apply the knowledge and skills learned to my own agricultural goals in the future.



Career and research aspirations: I have been fortunate enough to have grown up on my family's ranch, where my ancestors before me grew their own food. I hope to return there after gaining all of the knowledge that comes with an agriculture degree to grow fresh fruits and vegetables and make the land viable and fertile again. After harvesting my produce, I plan to sell to local grocery stores, restaurants, and farmer's markets as well as donate to shelters like Bethany's House who feed the homeless and the hungry.

Skill Set: -Computer skills -communication skills

The impact of my career experience: My time at the Southwest Border Food Safety & Defense Center agriculture security training in New Mexico was a great learning experience. I learned a lot from a group of very diverse and knowledgeable people involved in various aspects of the agriculture industry that guided and spoke to us. This great experience really got me excited about continuing to pursue my education and a degree in agriculture from Texas State and my plans for the future as well. I hope to return to my family's ranch after gaining all of the knowledge that comes with an agriculture degree to grow fresh fruits and vegetables and make the land viable again. I also want to work with a method of farming called aqua-ponics, which consists of plants and fish thriving together while cleaning and recycling the water used for each other. After harvesting produce, I plan to sell to local grocery stores, restaurants, and farmer's markets as well as donate to shelters like Bethany's House who help the homeless and the hungry so that I can give back to my community. To return to the ranch equipped with the very useful and important knowledge that comes with an agriculture degree, return the land to a viable and fertile state, successfully harvest my own fresh fruits, vegetables, and fish, and provide my community with fresh locally grown produce, would be a most fulfilling accomplishment and would be a dream come true for me.

The agriculture security training exposed me to a lot of information and experience concerning food safety and our food supply. I will remember to apply the knowledge and skills learned to my own agricultural goals in the future.

Name: **Marcella Juarez**
Hometown: **Laredo, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Sophomore**
Major: **General Agriculture/Teacher Certification**
Expected date
of graduation: **May 2015**
Degree: **General Agriculture**
USDA Agency
of interest: **Agriculture USDA**
Email: **fifa_mij@yahoo.com**



Career experience/location: I am currently looking for internships in the department of agriculture. I have applied to different internships to Agricultural Research Service and others and I am waiting for a response.

Description of career experience (what I learned): Though I have not done an internship, I have learned many new things. I am fortunate enough to have grown up on a ranch and to have had many hands-on experiences throughout my childhood. I have handled and vaccinated cattle. I have also has the opportunity to learn more about the different opportunities through the USDA. I have also enjoyed the different classes here at Texas State. I am learning a lot of beneficial information that will be useful to me in the real world after college.

What is your perception of agriculture now: My perspective of agriculture has expanded. I have learned about so many different job opportunities that an agriculture degree offers. I feel very confident and proud to be an agriculture major as I have learned how important agriculture is to everyone. Besides agriculture being so important to everyone it is also what my ancestors did and is a passion of mine.

How has this career experience broadened your employment opportunities: Though I still have not had the opportunity to intern with the USDA, I have learned about how I can become employed by the USDA. There are many employment opportunities out there for me that I feel I could apply for. I now know that there are many other employment opportunities out there that I can attain with agriculture major.

Career and research aspirations: When I look to the future five years from now I see myself growing organic produce and selling to local restaurants and stores there in South Texas. I would also like to donate any unsold produce to the Soup kitchen or Bethany's House. I can also see myself teaching at a high school and hopefully sharing my love for agriculture. In ten years I hope to be established as a business and have a steady basis of customers that will be satisfied with our produce and have a good working relationship with them. I could also see myself continuing to teach but hopefully by the time ten years has passed I will be able to primarily focus on my farming business

Besides agriculture being so important to everyone it is also what my ancestors did and is a passion of mine.

Skill Set: -Computer skills -ranch & farm experience -vaccination experience -trailer driving experience

The impact of my career experience: Again though I have not done an internship, while here at Texas State I have learned a lot about what I can do with a degree in agriculture. I am looking forward to the future classes. I have already learned a lot of beneficial information that I can use towards my future. I hope to be able to use the land owned by my family to produce fresh, organic produce and sell to those in South Texas. I hope to be able to grow and sell fresh produce in an environmentally responsible way that would use less water and have less an impact on the environment. I know that being able to live off a small farm's profits are hard but I am also fortunate to be simultaneous receiving my teacher certification. I come from a long line of teachers and I have always felt that teaching has called my name. I would love to teach others about agriculture and the importance of the connection that is made when you work with the earth. Teaching and agriculture are my passions and I am very excited about the future classes and the experiences that I will bring with me after college. I feel that my college experience is really preparing me for the future and my dreams.

Name: **Abdiel Lopez**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Biology**
Expected date
of graduation: **May 2015**
Degree: **Bachelor's**
USDA Agency
of interest: **USDA Microbiology Lab**
Email: **A_L101@txstate.edu**

Career experience/location: I have been recruited to job shadow in the USDA Fruit & Vegetable Division in Houston, Texas.

Description of career experience: During the time of job shadowing in the USDA Fruit & Vegetable Division, I would be helping buyers and sellers' market their perishable products in the most efficient way possible, but also make sure each produce passes its routine inspections.

What is your perception of agriculture now: Agriculture is not just the practice of growing crop and raising livestock, it goes much more beyond that.

How has this career experience broadened your employment opportunities: This experience has majorly broadened my employment opportunity but not just building relationships with people already working for the USDA, but sharpening my knowledge of agriculture as well.

Career and research aspirations: My future goals and aspirations career wise are: in five years I would like to have my foot in the door with a position in the USDA, but maintain a fluidity to find what I want to do for the rest of my life. In 10 years, I would like to have found my calling in the USDA working in a lab and being in charge of it, loving my job.



Skill Set: -Computer -lab -critical thinking -active listening -decision making -bilingual -communication -interpersonal -organizational -trustworthy -productive -time efficient

The impact of my career experience: The impact of career experience is very important because it allows you to 'test the waters' for jobs in your area of interest. You may think you want to do something for the rest of your life but when you start in the field, you may realize you don't like it as much (or confirm you do). Also getting experience before you find a job gives you not only affirmation, but you go into a job knowing what to expect so you aren't usually "culture shocked" when you enter into your field of interest.

This experience has majorly broadened my employment opportunity but not just building relationships with people already working for the USDA, but sharpening my knowledge of agriculture as well.

Name: **Jennifer Lopez**
Hometown: **Laredo, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Senior**
Major: **Geography-Geographic Information Science**

Expected date of graduation: **May 2014**
Degree: **Bachelor's**
USDA Agency of interest: **US Forest Service USFS**
Email: **jal165@txstate.edu**



Career experience/location: I completed a research experience in San Marcos, Texas with Dr. Ivan Castro of the Texas State University Biology department. As a research assistant I produced location analysis maps of central Texas bridges in terms to land cover and soil type.

Description of career experience (what I learned): This experience helped me sharpen my skills in utilizing ArcMap and Excel as well as how to produce quality research. I was also able to network with students and professors from across the country when I presented my data in Puerto Rico.

What is your perception of agriculture now: There are many facets of agriculture that impact our society today. Before coming to Texas State I had never realized how many different disciplines of study went into organizing our nation's food supply and landscape. Agriculture is not just about farming and ranching!

How has this career experience broadened your employment opportunities: Because of my research experience, I was able to gain an internship outside of the USDA with the City of San Marcos. I believe that the work and dedication I put in during my research experience helped me gain a competitive edge career wise and has allowed me to gain the confidence necessary to network with other individuals in my field of study.

Career and research aspirations: Five years from now, my goal is to have secured employment in either the federal or private sector somewhere in or near Houston, Texas. I am very interested in a job that will allow me to continue gaining knowledge and experience using ArcMap software and will lead to a position in upper level management. I am still open to different career roles and am still searching for the perfect job, but I am confident that with the experience and professional network I have gained, I will find the right one.

Skill Set: -Social/communication skills -sales experience -database management -GPS/data collection -experienced in location analysis & route optimization techniques -statistical analysis techniques -seasoned in use of Access, Excel, Dreamweaver, Adobe Illustrator and ArcMap

The impact of my career experience: My participation in the USDA FATE program as well as the experience I have gained through my research opportunity have motivated me to excel in all of my educational and career endeavors. Prior to my research experience, I was very insecure about my future and had little to no professional background. Thankfully, the work I did with Dr. Castro helped me hone my skills in ArcMap, Access, and Excel and has now helped me do above average work in my upper lever geography courses. I also had the opportunity to network with professionals in my field of study. These individuals have helped me meet my academic goals and helped me gain a better understanding of my future education and career options. I believe that these relationships will boost my competitive edge when begin my search in the job market.

There are many facets of agriculture that impact our society today. I had never realized how many different disciplines of study went into organizing our nation's food supply and landscape. Agriculture is not just about farming and ranching!

Name: **Regino Lopez**
Hometown: **Laredo, Texas**
Institution: **Texas State University Ingram School of Engineering**
Campus: **San Marcos**
Rank: **Sophomore**
Major: **Electrical Engineering**
Expected date of graduation: **May 2016**
Degree: **Bachelor's of Science**
USDA Agency of interest: **Rural Development RD**
Email: **r_1141@txstate.edu**

Career experience/location: I have yet to have an internship, but am excited to complete one.

Description of career experience (what I learned): I have not done an internship and so cannot give a description.

What is your perception of agriculture now: Based on the experience I've had with this program and the stories of those in the program, I'd say agriculture is a very broad subject where a lot of those interested in the interaction between human and animals can find something of interest.

How has this career experience broadened your employment opportunities:

I feel that the experiences my peers in the program share with us are great summaries that bring insight to possible jobs and how you can go about getting one which is a lot of useful information. I have yet to complete an internship, but the speakers we have had the pleasure to listen to have already explained to us what it is they go about doing in their jobs and have also provided volunteer opportunities to those majoring in a certain area.



Career and research aspirations: My career goals have remained to stay in the field of Renewable Energy. Researching the USDA Rural Development site has encouraged me however to look into using my degree to set up electrical grids for rural communities and so I've chosen this as where I want to be in the next 5 years. I see myself in the Renewable Energy field in 10 years respectively.

Skill Set: -Computer skills -C++ programming -basic land management -communication

The impact of my career experience: Researching my career has shown me that knowledge and experience is key to success. The field is competitive but open to those who are willing to go deep into their field. I've decided that means taking an extra class or two in order to sharpen my skills as an engineer and a professional working on the land. The Rural Development site has sparked major interest in me on working on the establishment of electrical frames for communities which I find very cool. As I said before, it is a field I would like to be in before I go to the renewable energy area. Overall, just taking part in the program has shown me so much information which gets me excited for when I actually am able to complete an internship or job shadow.

I'd say agriculture is a very broad subject where a lot of those interested in the interaction between human and animals can find something of interest.

Name: **Anailse Martinez**
Hometown: **Laredo, Texas**
Institution: **Texas State University**
Campus: **San Marcos, Texas**
Rank: **Senior**
Major: **Nutrition and Food Science- Dietetics Track**
Expected date
of graduation: **May, 2014**
Degree: **Bachelor in Nutrition and Food Science**
USDA Agency
of interest: **ARS, CNPP, FNS, FSIS, NIFA**
Email: **a_m304@txstate.edu**

Career experience/location: During my summer I had a research lab experience. In this time I had the opportunity to help one of the professors of the Nutrition and Foods department at Texas State University.

Description of career experience (what I learned): My time in the lab was such a great experience. My professor was an incredible mentor, always willing to help me. Getting used to all the lab requirements and rules at first was hard but very enjoyable. After this summer my professional goals and expectations were much more clear.

What is your perception of agriculture now: I have always thought that Agriculture is something that surrounds us every moment. As Nutrition major I am very interested in what can be improved in food that populations consume and what improvements can be done through research experiments.

How has this career experience broadened your employment opportunities: After this opportunity my first goal is getting into Graduate School. This experience has broadened my horizons and I realize that spending time in a research lab is very enjoyable to me.

Career and research aspirations: In 5 years I see myself with a Master's degree and my Register Dietitian (RD) credential. At that point in my life I would love to work in the community. Working with people is something that I am very passionate about. Spreading my knowledge and experience helping others is one of the nearest goals that I have in my life.

Skill Set: -Nutrition knowledge -computer skills -microbiological techniques -Anatomy and Physiology knowledge -Spanish fluent -Chemistry skills -communication skills

The impact of my career experience: After my experience this summer, my goals have changed immensely. I've decided that getting a Master's degree is something that I certainly need to do. The nearest goal I have before enrolling to grad school is having the opportunity to get an internship. I have the strong idea that things in the field are very different than the way we see it in school. Having that work experience is something that I would really enjoy. Getting my Register Dietitian credential is something that I see in my future achievements, having the opportunity to help communities and diverse populations with my knowledge is something that I would really love doing.



I have always thought that Agriculture is something that surrounds us every moment. As Nutrition major I am very interested in what can be improved in food that populations consume and what improvements can be done through research experiments.

Name: **Jesus Martinez**
Hometown: **Laredo, Texas**
Institution: **Texas State University**
Campus: **Agriculture**
Rank: **Junior**
Major: **Animal Science**
Expected date
of graduation: **May 2015**
Degree: **Agriculture**
USDA Agency
of interest: **APHIS, Texas Parks and Wildlife TPW**
Email: **jom9@txstate.edu**

Career experience/location: Working with the USDA scholarship program and the different variety of programs and internships available has really given me the experience needed to work anywhere within my state lines and even in other parts of the country.

Description of career experience (what I learned): Working with animals is and has been one of the best experiences I have had so far. The hands-on experience really helps out instead of just seeing videos and reading a book. I can really take my experiences and put them to good use in any day life situations. The education program I have been offered can be said to be one of the best in the area.

What is your perception of agriculture now: My perception of agriculture now has changed by far to make it be one of the most important areas of studies available. It isn't all just about cows, sows and plows. So much science, nutrition and disease control knowledge is available to us. We are the most important area in the field of studies. The countries back bone to life.

How has this career experience broadened your employment opportunities: From wanting to be only a veterinarian, I have now seen the thousand life changing opportunities I can take in any other field of study in agriculture or choose one of the hundreds of organizations that the USDA offers. I can now go into organizations that I would have never dreamed of.

Career and research aspirations: In around ten years I see myself working for the federal or state parks and wildlife caring for animals and population indexes making sure none of our animals go extinct for our next generations. I see myself putting natural conservation as my top priority in life.

Skill Set: -Statistical analysis -computer skills -Microsoft Word, Excel, PowerPoint -birth detection in bovine -castration technique of calf



My perception of agriculture now has changed by far to make it be one of the most important areas of studies available. It isn't all just about cows, sows and plows. So much science, nutrition and disease control knowledge is available to us.

The impact of my career experience: My career experiences have broadened from what I originally had. Now my goals for my future have changed for the best. I have so many opportunities I can take, but for now I see myself working for federal or state park and wildlife conservation and protection. I am interested in the protection of white tailed deer and pouching, I know with the experiences I have had so far I can go far in life. Right now I am at my halfway point and with more to learn so my decisions in life can change to any of the USDA organizations available to me.

Name: **Marissa Martinez**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Campus: **San Marcos Campus**
Rank: **Senior**
Major: **Animal Science**
Expected date of graduation: **May 2015**
Degree: **Bachelor's**
USDA Agency of interest: **Animal and Plant Health Inspection Service APHIS**
Email: **mm2151@txstate.edu**



Career experience/location: This past summer, I had an internship at the Wimberley Veterinary Clinic in Wimberley, Texas.

Description of career experience (what I learned): During my internship at the Wimberley Veterinary Clinic, I gained valuable knowledge of the skills and tasks of a veterinarian. I learned how to draw blood from animals, how to assist in surgeries, how to place catheters, and how to groom and wash animals.

What is your perception of agriculture now: Agriculture is very important in the world. In fact, it is the backbone of American society in which all people depend on for many different reasons. Agriculture is a very complex industry from which thousands of commodities are made and manufactured.

How has this career experience broadened your employment opportunities: Having the experience of working at a veterinary clinic has reassured me of my future plans to be a veterinarian. I found so much joy in working at the vet clinic, that I am determined to make it happen.

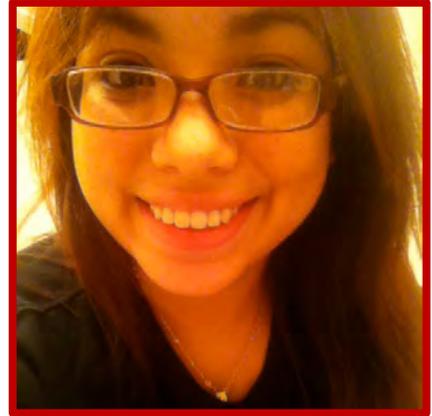
Career and research aspirations: After I finish my undergraduate degree in Animal Science at Texas State University, I see myself going to Texas A&M to pursue a degree in veterinary medicine. Then in about 10 years, I see myself having my own mixed practice clinic somewhere out in the hill country.

Skill Set: -Computer skills -efficient in Microsoft Word, Excel, and PowerPoint -public speaking skills
-customer service skills -strong organizational skills -decision making skills -time management skills -strong work ethic -flexibility

The impact of my career experience: My internship this past summer helped me to reevaluate what I really wanted to do for my future career. Before the experience, I was focused on just doing small animals, such as dogs and cats, but after working at the Wimberley Vet Clinic for the summer I have decided to ultimately open a mixed animal clinic. It's nice working with different types of animals and it was very interesting for the short time I was there. Working with Dr. Sheffield has also reassured me that being a veterinarian is what I really want to do. Working there, it was never the same habitual practice; instead I was always doing something new and increasing my knowledge of the practice of veterinary medicine. I understand being a veterinarian is not an easy task and takes a lot of work and determination, but the outcome is very rewarding and Dr. Sheffield was the first to tell me that it is well worth all the education and hard work. He helped reassure me that owning your own practice is something that can be accomplished if you keep your eye on the prize. He has owned his own practice for quite some time now and he is doing alright for himself. That is what I am striving for ultimately.

Agriculture is very important in the world. In fact, it is the backbone of American society in which all people depend on for many different reasons. Agriculture is a very complex industry from which thousands of commodities are made and manufactured.

Name: **Yessenia Martinez**
Hometown: **Houston, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Animal Science**
Expected date of graduation: **December 2015**
Degree: **Bachelor of Science in Agriculture**
USDA Agency of interest: **Animal and Plant Health Inspection Service APHIS, Natural Resource Conservation Service NRCS, Agricultural Research Service ARS**
Email: **y_m2@txstate.edu**



Career experience/location: I was recently awarded the USDA FATE Grant this past summer and haven't been involved in an internship yet.

Description of career experience (what I learned): Although I haven't been involved in an internship, I have been involved in volunteer work. I volunteered at a food bank back home for a few years and learned that I wanted to change people's lives. I wanted to impact someone's life in a positive way.

What is your perception of agriculture now: I always thought agriculture had to deal with farm and food products but that's not it. Agriculture is an important aspect in society and some people don't realize that. Most of what we do affects agriculture and the outcome. Agriculture affects animal genetics, what we consume, and among other things that I wish people knew. I appreciate agriculture more than I did before based off of what I learned and was taught in my time here at Texas State University.

How has this career experience broadened your employment opportunities: The USDA FATE Grant made my options open to what I would like to pursue as a career. I'm not limited to a few career options. Learning more about Agriculture and how it applies to what I've been learning for my degree, it's starting to all make sense now. I'm able to tie things together that I never thought would be relatable.

Career and research aspirations: I will graduate from Texas State University with a Bachelor's degree in Animal Science. I plan on attending Veterinary School and opening my own practice after I graduate. Another one of my aspirations is doing research with the USDA or research in general with animals. I also thought about teaching and giving back to the community in any way possible.

Skill Set: -Leadership skills -cashier skills -Photoshop CS5 skills -computer skills -multitasking skills -organizational skills

The impact of my career experience: In high school (YES Prep North Central), there were a list of things and acts that reminded me of how I got to where I am in life. "We are all here to make a difference" and "We act in a way that leaves a lasting impression" did impact me in how I approached my education. It's shown me that I need to do whatever it takes to be the best person to make an impact on someone or some animal's life. It will get more difficult as the years pass when I go to veterinary school but it will be worth it. The experiences I will have and the people I network with will give me a nudge to the career I would pursue. I will do what I need to do to make myself happy but also giving back the community with the knowledge I gained.

Agriculture is an important aspect in society and some people don't realize that. Most of what we do affects agriculture and the outcome. Agriculture affects animal genetics, what we consume, and among other things that I wish people knew. I appreciate agriculture more than I did before based off of what I learned and was taught in my time here at Texas State University.

Name: **Shelby Medina**
Hometown: **Laredo, Texas**
Institution: **San Marcos**
Campus: **Texas State University**
Rank: **Junior**
Major: **Animal Science**
Expected Date
of graduation: **December 2015**
Degree: **Bachelor's**
USDA Agency
of interest: **Animal and Plant Health Inspection Service APHIS**
Email: **smm218@txstate.edu**

Career experience/location: I helped volunteer at an animal shelter in Laredo named LAPS (Laredo Animal Protective Society) located at 2500 Gonzalez St Laredo, Texas, 78040. I was a weekly volunteer and had many hours of community service with the shelter.

Description of career experience (what I learned): I learned how to give animal vaccinations with a veterinarian. I learned how to give subcutaneous and intramuscular shots. I learned proper meals for dogs and cats and appropriate exercise that's needed in their daily life.

What is your perception of agriculture now: The agriculture world is more complex than what I had originally thought it would be. Through my participation and experience I see how much it is expanding in knowledge, science and technology, and it will only continue to grow.

How has this career experience broadened your employment opportunities: My experience influenced me to keep on pursuing my education in animal science. Working at a shelter opens up your eyes as you see so many defenseless animals are neglected and you see that they need your help.



Career and research aspirations: In five years I see myself getting into veterinarian school at Texas A&M. I plan on graduating with my doctoral degree and getting my license to become a veterinarian. I plan on opening up my own animal clinic in my hometown.

Skill Set: -Clinical techniques -computer skills -animal handling -chemistry techniques -basic animal care

Skill Set: My past experiences have a huge impact on my goals. My education has been life uplifting as seeing endless possibilities with science and technology. I have always known that I wanted to become a veterinarian, but while working at the shelter it made me realize just how much animals need help. Working at the shelter helped me learn about decision making and learning how to set my goals with an animal. In Laredo there are three veterinarian clinics but all three are very expensive. Hopefully when I get my license I can have more affordable treatments for animals that are in desperate need of it. My hometown has always pushed for education and striving for the best, I would want nothing more than to give back to my community. I plan on pursuing my education further and completing my goals.

The agriculture world is more complex than what I had originally thought it would be. Through my participation and experience I see how much it is expanding in knowledge, science and technology, and it will only continue to grow.

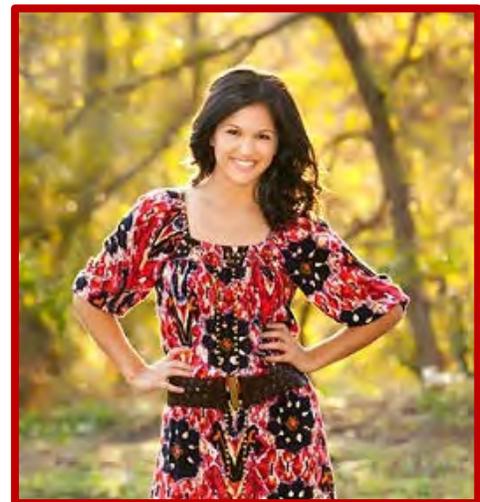
Name: **Cierra Nino De Guzman**
Hometown: **Austin, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Sophomore**
Major: **Biology**
Expected date of graduation: **December 2016**
Degree: **Biology**
USDA Agency of interest: **Animal and Plant Health Inspection Service APHIS**
Email: **Ckn9@txstate.edu**

Career experience/location: I was added to the program this year so I haven't had the opportunity to gain career experience just yet.

Description of career experience (what I learned): I haven't had the opportunity to have an internship yet.

What is your perception of agriculture now: Agriculture is a growing industry that has many different fields of work offered for individuals. It's more extensive than I originally thought and I've grown so much more respect for the hardworking individuals that surround me each day.

How has this career experience broadened your employment opportunities: This scholarship program has showed me the importance of continuing education and networking. I've seen many internship presentations and we have been pushed to be actively involved to gain experience in our field of work. I've also had the opportunity to meet so many knowledgeable people that are willing to help guide me through challenges on my way to become a veterinarian.



Career and research aspirations: After completing my undergraduate degree, I hope to apply to veterinarian school. After veterinarian school, I plan to travel to other countries to assist neglected animals in overpopulated communities. Many years from now I hope to own my own practice in my hometown Austin, Texas.

Skill Set: -Computer skills -communication skills -animal handling

The impact of my career experience: The career path I chose is extremely difficult if you aren't one hundred percent focused on your goals. This program keeps me on that track and gives me opportunities that other students don't come across as easy. Career experience is vital on an application to veterinarian school. With internship opportunities, I will be able to see where I want to specialize and where I want to work geographically.

Agriculture is a growing industry that has many different fields of work offered for individuals. It's more extensive than I originally thought and I've grown so much more respect for the hardworking individuals that surround me each day.

Name: **Jenny M Pantoja**
Hometown: **Houston, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **General Agriculture**
Expected date
of graduation: **May 2015**
Degree: **Bachelor's of Science**
USDA Agency
of interest: **NRCS, APHIS**
Email: **jmp11@txstate.edu**

Career experience/location: I have not been able to complete an internship with the USDA but I will complete one in the future hopefully with APHIS or NRCS.

Description of career experience (what I learned): I came into agriculture literally knowing nothing at all. Through the USDA FATE I have learned that the USDA has a place for everybody. It is mistaken that agriculture is only for farmers, but in reality agriculture is a far more diverse field.

What is your perception of agriculture now: Agriculture is a very comfortable and productive field. It is a field in which one will always find a job and career.

How has this career experience broadened your employment opportunities: I know what I experience in an internship will help me in the real world. It will give me a taste of what I need to do to perform well in a job that I may desire to pursue in the future.

Career and research aspirations: In the future I see myself working with the USDA enjoying my job. Also In the future I see myself traveling, doing business with Colombia and United States. I really want to use what I learned here and apply it in my birth country. In ten years I wish to have already raise my grandmas farm from the ground and by then see it as productive and fruitful.

Skill Set: -Spanish -good with people -computer skills

The impact of my career experience: My career experience will help me in my future in great ways. I have learned how to talk to people. I have learned that it is not what you know sometimes that is most important, but who you know. Since I have learned so much about what the agriculture business is actually about, now I know what I want to get into. I have a clear view of what exactly I want for my future job. I can see myself working with environmental issues, which is something I really love, taking care of nature, animals, natural resources that are getting scarce with every year that passes. Again, I have not completed an Internship, but I'm determined to complete one because I know for a fact, an internship will expand my knowledge and get me prepared in the areas that I need to polish.



I came into agriculture literally knowing nothing at all. Through the USDA FATE I have learned that the USDA has a place for everybody. It is mistaken that agriculture is only for farmers, but in reality agriculture is a far more diverse field.

Name: **Maricela Perez**
Hometown: **La Marque, Texas**
Institution: **Texas State University**
Campus: **Texas State University**
Rank: **Junior**
Major: **Animal Science**
Expected date
of graduation: **December 2015**
Degree: **Bachelor's**
USDA Agency
of interest: **Animal and Plants Health Inspection Service APHIS**
Email: **m_p13@txstate.edu**

Career experience/location: Even though I have yet to obtain an internship, I am really looking forward to doing one this summer. I would like to possibly work with APHIS and I would also like to travel to a different state if possible.

Description of career experience (what I learned): Even though I have yet to do an internship I was able to work at the San Marcos Animal Shelter and even shadow a local veterinarian. I learned that being a veterinarian was such a hard working career and in order to become one it would take a lot of hard work and dedication.

What is your perception of agriculture now: Agriculture is becoming a more technological based industry and every day it's becoming more and more diverse and advanced.

How has this career experience broadened your employment opportunities: When working at the San Marcos Animal Shelter, I was able to meet so many young volunteers that one day hope to become veterinarians themselves or work somewhere in the field of animal science. I was also able to meet a local veterinarian and grow somewhat of a rapport with her.



Career and research aspirations: In five years, I see myself attending Texas A&M and working on becoming a veterinarian. After that I plan to either open a vet clinic of my own or possibly working with the San Antonio Zoo or the Houston Zoo. I would really like to help the animal community by becoming part of an animal rescue foundation or even starting my own.

Skill Set: -Computer skills -microbiological techniques -animal handling -biological techniques -child care
-basic animal care -familiar with basic computer programs such as Excel, PowerPoint, etc.

The impact of my career experience: When volunteering at the animal shelter, I found that becoming a veterinarian was not going to be something that will come easy. I found that you have to put in the hard work and you have to put in the time. I learned that you have to completely be dedicated to what you want to become and you have to be willing to do anything to accomplish your goals. I also saw that if you cannot manage your time and know how to prioritize then you will not achieve your goals. Also, networking is such a huge part of obtaining a job because not only do you need the knowledge of your profession but you also need to know people in your career to achieve your goals. You have to be a social person and you have to go out your way to try to stand out in a crowd of people, but not in a bad way but a good way. You have to look presentable at all times and you have to show that you are really in it to win and succeed.

Agriculture is becoming a more technological based industry and every day it's becoming more and more diverse and advanced.

Name: **Natalie Perez**
Hometown: **Converse, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Nutrition and Foods**
Expected date
of graduation: **May 2014**
Degree: **Bachelor's**
USDA Agency
of interest: **Food Safety and Inspection Services FSIS**
Email: **n_p2@txstate.edu**

Career experience/location: FSIS Job Shadowing at the L&H Packing San Antonio, Texas.

Description of career experience (what I learned): I shadowed a public safety veterinarian and USDA food inspectors while inspecting cattle ante and post mortem, I acquired knowledge about different diseases found in cattle that could potentially harm our food system

What is your perception of agriculture now: Agriculture is related to everyone on this planet. Whether you're a farmer, a doctor, even a businessperson, we are all dependent on agriculture; therefore, we should all gain knowledge about this exciting field.

How has this career experience broadened your employment opportunities: The job shadowing experience introduced me to the food inspection segment of the USDA. It gave me an experience that wouldn't be made possible if it wasn't for the USDA Fate Program. As a nutrition major, I was exposed to different perspectives of nutrition found outside the clinical setting.



Career and research aspirations: Five years from now I would like to already have my master's in Nutritional Science. My ultimate goal is to work with families in rural towns providing them with food accessibility and helping communities improve their health by making better food choices.

Skill Set: -Bilingual -good written and verbal presentation skills -works well with others -proficient in Word, Excel, and PowerPoint

The impact of my career experience: The job shadowing experience opened my eyes to see how numerous the opportunities are for students who are determined and willing to work hard in order to go far. Working with professionals who have been part of the USDA for many years was a privilege, and provided hope that one day I'd be in the same position, training passionate students. Although the job shadowing was only two weeks, it taught me about professionalism, attitude in the workplace, and gained knowledge that could only be obtained through a hands-on experience. I encourage every student to do an internship or to job shadow because it not only helps you determine whether you enjoy doing a certain job, it also forms professional relationships and introduces you into the culture of the USDA.

Agriculture is related to everyone on this planet. Whether you're a farmer, a doctor, even a businessperson, we are all dependent on agriculture; therefore, we should all gain knowledge about this exciting field.

Name: **Candice Rodriguez**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Biology**
Expected date
of graduation: **December 2015**
Degree: **BS**
USDA Agency
of interest: **USDA**
Email: **C_r8@txstate.edu**

Career experience/location: I was an intern in Dr. Ivan Castro-Arellano's Wildlife Research Lab. Texas State University, San Marcos, Texas.

Description of career experience (what I learned): In Dr. Castro's lab, I learned proper trapping techniques, classification of small rodents, how to process small mammals and tissue sampling for a project involving *Borrelia*. I was even given my own research project involving the feces quantification of *Petrochelidon pyrrhonota*.



What is your perception of agriculture now: Before my internship, I perceived agriculture as nothing more than farming. But now, I see that agriculture is essentially everywhere and impacts almost everything. I thought my field had nothing to do with agriculture but in reality it involves a great deal of agriculture.

How has this career experience broadened your employment opportunities: Working in Dr. Castro's lab has not only provided me with experience but, it has allowed me take on my own research project that I will hopefully be able to publish, making grad school a reality and not just a dream.

Career and research aspirations: All of the time I've spent in the lab has narrowed down the broad field of biology down to wildlife research. I love the idea of zoonotic diseases and the puzzle that we face to prevent the transfer from animal to human. I hope to continue working with animals and produce notable publications that will make a difference in the world of diseases.

Skill Set: -Computer skills -graph making -mammal processing -lab safety -aggrerroism training -wildlife lab skills -working under adverse conditions

I see that agriculture is essentially everywhere and impacts almost everything. I thought my field had nothing to do with agriculture but in reality it involves a great deal of agriculture.

The impact of my career experience: The experience I've obtained in Dr. Castro's lab will have a huge impact on my future. Working in the lab has not only given me all the experience and responsibilities of working in the real world but, I've also gained mountains of networking opportunity. I've met so many world-renown professionals that have all provided me with different opportunities. Working in the lab will allow very easy entry into grad school and perhaps even funding to get through it all. With so much experience, I will be able to conduct my own projects with far less supervision and guidance. After graduating, I foresee a great amount of opportunity arising from just the experience I've gained in the lab. Looking for a job will be simpler than looking for one had I not been in the lab. Another detail that isn't of a lot of importance but will make my life easier is the pay my job will offer. I won't have to struggle working in a stable job for the USDA. I'll be able to make a difference in the world and also do what I love to do.

Name: **Isamar Sanchez**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Animal Science**
Expected date
of graduation: **May 2015**
Degree: **Bachelor's of Science in Agriculture**
USDA Agency
of interest: **Animal and Plant Health Inspection Service APHIS**
Email: **Isamar.sanchez11@gmail.com**

Career experience/location: I worked as a summer volunteer at Heritage Veterinary Medical Center in San Antonio, Texas.

Description of career experience (what I learned): I volunteered during surgery days where I was allowed to assist vet techs prepare the animals and I got familiar with surgical equipment and tools used and what chemicals are used.

What is your perception of agriculture now: Coming from a nonagricultural background I now see the impact that agriculture has in our lives and I am proud to be part of this agriculture family.

How has this career experience broadened your employment opportunities: I never imagined veterinary medicine to be part of agriculture, and after this experience I have been able to see what other careers I could possibly pursue.

Career and research aspirations: I plan on graduating Texas State University with my bachelor's in animal science and get accepted into the College of Veterinary Medicine at Texas A&M. If I succeed and become a veterinarian I would like to expand my skills and become dog trainer as well as a dog groomer and someday open my own practice or work with the USDA.

Skill Set: -Detailed oriented -decision making -problem solving
-sales and marketing -critical thinking -organization -networking

The impact of my career experience: This summer experience working at a veterinary clinic allowed me to confirm the love I had for veterinary medicine. I enjoyed helping change animals lives for the better. I would wake up every morning very early with a big smile on my face because I knew that my job then was to help small animals and I had to feed the curiosity that I had. This career experience will impact my education because I know what I want to pursue and I am that more motivated to follow my dreams and goals. And that experience will give me more chances into getting into veterinary school. It helped me in my future employment because I got hands on experience with animals and surgery which gave me the skills necessary to be successful if I ever get put in those situations.



I never imagined veterinary medicine to be part of agriculture, and after this experience I have been able to see what other careers I could possibly pursue.

Name: **Carlos Alberto Sencion**
Hometown: **Laredo, Texas**
Institution: **Texas State University**
Campus: **San Marcos, Texas**
Rank: **Junior**
Major: **Animal Science**
Expected date
of graduation: **May 2015**
Degree: **Bachelor's**
USDA Agency
of interest: **APHIS, FSIS**
Email: **cas260@txstate.edu**

Career experience/location: As of Summer 2013, I didn't have the opportunity to intern with a USDA agency, but I had a job offer to work at Critter Care Veterinary Clinic in Laredo, Texas.

Description of career experience (what I learned): I was first hired as a kennel technician cleaning kennels and managing diets given to all patients boarding. Besides kennel work, I also gave baths and trimmed nails as well. Then I had the opportunity to be trained as a veterinary technician. I learned how to draw blood and do complete lab blood work. During training, I learned how to administer vaccines and medications for all patients. I was also given the opportunity to do X-rays with different types of species.

What is your perception of agriculture now: An agriculture professor once told me, "It's not just about cows, plows, and sows!" Along with agriculture come leadership, responsibility and many other gaining aspects to become a better citizen of the United States.

How has this career experience broadened your employment opportunities: The career experience has broadened my perception to many other opportunities within my degree plan. An animal science degree does not only get you a degree with a USDA agency but many other careers. It has set my goals to what I would like to do for the rest of my life.



Career and research aspirations: Upon graduation, I plan to continue my education to further my knowledge in veterinary medicine. I plan to be enrolled at Texas A&M University. After receiving my degree, I plan to work with an experienced veterinarian to gain knowledge on opening my own practice.

Skill Set: -Computer skills -microbiological techniques -data base mgmt -leadership skills -rebounding from a mistake -ability to work as a team -critical thinking skills -judgement and decision making -operations and systems analysis -monitoring and assessing performance

The impact of my career experience: Given the opportunity to work at a veterinary clinic has made me continue my education in veterinary medicine. My career experiences have built a bridge between exploring career options and getting a look at a real world environment. It may have been a short-term job but it has helped me plan my future and what I want to do with my life. The past career experiences has been a springboard for new opportunities.

The career experience has broadened my perception to many other opportunities within my degree plan. An animal science degree does not only get you a degree with a USDA agency but many other careers. It has set my goals to what I would like to do for the rest of my life.

Name: **Karla M. Siller**
Hometown: **Laredo, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Sophomore**
Major: **Biology**
Expected date
of graduation: **May 2015**
Degree: **Bachelor's of Science in Biology, Biochemistry minor**
USDA Agency
of interest: **National Institute of Food & Agriculture NIFA**
Email: **kms166@txstate.edu**

Career experience/location: Last summer I worked as an intern at the Pathology lab of Laredo's Medical Center, in Laredo Texas.

Description of career experience (what I learned): I learned the techniques pathologists use in laboratory to diagnose diseases and how to read medical records. Safety training such as handling of dangerous materials, infection control, and patient's confidentiality was provided. The examinations done were performed after surgery on extracted tissues to determine the cause of possible diseases.

What is your perception of agriculture now: From my point of view, Agriculture is one of the most important and impacting fields of study regarding sustainability and health of a country; since it studies and develops systems to maintain and prevent crop diseases. It is important to note that agriculture is one of the primary sources that move our nation.

How has this career experience broadened your employment opportunities: This career experience has broadened my vision into the work field. Overall, career opportunities and experience go together in order to open new doors.

Career and research aspirations: I want to graduate with my bachelor's degree then I'm planning to go to graduate school and work as a researcher for the government. I am highly interested in biomedical investigation. I know that it is a broad area that has a lot to provide to our community in a vast variety of ways. In 5 years I see myself already graduated and maybe working on my PhD. In 10 years I see myself successful in my profession.

Skill Set: -Organized -responsible -biology/microbiology lab research experience -experience as mathematics tutor -English and Spanish languages written and spoken fluently -listener -friend -goal achiever

The impact of my career experience: The experience that my career has provided to me has helped to shape my future goals over time. My long term goal has always been the same, and work experience has helped me to get to know the best ways to achieve it. I have been exploring the broad fields of Biology during my career, and as I know more about the real life work, the more secure I am regarding what I want to be, and what I want to do with my profession. The more I know about my profession, the further I want to go with my education. I think it's just amazing all the knowledge that resides on nature and ourselves, there are so many things to know about. My long term goal is to have a job that allows me to help others, the way I think about it is that, if I am going to work anyway, I may as well have a job in which we can improve our community wellness.



Agriculture is one of the most important and impacting fields of study regarding sustainability and health of a country; since it studies and develops systems to maintain and prevent crop diseases. It is important to note that agriculture is one of the primary sources that move our nation.

Name: **Gabriela Dolores Solis**
Hometown: **Laredo, Texas**
Institution: **Texas State University**
Campus: **San Marcos, Texas**
Rank: **Junior**
Major: **Biology**
Expected date
of graduation: **May 2015**
Degree: **Bachelor in Science**
USDA Agency
of interest: **Animal and Plant Health Inspection Service APHIS**
Email: **sdg70@txstate.edu**

Career experience/location: I have not been able to have the pleasure of being an intern, but I would love to have an internship with the Animal and Plant Health Inspection Service.

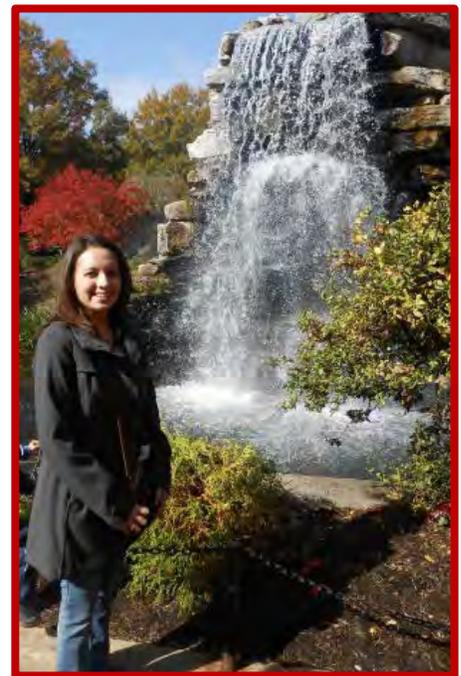
What is your perception of agriculture now: Thanks to the FATE program, I have learned more about the agriculture field and how it impacts everyone's life.

How has this career experience broadened your employment opportunities: I know getting an internship with the USDA will greatly broadened my employment opportunities, because I can learn varies skill sets from the internship. For example, the internship will teach me the basics that an employee should know about working for their employer. An internship can help me in getting experience that can be applied in a future internship or job.

Career and research aspirations: In five years from now I see myself still in Veterinarian School becoming a veterinarian. I am really interested in the science behind the veterinarian field. I see myself doing research and working with animals.

Skill Set: -Communication skills -patience -hard working -determined
-computer skills -time oriented -team work skill -quick learner

The impact of my career experience: I have not yet had the opportunity to have an internship or any career experience with the USDA but I would love to have an internship with the Animal and Plant Health Inspection Service.



Thanks to the FATE program, I have learned more about the agriculture field and how it impacts everyone's life.

Name: **Michael Reno Soto**
Hometown: **Laredo, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Wildlife Biology**
Expected date
of graduation: **May 2016**
Degree: **BS Wildlife Biology**
USDA Agency
of interest: **Animal and Plant Health Inspection Services APHIS**
Email: **mrs174@txstate.edu**

Career experience/location: I am new to this program and do not have any experience yet.

Description of career experience (what I learned): I am new to this program and do not have any experience yet.

What is your perception of agriculture now: A professor once told me “an Agriculturalist is responsible for feeding and clothing the world,” since then my perception of agriculture has risen since their responsibility has a huge impact on the world. Without agriculture, there would be a small amount of resources.

How has this career experience broadened your employment opportunities: I am new to this program and do not have any experience yet.

Career and research aspirations: My career aspirations in the future range. In the next 5 years, I do see myself being a successful Texas Game Warden where my main duty would be to protect the community, wildlife and environment while enforcing the law amongst anyone who disobeys it. In the next 10 years, I do see myself either enhancing my skills as a Texas Game Warden or entering graduate school to continue my studies. Working with the USDA agency Animal and Plant Health Inspection Services (APHIS) is a possibility as well.

Skill Set: -Veterinary technician -veterinary assistant -kennel technician -teacher assistant for elementary -middle school tutor -fish hatchery volunteer -film & media editing -computer skills -arts & crafts-

The impact of my career experience: I am new to this program and do not have any experience yet.



A professor once told me “an Agriculturalist is responsible for feeding and clothing the world,” since then my perception of agriculture has risen since their responsibility has a huge impact on the world. Without agriculture, there would be a small amount of resources.

Name: **Carolina Souza**
Hometown: **Austin, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Senior**
Major: **Animal Science**
Expected date
of graduation: **May 2015**
Degree: **Bachelor's in Animal Science**
USDA Agency
of interest: **USDA Foreign Agricultural Service FAS**
Email: **css77@txstate.edu**

Career experience/location: Previously before entering into the USDA grant at Texas State University I have been volunteering at the Austin Humane Society Shelter since November of 2010.

Description of career experience (what I learned): This volunteer work requires volunteers to take classes for behavior rehoming assessment training to help animal in the shelter become sociable and potentially get adopted.

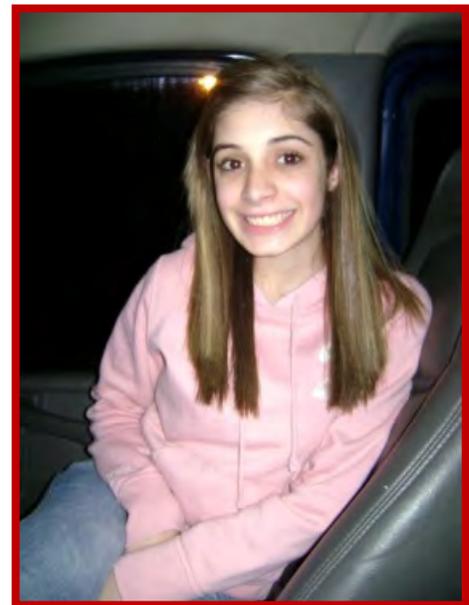
What is your perception of agriculture now: I have realized that agriculture is a broad field and there are many different careers that are possible to choose from. Also this program has given me insight to how to get out there and meet new people that could potentially help me get my foot in the door so I can get my first career.

How has this career experience broadened your employment opportunities: I feel like volunteering at the Humane Society has opened many doors for me by expanding my network with other employers who have an agriculture background.

Career and research aspirations: Within the next 5 years I hope to have graduated and gone global to help farmers around the world with expanding knowledge about animal science and how it can be applied within livestock and other animals. I would preferably enjoy going back to my parent's home land Brazil to help that culture to expand their horizons. In the next 10 years I hope to have impacted at least 10 communities around the world with the research I have done.

Skill Set: -Bilingual -organization skills -computer skills -customer service skills -CPR certified

The impact of my career experience: My experience with the USDA program has been great I have learned so much especially during the workshops where faculty members came explain the research they have done and continue to do. During these workshops, I particularly liked how the faculty members chose different methods of conducting their experiments. Since my field is particularly in research I truly enjoyed it and found that it is beneficial to me especially the presentation mentioning Vitamin A.



I have realized that agriculture is a broad field and there are many different careers that are possible to choose from.

Name: **Heidi Stence**
Hometown: **Santa Cruz, Peru South America**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Psychology**
Minor: **Biology**
Expected date
of graduation: **Spring 2015**
Degree: **Bachelor's of Science**
USDA Agency
of interest: **US Forest Service USFS**
Email: **has34@txstate.edu**

Career experience/location: This past summer I interned as a zookeeper intern at the San Antonio Zoo.

Description of career experience (what I learned): I learned how to care for exotic animals. I learned the procedures for cleaning exhibits and holding areas. I also learned that every animal received a specific diet that needed to be prepared in a specific way. I also learned how to administer medicine as needed.

What is your perception of agriculture now: Before getting involved with the USDA, I thought it was just about food inspection, now I have learned that they play very important roles such as policy making and supervising the quality of food.

How has this career experience broadened your employment opportunities: I believe that if I would want a career in zoology I would have an opportunity to be hired due to the fact I executed great work ethic in my internship and I created friendships during the time I was there.

Career and research aspirations: In 5 years I would like to have graduated from college and be in a job or an internship. In 10 years I would like to have completed a Master's in counseling. I want to counsel individuals who have been victims of physical and sexual abuse, especially those who have been involved in human trafficking.

Skill Set: -Bilingual: Spanish & English (written & oral) -computer skills -Microsoft Word, Excel, PowerPoint, Office, Fathom -statistical software -social networking: Facebook, Instagram -email -typing: 50 wpm

The impact of my career experience: I thoroughly enjoyed my internship and I learned a great deal from it. I was able to learn so much about exotic animals and the intricate care that is involved. Through this internship I gained a greater appreciation towards animal husbandry and the animals that were being cared for. This experience was eye opening. It allowed me to see what this job was really about and all the work that it involved. Although the experience was great, it showed me that it was something I did not really want to do as a career. I am glad I did this internship instead of later after having a degree in zoology and finding out this was something I did not want to do.



Before getting involved with the USDA, I thought it was just about food inspection, now I have learned that they play very important roles such as policy making and supervising the quality of food.

Name: **Samuel Verastegui Jr.**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Wildlife Biology**
Expected date
of graduation: **December 2015**
Degree: **Bachelor's**
USDA Agency
of interest: **Natural Resource Conservation Service NRCS**
Email: **sv.tsubio@gmail.com s_v63@txstate.edu**



Career experience/location: I was given the opportunity to be a part of the USDA's Pathways program within the NRCS. I worked for two months in the Pearsall, Texas office.

Description of career experience (what I learned): I was able to take part in conservation planning. Planning included brush management, soil conservation, irrigation development, native grass planting and many more efforts to allow land owners to use their property to its' full potential. NRCS covers a wide array of techniques suitable for land management, these were what are done during this time of the year. It all depends on the season.

What is your perception of agriculture now: Agriculture is a fundamental part of our lives. I now understand why we have a whole agency dedicated to protecting and conserving US Agriculture.

How has this career experience broadened your employment opportunities: Having some sort of foot in the door will help me later on in life. I am thankful to have been chosen for such a great opportunity. I now feel like I actually have a chance when I will need to apply somewhere. Having experience is very important, and will hopefully set me apart from other applicants.

Career and research aspirations: I plan on working with the Natural Resource Conservation Service until I am allowed to retire. I saw a different side to the USDA and will stay with NRCS for as long as I can. If plans change, graduate school with a focus in wildlife biology will become an option. At this point, I see myself working with NRCS 5-10 years from now.

Skill Set: -Bilingual -personable -dependable -determined -punctual -fast learning ability -humble -committed -positive -leader -dedicated -perfectionist -kind -hard working

The impact of my career experience: I am glad to say that without the USDA and Texas State University, I would not be at the point I am now. Thanks to the many classes we have attended as part of the scholarship, I feel like that acquired knowledge allowed me to stand out when applying for Pathways. I now feel like I have a chance to be successful during my undergraduate studies and after graduation. NRCS helped me focus on a career path I am passionate about. I decided to stay in the wildlife biology program because the NRCS has positions for wildlife biologists, which was something I learned during my internship. Education is very important now because I have the opportunity to stay with Pathways until graduation. Employment within NRCS is a huge opportunity that I want to be a part of for a long time. Obtaining a bachelor's degree is my biggest goal, and if the chance to obtain a master's degree is offered, I would consider it highly. My time with NRCS will be spent with 100% dedication to becoming a major part within that agency. At this point, my long term objective is to become someone who is valued and considered highly knowledgeable within the NRCS. That is what I want most at this point, and have realized this thanks to my internship.

Agriculture is a fundamental part of our lives. I now understand why we have a whole agency dedicated to protecting and conserving U.S. Agriculture.

Name: **Emily Way**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Nutrition Dietetics**
Expected date
of graduation: **December 2014**
Degree: **Bachelor's of Applied Arts**
USDA Agency
of interest: **Nutrition Dietetics positions**
Email: **egw11@txstate.edu**

Career experience/location: This past summer, I started volunteering at Meals on Wheels here in San Marcos, and as of today, I am still volunteering there.

Description of career experience (what I learned): As a volunteer, I had the honor of feeding families and individuals that were not able to get out and feed themselves. This has been an amazing and an eye opening experience, and I have learned that you should never take anything for granted.

What is your perception of agriculture now: My perception of Agriculture is it is our main and most important resource that provides us with all of our food and meals that we eat every day.

How has this career experience broadened your employment opportunities: This experience helped me have an open mind about future employment opportunities. I now know that I would love to be employed in an organization, or a job similar to what I did as a volunteer.



Career and research aspirations: As my graduation date gets closer, I am always thinking about the best and most appropriate way to put my degree to use. As a Nutrition Dietetics major, I want to become a Pediatric Dietitian, and also specialize in Eating Disorders. I want to be able to help children who are suffering with obesity and eating disorders, and help them become healthy individuals.

Skill Set: -Customer service -computer skills -cross-training -product demonstrator -ambitious -courtesy -friendliness -organizational skills -patient -product knowledge -teamwork -time management -communication -leadership -meeting deadlines -planning -prioritizing -training -information search -being thorough

The impact of my career experience: Being a volunteer at Meals on Wheels helped me realize how much I love helping those in need. Knowing I was able to deliver meals to individuals of all ages really filled me with joy. I now know that I will enjoy any job opportunity in the food service. I have been working towards becoming a Pediatric Dietitian, but after volunteering at this site, I now have many more options as to what I want to become. I have always heard that you need to take opportunities as you are given them because that is how you find more of what you are interested in and good at. For any future employment opportunities that come my way, I will now be open minded and more willing to take the job because it may end up being something I really enjoy. I have learned many skills and procedures in the food service, and I can now set personal goals to become even more skilled so I will go into my career being the best I can be.

My perception of Agriculture is it is our main and most important resource that provides us with all of our food and meals that we eat every day.

Texas State University - Graduate Students

Name: **Jessica Espinoza**
Hometown: **Laredo, Texas**
Institution: **Texas State University**
Campus: **San Marcos, Texas**
Rank: **Graduate**
Major: **Agricultural Education**
Expected date
of graduation: **May 2015**
Degree: **Master's**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS**
Email: **jye@txstate.edu**



Career experience/location: For two summers I worked in Washington, D.C. with The National Institute of Food and Agriculture. I conducted research on Hispanic demographics in USDA agencies and how their demographics reflected against national population numbers.

Description of career experience (what I learned): I further developed my communication skills with having to coordinate and collect data from several individuals from various agencies. Being resourceful and networking was all vital to the success and completion of my assignment.

What is your perception of agriculture now: Agriculture is more than food production, it's also involves the health and prosperity of human life while preserving and managing the effects on earth and its natural resources.

How has this career experience broadened your employment opportunities:

Working with USDA it has broadened my perception of possibilities and the different career paths one can take. I am passionate and interested in sustainability and preservation of natural resources and USDA has thought me that a career where I can do that very thing exists.

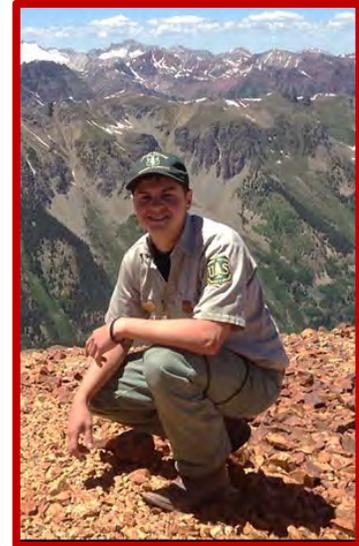
Career and research aspirations: Currently, I am gearing up to conduct research into perceptions of sustainability and recycling practices of Hispanic students at Texas State. I look forward to further developing how to collect these views for my thesis. It is difficult to decipher where you will be in 5 or 10 years but I hope to have already finished my graduate degree and on my path to building a career where I can advocate for the conservation and preservation of natural resources as well as educating the importance of sustainability to others.

Skill Set: -Excel -leadership skills -communication skills -something with growing importance in an age where many find themselves more reliant on technology

The impact of my career experience: My career experience has solidified me pursuing a career to advocate for earth's natural resources in order for the prosperity of generations to come. My career experience also influenced me to pursue higher education in agriculture and allowed for me to network my way into a position to do that. I have known for many years what is important to me and the components I wish for in future employment positions and USDA has allowed me to know that the fulfillment of a career like that is possible.

Agriculture is more than food production, it's also involves the health and prosperity of human life while preserving and managing the effects on earth and its natural resources. Working with USDA it has broadened my perception of possibilities and the different career paths one can take. I am passionate and interested in sustainability and preservation of natural resources and USDA has thought me that a career where I can do that very thing exists.

Name: **David Vela**
Hometown: **Laredo, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Graduate**
Major: **Agriculture**
Expected date
of graduation: **December 2013**
Degree: **BS**
USDA Agency
of interest: **NRCS, USFS**
Email: **dv1098@txstate.edu**



Career experience/location: This summer I interned for the USDA with the U.S. Forest Service in Aspen, Colorado under the title of Forestry Technician.

Description of career experience (what I learned): This internship provided me with hands on experience in a wide variety of skills necessary for running a Forest Service District. I gained experience in natural resource management, wildlife biology, and fisheries while also learning a great deal about recreational management and public relations.

What is your perception of agriculture now: In the time I spent working for the Forest Service, I realized how strongly agriculture is interconnected with an ecosystem's natural resources and how it plays a role in the quality of recreational experiences. Although there are perpetual advancements in agriculture, there is still plenty of room for improvement in terms of sustainability and natural resources.

How has this career experience broadened your employment opportunities: With the many connections I made throughout the duration of my internship coupled with the positive work ethic I demonstrated, I believe I have opened the door to future employment opportunities with the USDA. The skills and experience I gained will definitely give me an advantage when seeking a career with not only USDA, but with any agency or employer.

Career and research aspirations: Upon completion of my Bachelor's degree in December 2013, I will continue to further my education at Texas State in the Master's of Agricultural Education program. With this degree, I hope to gain knowledge and experience that will broaden my options and opportunities in my future career search. My goal is to ultimately be in a position where I can advocate education to younger generations and to the general public about the importance of conservation and preservation of our lands and natural resources.

Skill Set: -Wildlife/plant -surveying -recreation management -fisheries surveying -computer skills -teamwork
-public contact

The impact of my career experience: This internship with the US Forest Service was an invaluable experience that provided me the opportunity to grow and learn both as a professional and as a person. I learned many skills and practices that I believe will be of great value to me when I begin my career. I have always been interested and conscious of natural resource conservation as well as educating others to do the same. This experience provided me the opportunity to practice this on a daily basis. Because the location where I worked was a highly sought after tourist destination, I was able to have many public interactions about the conservation practices the District was employing as well as how they could play a part in conservation. In doing so, it allowed me to really realize the importance of public education to the current and future state of our nation's wilderness and natural resources. By continuing to seek internships such as this one and also pursuing a graduate degree with a large focus on education, I believe I can achieve my dream of making a difference in the perceptions of students and the public of our nation's lands and the vital role they play in our future world.

In the time I spent working for the Forest Service, I realized how strongly agriculture is interconnected with an ecosystem's natural resources and how it plays a role in the quality of recreational experiences. Although there are perpetual advancements in agriculture, there is still plenty of room for improvement in terms of sustainability and natural resources.

University of Puerto Rico Project Page

Mayagüez Center for Education and Training in Agriculture and Related Sciences (CETARS): Consolidating the Pipeline in Agriculture and Related Sciences

Lead Institution: The University of Puerto Rico at Mayaguez (UPRM)

Collaborating institutions: The University of Puerto Rico at Aguadilla (UPRag)

University of Puerto Rico at Humacao (UPRH)

Inter-American University of Puerto Rico at San Germán (IAUPR-SG)

University of Texas at El Paso (UTEP)

Project Directors: UPRM, Chemistry Department: Félix R. Román (felixr.roman@upr.edu) PD; Marco de Jesus, (mdejesus@uprm.edu), Co-PD and Martha L. Lopez (martha.lopez@upr.edu), Co-PD; Department of Engineering Science and Materials: Oscar Perales (operalesperez@yahoo.com), Co-PD and Marcelo Suarez (msuarez@ece.uprm.edu), Co-PD; Department of Crops and Agro-environmental Sciences: Winston Dela Torre (winston.dela@upr.edu), Co-PD; Food Science and Technology Program: Edna Negron (edna.negron1@upr.edu), Co-PD; UPRag, Environmental technology Program: Carlos Ruiz (carlos.ruiz8@upr.edu), Co-PD; Jesus Lee-Borges (jesus.lee@upr.edu), Co-PD; Rafael Estremera (rafael.estremera@upr.edu), Co-PD ; UPRH, Chemistry Department: Rolando Tremont (rolando.tremont@upr.edu), Co-PD; IAUPRSG, Chemistry and Biology Department: Angela Gonzalez (angela_gonzalez_mederos@intersg.edu), Co-PD; UTEP, Chemistry Department: Jorge Gardea-Torresdey (jgardea@utep.edu), Co-PD.

Project summary and accomplishments: The CETARS program continues to excel during its second year. The number of students participating of the CETARS activities and programs has increased from fifty-five to sixty-five, which represents 18% percent of increase with respect to last year, while keeping a retention rate as high as 90%. All CETARS participants are from underrepresented Hispanic groups. CETARS have directly sponsored the research-training activities of 65 students from all the participating institutions, 72% of which were females. Out of the 50 undergraduate students, 91% are involved in research and 100% are participating of outreach contributions to the program. Undergraduate and graduate students are actively participating of research and outreach activities under faculty mentorship. The total number of K-12 students impacted by CETARS institutions were 1531 with visits to schools for the construction of school gardens (10 schools), lectures using the Globe program protocols to measure water and soils assays (12 schools) including summer workshops for science teacher (all participating schools impacting over 25 teachers). Regarding the research activities, CETARS students were involved in diverse subjects including: experimental design associated to nanotoxicology studies in plants; development of nanosize bactericidal and fungicidal materials; fabrication and evaluation of plasmonic sensors and nano-sequestering agents for water and soil remediation; use of spectroscopic methods for the early detection of food pathogens; use of heat shock and protein genetic polymorphysim as environmental stress biomarkers; analysis of heavy metal content in food and soil and development of novel remediation technologies for the pre-treatment of food processing and irrigation water. The research efforts have resulted in 13 peer-reviewed manuscripts and 81 presentations (posters and oral) in regional and national conferences durint the second year. These include the 2012 PR Senior Technical Meeting of the American Chemical Society (November 30, 2012, Ponce, PR), the ACS National Meeting (April 8-11, 2013, New Orleans, LA); The Hispanic Association of Colleges and Universities Meeting (October 16-24, 2012, Washington DC) and a presentation to the PR Water and Sewer Authority of a CETARS research initiative to sustainably incorporate composted waste water solids for farming applications (December 20, 2012, Mayagüez, PR) and the Second CETARS Symposium during August 2013 at UPRM. Thirty-five CETARS students (54%) participated of paid and voluntary career experiences at USDA or research laboratories at universities in Puerto Rico and mainland USA.

University of Puerto Rico CETARS - Aguadilla Undergraduate Students

Name: **Avila-Lasalle, Tania**
Hometown: **Quebradillas, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Aguadilla Campus**
Rank: **BS**
Major: **Biology**
Expected date
of graduation: **June 2015**
Degree:
USDA Agency
of interest: **ARS**
Email: **tania.avila@upr.edu**

Career experience/location: During the summer of 2012, I went to a summer internship at the University of Massachusetts Medical School at Worcester, under the supervision of MD, PhD. Jeanine Ward.

Description of career experience (what I learned): The investigation was a clinical investigation, with patients with chest pain that arrived to UMass Medical Hospital. We were trying to find a marker to detect a heart attack earlier than the patient having one. We used PCR and electrophoresis.

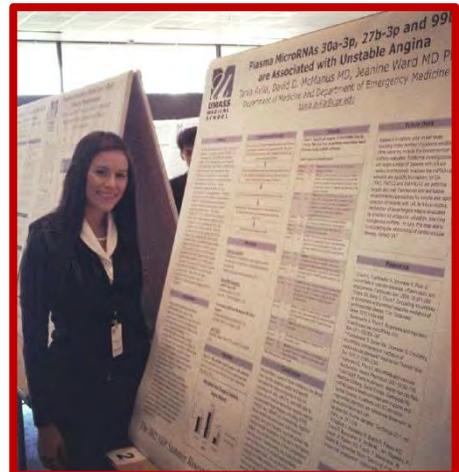
What is your perception of agriculture now? Agriculture is important for the humans because it is the only way that you can produce some products necessary for health and survival.

How has this career experience broadened your employment opportunities? In the research I centrifuged blood plasma from patients with chest pain and we analyzed some markers from them to look for a biomarker to detect a heart attack earlier than the patients having one; we used PCR, electrophoresis to analyze them. Knowledge about the different laboratory techniques can help me in the future, maybe in graduate school as well.

Career and research aspirations: My future aspiration is to undertake a PhD or Pharm D. I want to increase my knowledge of what is an investigation because through this we can identify problems and get information about how we can improve our lives and our health.

Skill Set: -Interpersonal communication skills -organizational skills
-problem solving skills -teamwork skills -decision making skills

The impact of my career experience: The research internship has given me the necessary skills to develop scientific skills and new technique such as PCR, Electrophoresis, DNA extraction, analysis of markers and proteins. These experiences introduce me to the world of the scientific research. During this learning process I have been able to be a part of various organizations in the university, centralized in research and environmental conservation. I conducted research with professors, learned new skills, and worked as a volunteer. My future goal is finish a PhD.



Agriculture is important for the humans because it is the only way that you can produce some products necessary for health and survival.

Name: **Cortes-Vera, Keishla M.**
Hometown: **Moca, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Aguadilla Campus**
Rank: **Undergraduate**
Major: **Biology**
Expected date
of graduation: **May 2014**
Degree: **BS**
USDA Agency
of interest:
Email: **keishla.cortes@upr.edu**

Career experience/location: Worked in a research internship at UPR Aguadilla under the supervision of Professor Llinil Torres.

Description of career experience (what I learned): I worked on bioremediation in the fishing village of Isabela beach. We performed different tests at different points around a drain pipe. In the laboratory we performed a pH test, alcohol test and other tests to measure the pollution in the different areas.

What is your perception of agriculture now? It is essential in our daily lives. Without agriculture our society will not be able to survive.

How has this career experience broadened your employment opportunities? I learned different analytical technique used to measure environmental contamination. I am confident that this experience can benefit me when applying for employment.

Career and research aspirations: I aspire to finish my BS in biology within the next year and apply to a graduate school.

Skill Set: -Bilingual English/Spanish -computer literate -Microsoft Office 2010 -proficient in microbiological and spectroscopical techniques

The impact of my career experience: The research and professional experiences I went through have given me the necessary skills to become a competent scientist in the near future. I learned to use research methods and laboratory techniques, which are used in environmental restoration. I also worked in the academic improvement of other student by providing assistance and peer mentoring. These experiences will prepare me to compete in any area related to environmental analysis.



It is essential in our daily lives. Without agriculture our society will not be able to survive.

Name: **González-Quintana, Suanne M.**
Hometown: **Moca, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Aguadilla Campus**
Major: **Biomedical**
Expected date
of graduation: **May 2014**
Degree: **Bachelor in Biomedical Science**
Email: **suanne.gonzalez@upr.edu**

Career experience/location: I had the opportunity to participate in the CETARS project in the University of Puerto Rico at Aguadilla.

Description of career experience (what I learned): Our research was focused on the analysis of the water from the beach Villa Pesquera in the town of Isabela.

What is your perception of agriculture now? Agriculture plays a crucial role in the life of an economy. Agriculture not only provides food and raw material, but also employment opportunities to a very large proportion of population; more specifically of major importance in PR agriculture, those provide production, processing, marketing and distribution of crops and livestock products. The technologies provide important feature to acquire more efficiently the better products in the agriculture.

How has this career experience broadened your employment opportunities?

These techniques, such as recrystallization techniques, melting point, distillation, boiling point, column chromatography, extraction and refractive index, can open doors in research laboratories related to agriculture and help us to provide more information to acquire the better result in the agriculture.

Career and research aspirations: I aspire to finish my Bachelor degree in Biomedical Science. Once I finish my degree, I would like to continue with graduate studies and acquire more knowledge in scientific research, which is what really interests me, within the next five years and I will like to find a job in at USDA or any other location. In 10 years I would like to be a group leader and have a career that allows me to develop my knowledge of scientific research. I also aspire to help other students who want to establish their careers in areas related to the science.

Skill Set: At present, I am working with recrystallization techniques, melting point, distillation, boiling point, column chromatography, extraction and refractive index, also worked with culture media and the extraction of the interested microorganisms. I have also made different types of stains such as Simple staining, Gram staining and differential staining in which I use them to identify microorganisms.

The impact of my career experience: I am convinced that this research has given me more experience in which I developed my leadership skills, improved my professional skills and increased my knowledge in research for my professional growth. This research has taught me to understand a variety of techniques and instrumentation which I can use in my future employment.



Agriculture plays a crucial role in the life of an economy. Agriculture not only provides food and raw material, but also employment opportunities to a very large proportion of population; more specifically of major importance in PR agriculture, those provide production, processing, marketing and distribution of crops and livestock products.

Name: **Mercado-Arocho, Abner E.**
Hometown: **San Sebastián, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Aguadilla Campus**
Rank: **Undergraduate**
Major: **Biology Biomedical Sciences**
Expected date
of graduation: **May 2014**
Degree: **BS in Biology Biomedical Sciences**
USDA Agency
of interest:
Email: **abner.mercado@upr.edu**

Career experience/location: Worked as a mentor in the mentorship component of the CETARS program at the University of Puerto Rico-Aguadilla.

Description of career experience (what I learned): As a mentor, I served as a role model and offered academic/personal advice to four protégés. Through the mentorship program I have learned to convey ideas more efficiently and to develop leadership skills. I learned many things from the perspectives and ideas of my protégés.

What is your perception of agriculture now? Agriculture is necessary to enhance and sustain human life. We must generate knowledge in order to improve current agricultural methods or come up with new ones in response to the needs of humanity now and in a not so distant future.

How has this career experience broadened your employment opportunities? I developed and enhanced my leadership skills as well as my efficiency in communicating ideas and educating others.

Career and research aspirations: I aspire to graduate with honors from the Biology (Biomedical Sciences) program of the UPR-Aguadilla and pursue an MD degree in the field of cardiology. I also hope to carry out research in this particular field and to communicate my findings with peers and the general public.

Skill Set: -Bilingual (Spanish/English) -mentor
-leadership -western blotting -nuclear
fractionation -polyacrylamide gel electrophoresis
-agarose gel electrophoresis -calcium imaging
-spectrophotometry -NIS elements advanced research software -confocal dissection and fluorescent microscopy
-BSA assay -cell lysing techniques (hypotonic, enzymatic, sonication) -PCR ligation techniques -determination of
DNA and protein concentrations -serial dilutions -stock solution preparation -transformation techniques -stock
maintenance -protein isolation -protein precipitation (Acetone) -clonal expansion -centrifugation -titration
-bacterial culturing -biochemical characterization -2D tissue culture -3D tissue culture -fura 2 AM and Texas red
staining -bulk tissue staining -ELISA -immunochromatography -immunoprecipitation -dialysis medium
preparation

Agriculture is necessary to enhance and sustain human life. We must generate knowledge in order to improve current agricultural methods or come up with new ones in response to the needs of humanity now and in a not so distant future.



The impact of my career experience: The mentorship experience in the CETARS program has broadened my skill set and will help me achieve my educational and professional goals. I served as a role model and offered academic and personal advice to four students majoring in Biology (Biomedical Sciences). These experiences will help me improve personal and professional aspects of my life. I've been able to build strong networks with my peers and showed that I'm highly motivated and willing to help my colleagues.

Name: **Osoria Jiménez, Adriana E.**
Hometown: **Isabela, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Aguadilla Campus**
Rank: **Undergraduate**
Major: **Biological Sciences**
Expected date
of graduation: **May 2015**
Degree: **BS in Biology**
Major: **Biomedical Sciences**
USDA Agency
of interest:
Email: **adriana.osoria@upr.edu**

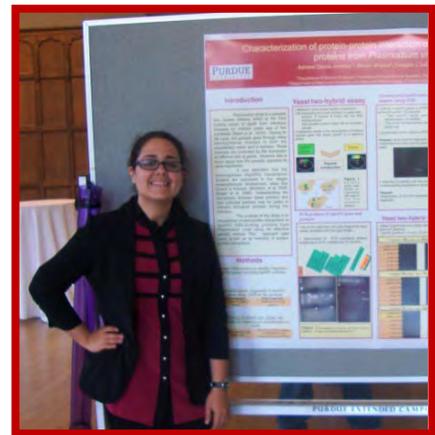
Career experience/location: I worked in a research internship at Purdue University at West Lafayette, Indiana funded by the Summer Research Opportunities Program (SROP) under the supervision of Dr. LaCount at the Pharmacy Department.

Description of career experience: I worked on the characterization of DNA binding proteins from *Plasmodium vivax* by using a genetic assay, yeast two hybrid. Studying these interactions during the development of the parasite can be useful in creating protein linkage maps that can be helpful in understanding the function of these factors in parasite replication.

What is your perception of agriculture now? It is a branch of science that complements their findings with many areas such as Biology and Chemistry also. In addition, support of this area will have effects in terms of social, economic and scientific advances.

How has this career experience broadened your employment opportunities? During this experience I learned several techniques related to Molecular Biology among these: PCR technique, others related to cloning and in addition, the design of DNA primers using Gene Construct Kit. These techniques provided me with part of the experience that is required in graduate studies in the area of Microbiology/Molecular Biology and later in the research area.

Career and research aspirations: I aim to be accepted into Purdue University in order to obtain a PhD. in Microbiology. By obtaining this degree I would be capable of being a part of academia and also, continue my steps in the research area as a competent scientist. In ten years, I would like to also obtain a certification as a Cytotechnologist in order to study more in depth diseases before they can be present in humans. Studying and researching global diseases is one of my interests in order to contribute with the creation of drugs and a better understanding of their pathway infection.



It is a branch of science that complements their findings with many areas such as Biology and Chemistry also. In addition, support of this area will have effects in terms of social, economic and scientific advances.

Skill Set: -Bilingual English/Spanish -proficient in bacterial transformation -electrophoresis and PCR technique -basic knowledge in gene construct kit -plasmodium genomics resources -saccharomyces genome database (SGD)

The impact of my career experience: The research experience at Purdue University, by the SROP, offered me the opportunity to choose a formal investigation and learn how cloning tools can be used in order to characterize cellular process mediated by proteins on a specific organism. This privilege helped me to develop more my critical thinking skills which are necessary in an investigation at graduate studies. Having the experience in techniques related in the characterization of protein-protein interaction would prepare me as a competent student in the area of research focused on the pathways of global diseases and in the development of drugs against these organisms. As a short term goal, I am interested in the molecular techniques necessary in becoming a scientist in the industrial field.

Name: **Soto Hernández, Joaris**
Hometown: **Aguadilla, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Aguadilla Campus**
Rank: **Undergraduate**
Major: **Biomedics**
Expected date
of graduation: **May 2014**
Degree:
USDA Agency
of interest: **ARS Aguadilla Puerto Rico**
Email: **joaris.soto@upr.edu**

Career experience/location: Worked in a research internship named SMART, a program at Baylor College of Medicine, Houston Texas, under Dr. David Moore.

Description of career experience (what I learned): I worked studying nuclear receptor CAR. We wanted to find out if endocrine disrupter xenobiotic DEHP activated CAR in mice testes. QPCR and western blot were performed for CAR target. In the future, CAR will be knocked down in the cell lines to determine leydig cell function when CAR is lost.

What is your perception of agriculture now? Our planet is going through a lot of changes that are affecting the human species and other variety of species. As the time passes, researchers have found higher concentrations of this xenobiotic DEHP is being exposed to the humans. We should keep investigating why and how this is happening and what modifications are needed to be done so that agriculture doesn't get affected by this problem. We must learn the latest technological advances to increase agricultural harvest and products to feed the human population with food that is not contaminated with this molecule.



How has this career experience broadened your employment opportunities? I learned how to improve my ability to use cellular biology techniques such as QPCR, SDS-PAGE, western blot, cell line treatment and the instruments required for these techniques.

Career and research aspirations: I aspire to accomplish a PhD in Cellular Biology related to endocrinology.

Skill Set: -Bilingual English/Spanish -cellular biology techniques -DNA extraction -RNA isolation -PCR -QPCR -western blot -gel electrophoresis -cell treatment -microscopy -leadership skills -Microsoft Word

The impact of my career experience: My research experience at Baylor College of Medicine helped me grow more as a person professionally. They gave me the necessary tools and skills to enhance my knowledge in acquiring and analyzing new data, helping me become a proficient scientist for future investigations. Thanks to this opportunity I worked with laboratory instruments and performed specialized techniques, which are not available at our institutions. I had the chance to treat mice and cancer cells. This research internship gave me the motivation and the desire to keep investigating.

My research experience at Baylor College of Medicine helped me grow more as a person professionally. They gave me the necessary tools and skills to enhance my knowledge in acquiring and analyzing new data, helping me become a proficient scientist for future investigations. Thanks to this opportunity I worked with laboratory instruments and performed specialized techniques, which are not available at our institutions.

University of Puerto Rico CETARS - Humacao Undergraduate Students

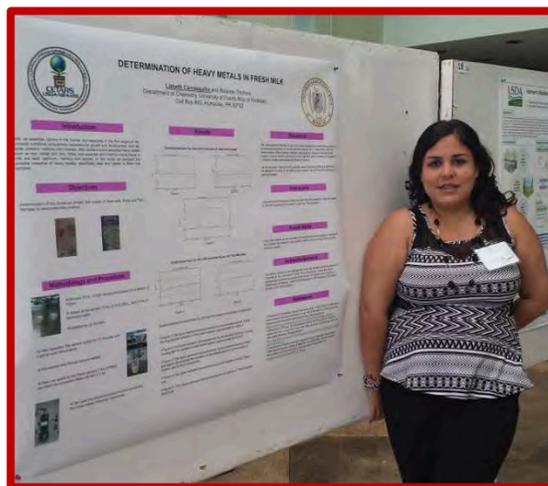
Name: **Carrasquillo-Carrasquillo, Lizbeth**
Hometown: **Caguas, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Humacao Campus**
Rank: **Undergraduate**
Major: **Chemistry**
Expected date
of graduation: **May 2014**
Degree: **BS in Industrial Chemistry**
USDA Agency
of interest: **Farm Service Agency FSA**
Email: **lizbeth.carrasquillo@upr.edu**

Career experience/location: Worked in a research internship at the USDA-CETARS under the supervision of Dr. Rolando Tremont.

Description of career experience (what I learned): I worked in the analysis of water, food and educate students of high school for the importance of environmental care, and the use correctly of natural resources. In addition to teaching simple analysis of soil and water

What is your perception of agriculture now? We must teach our children the love for the environment and agriculture, for increase the resources of a growing society.

How has this career experience broadened your employment opportunities? I learned working in team, how use of electrochemistry instrument, and realize a different analysis in the environment area. Knowledge about these techniques can open doors in subgraduate school and research laboratories.



Career and research aspirations: I aspire to finish my PhD in environmental chemistry within the next five years and find a job at the USDA- Farm Service Agency. In 10 years I would like have an established career record.

Skill Set: -Computer skills -biotechnology techniques -proficient liquid and gas chromatography

The impact of my career experience: The research experiences at the USDA has given me the necessary skills to become a competent scientist. I also learned to use novel methods of analysis for a variety of compounds of agricultural interest, such as water, soil and food. These experiences will prepare me to compete in the job market specifically at USDA. My long term goals are to find a research position at USDA- Farm Service Agency.

We must teach our children the love for the environment and agriculture, for increase the resources of a growing society.

Name: **García Rivera, Gina D.**
Hometown: **Las Piedras, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Humacao Campus**
Rank: **Undergraduate**
Major: **Chemistry**
Expected date
of graduation: **May 2014**
Degree: **BS in Chemistry**
USDA Agency
of interest: **ARS Albany, California**
Email: **gina.dgr19@gmail.com**

Career experience/location: Working for the USDA-CETARS program at the University of Puerto Rico at Humacao under the supervision of Dr. Rolando Tremont.

Description of career experience (what I learned): I am working in the determination of arsenic III in tomatoes. The antioxidant lycopene is deactivated by the arsenic. I was able to prepare soil samples for atomic absorption analysis using an acid digestion procedure.

What is your perception of agriculture now? Agriculture is necessary for the humanity, without it we can't have high quality goods. We must have to rescue the agriculture in Puerto Rico. We currently produce only 15% of what we consume.

How has this career experience broadened your employment opportunities? I analyzed soil before it was use for planting tomatoes. The soil has to be free of heavy metals. Using atomic absorption allowed me to determine if the soil was free of arsenic, lead, mercury, and other heavy metals. I poisoned the plants with different concentrations of arsenic for their analysis.

Career and research aspirations: I aspire to finish my MS in agronomy within the next five years and find a job at the USDA-ARS in Albany California or any other location. In 10 years I would like to be working for the USDA permanently in multiple projects around the United States and its territories.

Skill Set: -Bilingual-English/Spanish -Microsoft Word, Excel, Power Point 2007 -proficient in atomic absorption
-UV/VIS -leadership skills

The impact of my career experience: The research experience at the USDA-CETARS program has given me the necessary skills to become a competent scientist in the near future. I applied techniques and procedures of agricultural interest, such as determine arsenic in tomatoes using atomic absorption. The tomatoes that everybody eats are sprayed with pesticides that commonly have arsenic present. Is very important to know if what we eat is healthy and safe. These experiences will prepare me to compete in the job market specifically at USDA. My long-term goal is to work as a research scientist at USDA.



Agriculture is necessary for the humanity, without it we can't have high quality goods. We must have to rescue the agriculture in Puerto Rico. We currently produce only 15% of what we consume.

Name: *Lopez-Peña, Nicole M.*
Hometown: **Juncos, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Humacao Campus**
Rank: **Undergraduate**
Major: **Chemistry**
Expected date
of graduation: **May 2016**
Degree: **BS in Chemistry**
USDA Agency
of interest: **NRCS**
Email: **Nicole.lopez15@upr.edu**

Career experience/location: Worked in research laboratory at the University of Puerto Rico in Humacao under the supervision of Dr. Rolando Tremont.

Description of career experience (what I learned): I worked in the environmental chemistry laboratory analyzing crab tissues samples for the content of cooper, mercury and lead using atomic absorption spectroscopy. Thanks to this experience I am more proficient in my analytical chemistry laboratory.

What is your perception of agriculture now? We experience the agriculture in a way that it is not practical but mostly theoretical. This experience has helped me realize that the agriculture is very important.

How has this career experience broadened your employment opportunities? I think is it is a great experience for my future employment opportunities and also if I want to attend graduate school. It gives me the opportunity to learn about the environmental chemistry.

Career and research aspirations: I want to finish a PhD in environmental chemistry and apply for work at USDA.

Skill Set: -Bilingual English/Spanish -computer literate-Office 2010 -prefect titration -atomic absorption
-organization skills -leadership skills

The impact of my career experience: It is very important and useful to work in a research project because it increased my knowledge in the field of environmental chemistry. I now realized the importance of the environmental chemistry thanks to my current the research project. It also motivated me continue into a graduate program with the goal of obtaining a PhD in environmental Chemistry.



We experience the agriculture in a way that it is not practical but mostly theoretical. This experience has helped me realize that the agriculture is very important.

Name: **Marcano-Bermúdez, Jorge M.**
Hometown: **Humacao, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Humacao Campus**
Rank: **Undergraduate**
Major: **Chemistry**
Expected date
of graduation: **May 2014**
Degree: **PhD in Chemistry**
USDA Agency
of interest: **US Forest Service USFS, NIFA**
Email: **jorge.marcano1@upr.edu**

Career experience /location: Worked in research related to organic photovoltaic's, block co polymers under supervision of Dr. Josee Vedrine, and currently environmental chemistry under the supervision Dr.Rolando Tremont.

Description of career experience (what I learned): I worked in the fabrication of more efficient OPV's, the construction of ordered nano structures, and currently analytical analysis of heavy metals in crabs by means of Atomic absorption spectroscopy.

What is your perception of agriculture now? It's become clear that it plays a major role in the survival of mankind. It must be studied in order to develop new and more efficient ways in which can be used in order to sustain and enhance human life.

How has this career experience broadened your employment opportunities? I have learned how to use Atomic absorption spectroscopy for the analysis of elements and compounds related to contamination of our natural resources. Knowledge about this technique can help me to get a job in an ARS research laboratory.



Career and research aspirations: My goal whiting the next 10 year is to finish a PhD in environmental chemistry and find a job at the USDA, US Forest Service or NIFA.

Skill Set: -Bilingual English/Spanish -computer skills -atomic force microscopy (AFM) techniques -atomic absorption technique

The impact of my career experience: The research experience at the UPRH has given me a broader sense of just how closely relate we are with our environment. As an individual it has taught me that we must ensure a healthy and productive environment in order to ensure our survival. This opportunities has greatly help me practice my analytical skills and allowed me to properly learn Spectroscopy techniques. This will help me compete in a job market at the USDA.

It's become clear that it plays a major role in the survival of mankind. It must be studied in order to develop new and more efficient ways in which can be used in order to sustain and enhance human life.

Name: **Oliveras Cabrera, Adriana**
Hometown: **Guaynabo, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Humacao Campus**
Rank: **Undergraduate**
Major: **Chemistry**
Expected date
of graduation: **May 2014**
Degree: **BS in Chemistry**
USDA Agency
of interest:
Email: **adriana.oliveras@upr.edu**

Career experience/location: Worked on my research during summer at UPR-H under the supervision of Dr. Rolando Tremont.

Description of career experience (what I learned): We analyzed heavy metal content in cigarettes, milk and fishes bought locally. We used electrochemistry and atomic absorption. We also taught high school students about environmental chemistry and some of the techniques used.

What is your perception of agriculture now? Nowadays, we are faced with environmental issues that affect agricultural production; therefore we must continue researching these issues.

How has this career experience broadened your employment opportunities? It broadened my employment opportunities by learning new techniques (electrochemistry) and applying that knowledge to analyze environmental issues.

Career and research aspirations: My current goal is to finish my bachelor's degree in chemistry and microbiology and continue working on my research. After that, I plan to continue graduate studies, specifically a Ph.D. in Biochemistry.

Skill Set: -Bilingual English/Spanish -computer literate -Office/Excel/PowerPoint 2010 -chemistry lab techniques such as: UVvis -electrochemistry -atomic absorption/emission -liquid and gas chromatography -microbiological techniques -API -PCR-DNA extraction and sequencing

The impact of my career experience: The summer research opportunity was a new experience for me; it helped me develop my research abilities, laboratory techniques (while learning new ones), and team working skills. It helped prepare myself for what my future will be like in graduate school and other research opportunities.



Nowadays, we are faced with environmental issues that affect agricultural production; therefore we must continue researching these issues.

Name: **Olmeda-Viera, Natalia N.**
Hometown: **Humacao, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Humacao Campus**
Rank: **Undergraduate**
Major: **Industrial Chemistry**
Expected date
of graduation: **May 2016**
Degree: **BS in Industrial Chemistry**
USDA Agency
of interest:
Email: **natalia.olmeda@upr.edu**

Career experience/location: I worked in a research experience in the CETARS Program at UPRH under the supervision of Dr. Rolando Tremont.

Description of career experience (what I learned): In this experience, I had the opportunity to work analyzing samples of red snapper (fish) for the analysis of toxic metals. I also worked analyzing soil and water samplers. I used electrochemistry and atomic absorption methods to analyze concentration of heavy metals in these samples.

What is your perception of agriculture now? Agriculture is a field full of experiences to learn, experiments to develop in order to improve agricultural practices for the welfare of human health.

How has this career experience broadened your employment opportunities? This experience has given me the opportunity of working with the electrochemistry methods in the laboratory. I prepared solutions of different samplers for their analysis. This research experience taught me new analytical techniques that can improve my job opportunities.

Career and research aspirations: I aspire to finish the B.S. in Industrial Chemistry and then to go further and study a Ph.D. outside Puerto Rico. In 10 years I see myself working in a research laboratory and mentoring other students.

Skill Set: -Leadership skills -electrochemistry techniques -atomic absorption techniques -field experience
-bilingual English/ Spanish -laboratory chemistry techniques

The impact of my career experience: This research experiences have given me the opportunity to expand my knowledge about agriculture and has increased my interest in finding solutions to existing problems related to agriculture or the environment. Working soil, water and red snapper samples analysis has helped me see the different areas of research, thus giving me the opportunity to choose where I would like to continue in future studies. Also, working with techniques such as electrochemistry and atomic absorption has been such a great experience. Thanks to these I want to keep researching in agriculture related disciplines and looking forward to improve human lifestyle. I see myself working as research mentor; these experiences are preparing me with the necessary skills to accomplish my goals.



This experience has given me the opportunity of working with the electrochemistry methods in the laboratory. I prepared solutions of different samplers for their analysis. This research experience taught me new analytical techniques that can improve my job opportunities.

Name: **Reyna-Liriano, Maritza D**
Hometown: **Humacao, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Humacao Campus**
Rank: **Undergraduate**
Major: **Industrial Chemistry**
Expected date
of graduation: **May 2014**
Degree: **BS**
Email: **maritza.reyna@upr.edu**

Career experience/location: Worked in a research program CETARS in the University of Puerto Rico at Humacao under the supervision of Dr. Rolando Tremont.

Description of career experience (what I learned): I worked tracing a variety of metals in potable water such as Arsenic, Lead, and Mercury using pH meter and Atomic Absorption Spectroscopy.

What is your perception of agriculture now? It has a supreme importance for human species trying to improve our quality of live. Understanding and developing new technologies to upgrade our agricultural standards would have a great impact later on.



How has this career experience broadened your employment opportunities? I learned how to use Atomic Absorption instrument as well, how to collect samples from outdoors and the process to analyze them using atomic absorption spectroscopy. Knowledge about these techniques can open doors in ARS research laboratories and graduate school.

Career and research aspirations: I aspire to finish my PhD in environmental chemistry within the next five years and find a job related to this field. In ten years I would like to expand my knowledge even more and try to get others degrees that could help me improve even more.

Skill Set: -Bilingual English/Spanish -computer -Microsoft Excel, Origin, Prism 2012 -proficient in atomic absorption spectroscopy and potable water analysis -leadership skills

The impact of my career experience: The research experiences at the University of Puerto Rico at Humacao in the Environmental field, will prepare me to compete among others in my plans to get accepted into graduate school. My long term goals are to find a research position or a job in Environmental Science. This experience has allowed me to meet and work with scientists in many conferences and meetings through all my undergraduate years. It also has allowed me the opportunity to show them that I am a highly motivated, competent individual that can be able to accomplish my goals. The CETARS program has given me the necessary skills to become successful in graduate school. I worked with a variety of instruments that can help in my professional future. I also learned how to interpret peer review literature of studies in environmental chemistry.

It has a supreme importance for human species trying to improve our quality of live. Understanding and developing new technologies to upgrade our agricultural standards would have a great impact later on.

Name: **Santiago Lebrón, Jaileen**
Hometown: **Patillas, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Humacao Campus**
Rank: **Undergraduate**
Major: **Chemistry**
Expected date
of graduation: **May 2016**
Degree: **Bachelor's in Industrial Chemistry**
USDA Agency
of interest: **Environmental Protection EPA**
Email: **jaileen.santiago1@upr.edu**

Career experience/location: Worked in a research project at the University of Puerto Rico Humacao under the supervision of Dr. Rolando Tremont.

Description of career experience (what I learned): I have been working with different samples including pH measurements and the use of instruments such as atomic absorption spectroscopy for the analysis of metals...

What is your perception of agriculture now? Even that I'm new in this program, my knowledge had grown and that I have acquired a new way of thinking about the environment and its importance in agriculture.

How has this career experience broadened your employment opportunities? This experience has helped me learn different techniques to detect certain contaminants such as heavy metals. Knowing about these techniques can open doors in different laboratories.

Career and research aspirations: I aspire to finish my Bachelor's degree in Industrial Chemistry, in a year. After graduation I would like to enter graduate school and obtain a Master's degree in environmental chemistry.

Skill Set: -Bilingual English/Spanish- -computer (Office 2010) -leadership -atomic absorption spectroscopy -titration -pH meter -solvent extraction -liquid chromatography -dissection of animals-responsible

The impact of my career experience: Having the opportunity of being part of this program had impacted my life in big way. I can say that I was uncertain about what I wanted to work in different fields of chemistry. Now I would like to continue my studies in the environmental chemistry. I will share my experience with new people to create in them curiosity, to make them think and open their minds to a different world. Also I will keep doing research, help others with their own research and help them to achieve their goals.



Having the opportunity of being part of this program had impacted my life in big way. I can say that I was uncertain about what I wanted to work in different fields of chemistry. Now I would like to continue my studies in the environmental chemistry.

University of Puerto Rico CETARS - Mayaguez Undergraduate Students

Name: **Cancel-Villamil, Nathalia C**
Hometown: **Mayagüez, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **General Agriculture**
Expected date of graduation: **May 2014**
Degree: **BS in General Agriculture**
USDA Agency of interest: **ARS Beltsville Maryland**
Email: **nathalia.cancel@upr.edu**

Career experience/location: During summers 2012 and 2013, I worked in a research internships at the USDA-ARS Maryland under the supervision of Dr. Manan Sharma.

Description of career experience (what I learned): While working at USDA ARS I learned a lot of new things like, how to use different lab equipment, think and resolve/react to several situations and problems that can occur in a laboratory. It's a lifetime experience that helped me grow as a professional.

What is your perception of agriculture now? Agriculture is the spinal cord of a society, without Agriculture we don't eat, and if we don't eat we don't live. It is essential in our lives.

How has this career experience broadened your employment opportunities? During my experience, I learned how to identify different microorganism that grow on plants and how long they live, so we can improve food safety. Knowledge acquired can open me doors in ARS research laboratories.



Career and research aspirations: Within five years, I aspire to finish my B.S in General Agriculture and find a job in USDA-ARS Maryland, ARS-TARS Puerto Rico or any other location. Also, I will like to continue my job, by visiting elementary schools and teaching the kids about Agriculture and its importance. In ten years I will like to have an establish career at USDA.

Skill Set: -Bilingual English/Spanish -detail oriented
-strong organizational skills -prioritize multiple projects
-efficient working with kids -microbiological techniques -proficient in Microsoft word and internet

Agriculture is the spinal cord of a society, without Agriculture we don't eat, and if we don't eat we don't live. It is essential in our lives.

The impact of my career experience: My career experience has impact me in different ways. It has helped me developed as a professional and as a human being. It also helped me notice what are my strengths and weaknesses, so I can work on them. Definitely this career experience has taught me a lot of thing that I really appreciate. This was a unique opportunity not available to everyone. During this career experience as an intern I learned techniques such as PCR, electrophoresis, how to use a spiroplatter, an autoclave, an spectofotometer etc. I also learned how to read and analyze the results. Definitely the skills I learned in my career experience will make me a competent scientist in the future. My long-term goal is to work as a research scientist at USDA.

Name: **Carmona-Ortega, Fabian**
Hometown: **San Juan, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Mechanical Agricultural Technology**
Expected date
of graduation: **May 2014**
Degree: **BS**
USDA Agency
of interest: **NRCS Bismarck, North Dakota**
Email: **Fabian.carmona1@upr.edu**

Career experience/location: Worked as a Soil Conservationist Student Trainee with North Dakota's NRCS at the New Rockford and Mandan Field Offices for two consecutive summers.

Description of career experience (what I learned): With these experiences, I learned about different conservation practices, how to work in an office environment, how to work with several GPS tools and specially how to work with producers in order to help them conserve the resources in their land.

What is your perception of agriculture now? After these experiences, my perception of agriculture has changed from one of production only, to one of production and conservation for a better agricultural production.

How has this career experience broadened your employment opportunities: During these internships, I have worked at different NRCS facilities with researchers from ARS, which can open opportunities of working with the ARS or other NRCS offices.

Career and research aspirations: One of my goals is to finish my BS in mechanical agricultural technology and continue onto a Master's degree in agronomy focusing my research on soil health promoting practices for clayey soils in the Caribbean. Five or 10 years from now I would like to work with the NRCS in Puerto Rico, promoting soil health among the farms in the island.

Skill Set: -Bilingual English/Spanish (written and oral) -computer skills with Windows programs and others -field work reliability -time efficiency -data analysis -photography -lab work skills -office work -ArcGIS and GPS -basic skill -problem solving skills

The impact of my career experience: In the first place, this career experience has given me the opportunity of developing my communication skills in English since my first language is Spanish. Other benefits from this internship include the development of my laboratory work skills since during my last summer internship I spent ¼ of my time working with researchers from the ARS offices at Mandan, North Dakota helping them in the process of sampling and preparation of samples for further analysis. We actually spent some time analyzing soils from different fields under different management practices to observe how those practices affected soil health in each field. Added to this, I spent more than half of this summer reading academic documents and attending field tours related to soil health promoting practices and worked with several producers that managed their farmland, which has made me understand that my future research should be focused in this subject.



After these experiences, my perception of agriculture has changed from one of production only, to one of production and conservation for a better agricultural production.

Name: **De Jesús Silva, Jorge D**
Hometown: **Patillas, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate Mechanical Engineering**
Expected date
of graduation: **May 2015**
Email: **Jorge.dejesus5@upr.edu**

Description of career experience (what I learned): I worked in a material science laboratory in which we tested structural and compression characteristics of sintered recycled glass designed for the remediation of polluted soils, which helped me learn every day through daily experiences. At the laboratory we worked with samples and measured data of compression and percolation.

What is your perception of agriculture now? Agriculture is essential for the world and with all the technology and research that is currently developed in universities we are benefiting by its impact.

How has this career experience broadened your employment opportunities? Experience working in labs and familiarization with equipment will help me open doors in the future employment and the knowledge about these techniques can open doors at USDA.

Career and research aspirations: I aspire to finish my bachelor degree in mechanical engineering within the next two years. In the next 5 years I would like to graduate with my MS degree in mechanical engineering and find a job at the USDA. I would love to work for the future of agriculture.

Skill Set: -Good communication skills in English and Spanish -prepared to work in different computer Software's such as AUTOCAD, Word, Excel, Power Point and Mat Lab

The impact of my career experience: The research experiences at the University of Puerto Rico Mayaguez campus have given me the necessary skills to become an experienced scientist in the near future. I did research in gathering evapotranspiration data using different procedures and making a more efficient method of measure. Tested structural and compression characteristics of sintered recycled glass designed for the remediation of polluted soils. Also participating of with the Globe Program has helped me work with K-12 students giving them workshops and making them think in their future careers.



Agriculture is essential for the world and with all the technology and research that is currently developed in universities we are benefiting by its impact.

Name: **Feliberty-Méndez, Nicole Marie**
Hometown: **Yauco, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Chemistry**
Expected date
of graduation: **May 2016**
Degree: **Bachelors Degree in Chemistry**
USDA Agency
of interest: **FSIS**
Email: **nicole.feliberty@upr.edu**

Career experience/location: Worked in the research laboratories of Dr. Marco De Jesús from the Department of Chemistry, in the University of Puerto Rico, Mayaguez Campus, extracting vitamin A from UHT Milk.

Description of career experience (what I learned): I have gained knowledge of the advantages and benefits of Vitamin A. Also, I have learned how to prepare the solutions and samples for a good extraction, making modifications in old methods to create or improve techniques for a better determination and quantification of vitamins on milk.

What is your perception of agriculture now? Agriculture is one of the most important concerns in the world today. The production of crops, transforming them into many different ready-to-eat meals is of great importance for the production of necessary food supply to feed our nation.

How has this career experience broadened your employment opportunities? My work in the laboratory has helped me learn how to use the HPLC for determination and quantification of components in food samples. The use of different analytical instrumentation will help me achieve a broader knowledge for my work after graduation.

Career and research aspirations: My goals are to finish studying my Bachelors Degree in Chemistry and continue graduate studies in Food Science or Chemistry. Being a part of the USDA program is one of my future goals. In approximately 10-12 years, I can see myself working in USDA helping to bring high quality food for the consumer.

Skill Set: -Bilingual English/Spanish -computer Office 2010, Excel -analytical techniques -microscopy -leadership -HPLC-biology -chemistry -presentations PowerPoints -meeting participation -decision-making -motivation -teamwork -patience -responsibility -analytical balance -UV spectrophotometer -planning -organizing -time and project management

The impact of my career experience: This research opportunity has helped me gain skills for future jobs. Also, as an analytical chemist, I learned how to work under pressure. I aspire to acquire more education in the development of new methods and techniques for better and faster methods for the analysis of foods. I have modified validated methods in order to obtain better results. The importance of my project is to develop better and faster methods for the analysis of components and adulterants in UHT milk. My future achievements would be to work in the analysis of food contamination including research on food pathogens.

Agriculture is one of the most important concerns in the world today. The production of crops, transforming them into many different ready-to-eat meals is of great importance for the production of necessary food supply to feed our nation.



Name: **García-Rodas, Mario**
Hometown: **Guaynabo, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Agronomy and Soils**
Expected date
of graduation: **December 2015**
Degree: **BS**
USDA Agency
of interest: **Soil Conservation**
Email: **mario.garcia3@upr.edu**

Career experience/location: I worked with APHIS in the Luis Muñoz Marín International Airport in Carolina, Puerto Rico.

Description of career experience (what I learned): Half of my work was in the field recollecting fruit flies from fly traps across the metropolitan area. The other half of the job consisted of identifying the insects in the laboratory and documenting the findings. We also did a survey in Naranjito, Puerto Rico in an orange field.

What is your perception of agriculture now? Protecting our nation from invading pests and insects is very important for our economy and agriculture. USDA plays a major role in the control of invasive species that attack fruits and vegetables, which is very important for our economy.

How has this career experience broadened your employment opportunities? It has broadened my employment opportunities because I have gained laboratory and field experience in the control of invasive species that may damage crops. This summer research will help me to compete for future career opportunities at USDA.



Career and research aspirations: In the next 5 years I see myself finishing a master's degree in soil conservation at UPR- Mayaguez or other institution on the mainland. My main goal is to own a fertile farmland in Puerto Rico to start my small agronomical business to improve the agricultural economy in the island. I will like to participate of several career experiences to acquire all of the necessary skills needed to achieve my goals.

Skill Set: -Language fluent in English and Spanish -proficient in Word, Excel and Power Point -experience in field work -experience in laboratory work

Protecting our nation from invading pests and insects is very important for our economy and agriculture. USDA plays a major role in the control of invasive species that attack fruits and vegetables, which is very important for our economy.

The impact of my career experience: The experience during the summer of 2013 in the internship with APHIS helped me to learn how to distinguish between native fruit flies and dangerous invasive fruit flies like the Mexican or the Mediterranean fruit flies. I also learned how to document these findings in the lab. The experience was also fun because I traveled across the northern part of Puerto Rico looking for flies in the designated traps. During these trips, my supervisors explained and taught me the procedures to change the baits, located mango seed weavers and more. I now know the importance of protecting our crops from dangerous invasive species and I would like to gain more experience in other fields to expand my knowledge.

Name: **Grajales Cortés, Rosiel M.**
Hometown: **Isabela, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Soils**
Expected date
of graduation: **May 2015**
Degree: **None**
USDA Agency
of interest: **Natural Resources Conservation Service NRCS**
Email: **rosiel.grajales@upr.edu**



Career experience/location: The past two summers I had the experience to work with the USDA-Natural Resources Conservation Service at North Carolina. The first one was at Robeson County with the District Conservationist Jeremy Roston Navas as my supervisor. The second summer experience was at Iredell County under the guidance of the District Conservationist Jim Propst. This semester I am working with Iowa Sate University with Mrs. Nieves Rivera as my supervisor.

Description of career experience (what I learned): During these internships I learned several skills that have had helped to grow as a professional. With the NRCS Agency I learned about the Highly Erodible Compliance Reviews (HEL), Crop Rotation Program (CRP), Soils Investigation, Surveying, among others. Currently, with Iowa State University, I am learning about research, Crossing Block's, developing soy beans seeds with disease resistance and crop management.

These types of experiences had helped me to gain knowledge in different aspects of agriculture. I learned about the field, but also about leadership and how to deal face to face with people.

What is your perception of agriculture now? Agriculture is the basis of life. Everything around us wouldn't be done without agriculture. Every human must learn its importance and must have the initiative to work in this area. Our new generations grow with less interest in agriculture and that's bad for our society. Without agriculture there's no food, no existence of human life.

How has this career experience broadened your employment opportunities? These types of experiences had helped me to gain knowledge in different aspects of agriculture. I learned about the field, but also about leadership and how to deal face to face with people. Thanks to these internships I am well prepared to work with the NRCS Agency. They are waiting for my graduation day to start working for them and also Monsanto had asked me for an Internship with them.

Career and research aspirations: My short term goal is to accomplish my Bachelors in Soils in the University of Puerto Rico at Mayaguez on May 2015. After my Bachelors, I will like to work with the NRCS Agency while I studying my Masters and PhD in Crop Science, in North Carolina State University. I wish to become a professor and researcher.

Skill Set: - Bilingual English/Spanish -computer bilingual English/Spanish -intermediate soils investigation -CRP -HEL compliances -conservation plans -survey

The impact of my career experience: During the Natural Resources Conservation Service internship, I learned about the impact of erosion on the fields affecting the crop yield and the ecosystem around it. The practices to prevent this are No-tillage and Grass Waterways. I also learned the basics of surveying for constructing a structure or for determine an HEL. The importance of the Conservation Crop Rotation is to control diseases or pests, also to promote wildlife. I learned that NRCS promotes the composter facilities to prevent soils and water contamination caused by leaching off a decomposing animal. With Iowa State University, I learned about crop management, but more importantly about the importance of creating disease resistance seeds.

Name: **Guzman-Perez, Nitza M.**
Hometown: **Bayamon, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Industrial Engineering**
Expected date
of graduation: **May 2015**
Degree: **BS**
USDA Agency
of interest: **ARS Beltsville Maryland**
Email: **nitza.guzman@upr.edu**

Career experience/location: UPRM Chemistry Department (Dr. Lopez-Moreno, PhD.) Evaluation of the toxicity and impact of CoFe_2O_4 nanoparticles (NPs) on the growth and development of the edible *Solanum Lycopersicum* plants. Catalase activity (CAT) in tomato plants by Spectrophotometry and nutrient quantification by ICP-MS. Evaluation of the plant protein content by the Bradford Assay and analysis of the impact of the NPs on the plant tissues.

Description of career experience (what I learned): The use of the following instrumentation and techniques: UV Spectrophotometer, FTIR, Plant Material Digestion Methods (microwave) and ICP-MS utilization, Plants growing at hydroponic systems, Six Sigma Green Belt for Process Improvement Certification.

What is your perception of agriculture now? Agriculture is the base of any society. Agriculture provides food, clothing and many other essential needs so people can have a better quality life. Agriculture provides jobs for a lot of people in the United States and around the world. As science research student I have the mission of promote and work hard for the sustentation of this important research area.

How has this career experience broadened your employment opportunities? I learned about agriculture science, including plants tissues, soils, composting and many others areas. It also allowed me to work as a research student and learned about laboratory methods and instrumentation, oral presentations and scientific reports. All these experiences will go to be very helpful for my future employment opportunities.

Skill Set: -Fluent Spanish and English -ability to communicate at all levels of the organization -knowledge of GDP & GMP -working knowledge of SAP software -Eng. Study -RACC & Validation procedure knowledge -proficient in Microsoft Office applications -basic knowledge in AutoCAD, MATLAB & Minitab

Career and research aspirations: In the next two years I hope to have a career opportunity related to the food industry. As I work as researcher I want to complete my master in this agriculture important area.



Agriculture is the base of any society. Agriculture provides food, clothing and many other essential needs so people can have a better quality life. Agriculture provides jobs for a lot of people in the United States and around the world. As science research student I have the mission of promote and work hard for the sustentation of this important research area.

The impact of my career experience: Agriculture is the main step of the food production. As CETARS research student I had the opportunity to understand and work with: plant growing process, nutrition components on plants tissues, soil and compost effect on the sowing, and many other aspect. This gave me an idea of the importance and the impact of agriculture as part of my future career aspiration.

Name: **Hernández-González, Liliana M.**
Hometown: **Arecibo, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Junior**
Major: **Civil Engineering**
Expected date
of graduation: **December 2014**
Degree: **BS in Civil Engineering**
USDA Agency
of interest: **Agricultural Research Service ARS**
Email: **liliana.hernandez1@upr.edu**



Career experience/location: I did an undergraduate research last summer at the University of Wisconsin-Madison in the Modified Asphalt Research Center where I worked with asphalt mixtures produced at ambient temperatures for the preservation and maintenance of pavements.

Description of career experience: From this experience I learned on how to produce asphalt cold mixtures for the slurry and chip seals surface treatments. These cold mixtures have fewer emissions to the environment and reduce the energy consumption. I worked specifically on testing the early and late bond strength of the mixtures using the Bitumen Bond Strength Test and apparatus. Also, I learned about the different projects that the graduate students are doing there and how is the live as a graduate student working in a lab.

What is your perception of agriculture now? The agriculture, the water quality and the land available for agriculture are three essential aspects for the people in this world. It is our responsibility to educate our society and work hard to improve the quality of water and the food that we consume.

How has this career experience broadened your employment opportunities? I have more knowledge in the different techniques of how the asphalt mixtures are designed and how they are applied to the road surface. In addition, I have gain more knowledge of the different components that affects the bond strength of a mixture as the types of aggregates, curing temperatures and times, asphalt binders, among others. Also, with this experience I have learned how to develop an experiment design and how to create a research poster.

The agriculture, the water quality and the land available for agriculture are three essential aspects for the people in this world. It is our responsibility to educate our society and work hard to improve the quality of water and the food that we consume.

Career and research aspirations: My short term goals are to obtain a COOP or career experience with the USDA Agency before I graduate. My long term goals are to be accepted in a Graduate School in order to obtain a Master and Doctor's degree in the field of Material Science or in Environmental and Sustainable Engineering. In the future, I see myself working in a research lab such as in the Agricultural Research Service of the USDA.

Skill Set: -Microsoft Office (Word, Excel, PowerPoint) -visual basic application (VBA), Autodesk, AutoCAD, Civil 3D, Google SketchUp Program, ImageJ -leadership and team work skills -time management

The impact of my career experience: My career experience at the University of Wisconsin-Madison impacted my life in many aspects. It helped me to decide that I want to pursue graduate studies and obtain a PhD. Also, it helped me to do networking with many professors in different research areas. Now I have more confidence on my abilities and learned on how to manage my time in order to finish a large research project in just 10 weeks. Last summer, I worked in a project where I tested more than 300 samples. I thought that an important thing that I learned from this experience was to work under pressure and to prepare weekly reports for my research mentor that will help me in future work experiences. In addition, this experience helps me to see that there are many opportunities for us and that the key is to work hard to obtain them and that anything is impossible.

Name: **Lugo-Avilés, Leany E.**
Hometown: **Lajas, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Senior**
Expected date
of graduation: **May 2014**
Degree: **BS**
USDA Agency
of interest: **ARS Beltsville Maryland**
Email: **leany.lugo@upr.edu**

Career experience/location: I worked with the Dr. Laura Lopez at UPRM with Alfalfa plant and the uptake of Zn. The Zn used in the experiment was obtained from its release from de wash solution of water tires crumb rubber.

Description of career experience (what I learned): I worked in the lab with Alfalfa plants in a hydroponic system. I learned how to use a microwave digestion system and, the ICP-MS and the AAS instruments.

What is your perception of agriculture now? Agriculture is an essential part in all societies. We as future researchers and farmers need to help promote and expand the opportunities and knowledge related to the field of agriculture.

How has this career experience broadened your employment opportunities? I learned how to cultivate plants in hydroponics and how to use them in research to evaluate the impact of nanoparticles in agriculture. The project this has given me the experience to involve myself in research and helped me see what I can aspire to be in the future.

Career and research aspirations: In the next 5 years I see myself in the course of finishing my PhD. In the next years I hope to develop myself more as a researcher and professional. My goal is to land a job as a researcher in the ARS, TARS (Mayaguez) or to work in a University as a professor or researcher.

Skill Set: -Bilingual (Spanish and English) -good teamwork and leadership -proficient in Microsoft Office Word, Excel, PowerPoint -team oriented and fast learner -problem solving and analytical skills -interpersonal and artistic abilities -proficient in MATLAB and Chematix simulator

The impact of my career experience: I got to work and interact with different researchers and other students just like me. My main goals for now are to learn as much as I can, experience the many different aspects of the agriculture and related sciences through the CETARS program and the career experiences. One of my priorities is to continue studying and obtain a PhD and impact the field of agriculture with my future research projects.



Agriculture is an essential part in all societies. We as future researchers and farmers need to help promote and expand the opportunities and knowledge related to the field of agriculture.

Name: **Maldonado-Corchado, Susej M.**
Hometown: **Isabela, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Agricultural Extension**
Expected date
of graduation: **December 2015**
Degree: **BS**
USDA Agency
of interest: **AMS Washington DC**
Email: **Susej.maldonado1@upr.edu**

Career experience/location: Worked in a career experience at the USDA-AMS in Washington DC under the supervision of Jeffery Haynes.

Description of career experience (what I learned): I worked on the preparation of certificates of plant variety protection office in the AMS program. I verified the documents submitted by the farmers for the protection of their crops by these certificates.

What is your perception of agriculture now? It is an essential part for the survival of the human species. We must learn to use new methods and technologies to increase agricultural production of our land to feed a growing human population.

How has this career experience broadened your employment opportunities? I learned to use a computer program "STARS" where you start the applications for certification of seeds; it is used to enter the data sent by the farmers to Plant Variety Protection Office.

Career and research aspirations: I aspire to finish first my baccalaureate degree in agricultural extension, and then my master's degree in the same field. Then find work at the USDA-AMS in Washington DC or the Department of Agriculture in Puerto Rico. I will put my effort and dedication to be one of the best Puerto Rico's agricultural extensions.

Skill Set: -Bilingual English/Spanish -good understanding of computer -good job database -drafting letters and other documents -good relationship with elementary grade students

The impact of my career experience: The experiences as an assistant at the USDA -AMS has given me the skills to become a competent professional in the near future. I worked with the database AMS program. I learned to use new methods of analysis and new techniques for the processing of new applications. These experiences prepared me to compete in the labor market especially in the USDA. My long term goals are to find a USDA -AMS position. This experience has helped me to know the methods of protection seeds across the United States and allowed me to meet and work with specialists of the program. It also gave me the opportunity to show that I am a highly motivated, person qualified to occupy a position in AMS program. My long-term goal is to work as a resource to farmers and people interested in agriculture all over the USA.



It is an essential part for the survival of the human species. We must learn to use new methods and technologies to increase agricultural production of our land to feed a growing human population.

Name: **Morales-Rivera, Ruben J.**
Hometown: **Naranjito, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Junior**
Major: **Agricultural Engineering**
Expected date
of graduation: **May 2016**
Degree:
USDA Agency
of interest: **AMS Washington DC.**
Email: **ruben.morales4@upr.edu**

Career experience/location: Volunteer Student for a summer career experience at the USDA-AMS Washington DC, under the supervision of William Francis, Director of Order Formulation and Reinforcement Division - Dairy Program.

Description of career experience (what I learned): My communications skills improved significantly and also the networking. I learned more about how the dairy milk industry is managed and how it operates within the US and outside.

What is your perception of agriculture now? Every single thing that surrounds us involves with some area of agriculture.

How has this career experience broadened your employment opportunities? This opportunity influenced me to gain more interest in the area of economics and marketing. Reason that I'm considering to do degree in economics too, the more you know, the more doors will open.

Career and research aspirations: Within the next five years, I aspire to finish my Degree in Agricultural Engineering and combine it with Agricultural Economics. Once I graduate I will seek a position at the USDA and contribute in the best way I can, helping people and my Country. Ten years from now, I aspire to be a leader in my area of work.

Skill Set: -Language fluency English/Spanish -basic Portuguese/French -interpersonal skills -work well with others -energetic -organized -communication skills -confidently speaking publicly -fast learner -adapt to situations -laboratory techniques

The impact of my career experience: The last summer career experience at the USDA-AMS in Washington has given me another perspective of what might exist in the future and what branches or studies should I study within the university to get the job I want. Having the knowledge in different subjects, can open more doors, and have more job options. This experience made me get enveloped more with economic and market issues. This was thanks to an excellent professional group of co-workers, who explained to me very well their role inside the department. My goal is to give the best of me, and step by step strive for the maximum point of my career. My long-term goals for now, are to graduate and become a professional in my area, and contribute with my knowledge in any USDA agency.



Every single thing that surrounds us involves with some area of agriculture.

Name: **Navarro-Acevedo, Krystel A.**
Hometown: **Aguadilla, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Senior**
Major: **Crop Protection**
Expected date
of Graduation: **December 2013**
Degree: **BS**
USDA Agency
of Interest: **ARS**
Email: **krystel.navarro@upr.edu**

Career experience/location: Worked as a Soil Conservationist at the USDA-NRCS at Anderson, South Carolina under the supervision of Mike Banks.

Description of career experience (what I learned): I was able to learn about natural resources conservation practices including how to prepare conservation plans, work with GIS and other programs to develop the entire plan. I was also able to visit farmers and assist them in the office.

What is your perception of agriculture now? Agriculture is very important in every aspect of our everyday life. It doesn't matter in which field we are, there are always a way to get involve in Agriculture. A country must relay in Agriculture not just as a way to survive, but also as the way to be self-dependent and to provide food security for the entire citizens.

How has this career experience broadened your employment opportunities? It has helped me develop a network within the USDA agency and in the development of research, leadership and personal skills.

Career and research aspirations: I will pursue my PhD. at Ohio State University in plant pathology. My future goal is to work for the USDA-ARS Agency in the United States or Puerto Rico. I will also like to work for the University of Puerto Rico as a professor if the USDA job is not available.

Skill Set: -Bilingual English/Spanish -basic level Portuguese -leadership skills -computer basic skills -advanced laboratory skills

The impact of my career experience: My experiences with the CETARS project the have taught me skills that will be beneficial to my career. Learning not just about research techniques but also about how to create network between fields and between people is the key for success. I have work in many areas where collaboration between people is very important in order to develop more efficient project in less time. I have also learned to expand my limits, traveling to different States far from home. I have also improved my English exposing my self to internships in United States.



Agriculture is very important in every aspect of our everyday life. It doesn't matter in which field we are, there are always a way to get involve in Agriculture. A country must relay in Agriculture not just as a way to survive, but also as the way to be self-dependent and to provide food security for the entire citizens.

Name: **Nazario Del Toro, Gerardo A**
Hometown: **Mayagüez, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Civil Engineering**
Expected date
of graduation: **May 2015**
Degree: **BS Civil Engineering**
USDA Agency
of interest: **US Forest Service USFS, R&D-Wisconsin**
Email: **gerardo.nazario@upr.edu**

Career experience/location: Worked in a research project at the USDA-CETARS project at University of Puerto Rico Mayaguez under the supervision of Dr. O. Marcelo Suárez.

Description of career experience (what I learned): Learned how to characterize Titanium Dioxide samples, to use a furnace and various instruments (cutting, compression) for sinterizing and preparing samples; how to use an optical microscope for photos of samples. Also learned how to work as part of a team.

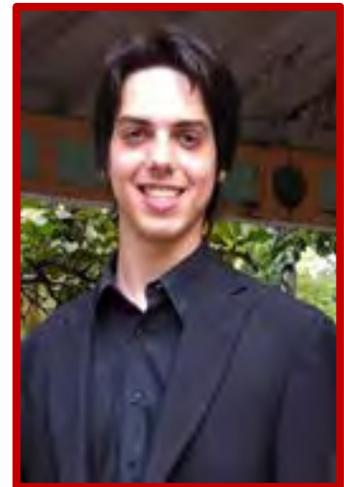
What is your perception of agriculture now? It is essential for life. We must learn how to use the technologies available to us in order to increase agricultural yields to maintain a healthy population.

How has this career experience broadened your employment opportunities? The experience I acquired on my research project capacitates me to work and understand most instruments and programs required for the characterization and analysis of ceramics. Knowledge about these techniques can open doors in research laboratories.

Career and research aspirations: I aspire to finish my bachelor degree in civil engineering and surveying and afterwards get a master's degree or a PhD on civil engineering within the next five years and find a job at the USDA-Forest Service or in the United States Army Corps of Engineers. In 10 years I would like to be a group leader and have an established career.

Skill Set: -Bilingual English/Spanish -computer literate -Office 2013 -sinterizing on laboratory furnace -optical microscope analysis programs -characterizing samples -leadership skills

The impact of my career experience: The research experiences at the CETARS program have given me the necessary skills to become a competent researcher, which will help me in my future graduate program. I worked with instrumentation available at our institution that gives me experience for future jobs. I also learned to use methods of analysis of agricultural interest, such as pesticides; these experiences will prepare me to compete in the job market. My long term goals are to find a research position at USDA-Forest Service Research and Development.



It is essential for life. We must learn how to use the technologies available to us in order to increase agricultural yields to maintain a healthy population.

Name: **Negrón Avilés, Francisco A.**
Hometown: **Mayagüez, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Chemical Engineering**
Expected date
of graduation: **May 2016**
Degree: **BS in Chemical Engineering**
USDA Agency
of interest: **ARS Peoria, Illinois, FS-FPL Madison, Wisconsin**
Email: **francisco.negron1@upr.edu**

Career experience/location: Worked in a research internship at the USDA-FS Forest Products Laboratory in Madison, Wisconsin under the supervision of Dr. Richard Bergman.

Description of career experience (what I learned): We were able to make a life cycle assessment of two short-span secondary road wood and steel bridges and analyze the environmental impacts of both structures; we concluded that using organic salt treated wood bridge would have less environmental impact than creosote treated wood bridge. The same environmental impact was access for the lightweight steel bridge compared to a homogenous steel bridge.

What is your perception of agriculture now? We need to maximize the usage of the lands for agriculture because human beings are multiplying and the lands are decreasing. It is very important to optimize food production since it is necessary for future generations.

How has this career experience broadened your employment opportunities? In the USDA internship I learned how to use life cycle assessment software for the analysis of the environmental impact of materials. I also learned different laboratory skills and techniques that can open doors in ARS research laboratories.

Career and research aspirations: In 5 years I aspire to finish my B.S. in chemical engineering and to enter in a Master degree program in Material Sciences and Engineering and apply this knowledge to agriculture. In 10 years I would like to finish a PhD. program and find a job related to agriculture and nanotechnology at the USDA-ARS Peoria, Illinois, USDA-NIFA, USDA-FS. I also want to be a group leader in the USDA and be mentor of students.

Skill Set: -Computer skills -Microsoft Office 2010 -excellent Spanish and English -basic French -laboratory general and specialized instruments -HPLC -AAS -raman muffle furnace laboratory microwave -pH meter -leadership and teamwork skills

The impact of my career experience: The research experiences at USDA-FS and CETARS has given me the necessary skills to become a competent scientist in the near future. In USDA-FS I worked with recent life cycle assessment software's for the analysis of different materials that compose wood and steel bridges. I also learned how to use this software. This experience has allowed me to meet and work with professionals and scientist at this institution which has helped me in the research. It also has allowed me the opportunity to show them that I am a highly motivated and competent person. CETARS gave me the tools for being a professional by supporting me and allowed me to participate of public schools k-12 students outreach and teach them the importance of agriculture. These experiences will prepare me to compete in the job market especially at USDA. My long term goals are to find a research position in the area of where I can use my knowledge in nanotechnology in an agency, and become a group leader at USDA ARS.



We need to maximize the usage of the lands for agriculture because human beings are multiplying and the lands are decreasing. It is very important to optimize food production since it is necessary for future generations.

Name: **Otero-Pichardo, Joshua**
Hometown: **San Juan, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Agronomy**
Expected date
of graduation: **December 2014**
Degree: **BS in Agronomy**
USDA Agency
of interest: **ARS Beltsville Maryland**
Email: **joshua.otero@upr.edu**

Career experience/location: Worked in an internship at the USDA-NRCS North Dakota under the supervision of Michelle Doyle, Morton County District Conservationist.

Description of career experience (what I learned): During my work experience with the NRCS I learned soil classification, soil mapping, worked with crops cover, participated in conferences about no till, soil health. I also worked with the status review of Conservation Reserve Program (CRP), learned about wetlands, National Resources Inventory, Wildlife Habitat Evaluation and with Plant Material Center Grass Clippings / Planting Evaluations.

What is your perception of agriculture now? Besides being vital for humans agriculture is a field that involves many branches of science and job opportunities. New technologies promise to be a major positive impact on agriculture products and the economy of the country.



How has this career experience broadened your employment opportunities? I went under the SCEP program which guides their internal students to have the necessary training in order to compete in the future for a permanent job in the USDA. Having experience prior to graduation puts me one step ahead of others.

Career and research aspirations: I aspire to finish my degree in agronomy and participate in every internship and undergraduate research opportunities that arise. Within the next five years I aspire to finish graduate studies and find a job at the USDA-NRCS, ARS, APHIS and Forest Service in Puerto Rico or any state of the United States. In ten years I aspire to have a solid record as a federal employee and I hope I have reached a position of leadership within the agency. I see myself being realized professionally and will have my own land to produce food and create jobs for my country.

Besides being vital for humans agriculture is a field that involves many branches of science and job opportunities. New technologies promise to be a major positive impact on agriculture products and the economy of the country.

Skill Set: -Bilingual English/Spanish -computer literacy -microorganism inoculation and media preparation -soil mapping -soil classification testing -cation exchange capacity testing -electrical conductivity testing -spectrophotometry technique -extraction of DNA technique -PCR technique

The impact of my career experience: The research experiences and the summer internship at the USDA-NRCS have given me the necessary skills to become a competent scientist in the near future. My career experience gave me an idea of what will be my future job and what I will have to be facing. The internship gave me experiences that placed me a step up ahead of the competition to get a job at the USDA. I had the opportunity to put into practice my acquired knowledge in college. Thanks to this career experience I now I know what extra courses I should take to give my best performance as an employee and as a scientist. Now I am more focused on what will be my graduate studies. There are opportunities to be part of USDA, you just need to know how to take advantage to the fullest.

Name: **Pérez-Rodríguez, Leomar D**
Hometown: **Camuy, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Chemical Engineering**
Expected date
of graduation: **May 2014**
Degree: **BS in Chemical Engineering**
USDA Agency
of interest: **ARS Beltsville Maryland**
Email: **leomar.perez@upr.edu**

Career experience/location: I worked in a research project at the UPRM Chemistry and General Engineering departments.

Description of career experience (what I learned): Currently I'm working making thin films of biopolymers that could be used to preserve foods without harming the environment.

What is your perception of agriculture now? Is the basis of our civilization and must be improved to sustain a growing population.

How has this career experience broadened your employment opportunities? I have used instruments for the characterization of the thin films and learned lots of concepts that are handy in the industry.

Career and research aspirations: After graduating I hope to find a job where I feel that I'm doing something good and for the progress of humanity including USDA.

Skill Set: -Bilingual English/Spanish -computer literate -Office 2010 -NMR experience -thin films preparation

The impact of my career experience: My experience has awakened the possibility of entering graduate school and had given me skills that are valuable on the industry of material science and environmental protection. One of my career goals is to have a job at USDA. I want to contribute to expand scientific knowledge that will result helpful to sustainable agriculture.



Is the basis of our civilization and must be improved to sustain a growing population.

Name: **Ramirez-Hernandez, Maricely**
Hometown: **Aguadilla, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Chemical Engineering**
Expected date
of graduation: **May 2016**
Degree: **BS in Chemical Engineering**
USDA Agency
of interest: **ARS Beltsville, Maryland, FS-FPL Madison, Wisconsin**
Email: **maricely.ramirez@upr.edu**

Career experience/location: Worked in a research internship at the USDA-FS Forest Products Laboratory in Madison, Wisconsin under the supervision of Dr. Richard D. Bergman.

Description of career experience (what I learned): I worked on putting together a bill of materials for secondary road steel bridges and later used it to carry out a Life Cycle Assessment using Athena Impact Estimators and SimaPro7.

What is your perception of agriculture now: Agriculture entails a lot more than just field work, all areas of science are needed in order to have successful, safe, and sustainable food sources.

How has this career experience broadened your employment opportunities?
I learned how to use Athena Impact Estimators and several databases during summer. While in the program I have learned to use XRD, FT-IR, UV/VIS, and Z-Potential characterization techniques. I have learned to work with microwave synthesis methods as well.

Career and research aspirations: I aspire to finish my BS in chemical engineering within the next 2 years and find a job in an USDA agency as a researcher or related position. In 10 years I would like to have finished my PhD in Materials Science to apply it to food packaging and continue my career as a researcher at USDA

Skill Set: -Bilingual English/Spanish -computer literate Office 2010 -proficient in XRD, FT-IR, Z-Potential, UV/VIS spectrometry, TGA, optical microscopy

The impact of my career experience: The research experiences while being a part of the CETARS program have given me the necessary skills to become a competent scientist in the near future. I have learned several characterization techniques as well as synthesis techniques not taught in regular teaching laboratories. My oral skills have greatly improved since I am no longer that dubious of myself when presenting my project. These experiences will prepare me to compete in the job market, especially at USDA. My long term goals are to find a research position at an USDA facility. This experience has helped me to know the research that is being carried out in the University of Puerto Rico as well as in Forest Products Laboratory, where the research being conducted is like nothing I ever imagined. I understand these opportunities will better prepare me to become a competent researcher that would be honored to work for the USDA.



Agriculture entails a lot more than just field work, all areas of science are needed in order to have successful, safe, and sustainable food sources.

Name: **Román-Arocho, Gloricelly M**
Hometown: **Moca, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Sophomore**
Major: **Chemistry**
Expected date
of graduation: **May 2016**
Degree: **BS**
USDA Agency
of interest: **ARS Beltsville Maryland**
Email: **gloricelly.roman@upr.edu**



Career experience/location: I will have the opportunity this year to go on a research internship with the University of Nebraska- Lincoln and NARS. I also have been working at the research laboratory of Dr. Felix Roman under de mentorship of PhD student Victor Fernandez.

Description of career experience (what I learned): I have been working in the use of magnetic nanoparticles and human hormones studding their interaction with plants. I have use instruments such as HPLC for their analysis. I hope that this summer 2014 I will learn new things, in order to grow in intellect and to perfectionalize my laboratory and research skills. I believe that this experience will be enriching and that I will excel in this program.

What is your perception of agriculture now? Agriculture is essential in our lives; we need agriculture in order to live. It is very important to foment the importance of agriculture to our society, since without it we would not be able to survive. We must support agricultures and try to help in the development of new technologies to increase and advance in agriculture.

How has this career experience broadened your employment opportunities? I hope that this new opportunity will open me more doors in future internships with any USDA Agency, since it will help me learn more about agricultural research.

Career and research aspirations: Looking forward to the future, my long term goal is to be admitted to graduate school and graduate with excellent grades and find a job where I can apply what I have learned.

Agriculture is essential in our lives; we need agriculture in order to live. It is very important to foment the importance of agriculture to our society, since without it we would not be able to survive. We must support agricultures and try to help in the development of new technologies to increase and advance in agriculture.

Skill Set: -Fully bilingual excellent skills in writing, reading, and speaking in both English and Spanish. I am very good at teamwork and also have leadership skills. Excellent experience in communication skills. I have been awarded for my writing skills, including essays, papers, and poem writing. Familiarized with internet researching, and also with computer programs such as Microsoft Word, PowerPoint, and Excel. Familiarized with laboratory technologies and skills such as HPLC-DAD, nanoparticle synthesis, hydroponic systems, dilutions, plant germination, and the calculation of the poing of zero charge.

The impact of my career experience: I love to go on a summer internship, where I could acquire more laboratory, teamwork, and working skills which Cn be an asset for a future employment. Also to be able to participate in other USDA internships and coops in order to grow as a future professional. This experience is helping me to grow as a person, in intellect and professionally. It has been of a huge impact in my development. I have been working on a research lab, using nanotechnology in hidroponic plants, helping and contributing to the development of new technology in agriculture. This has been a great experience that I will never forget and it has been of huge impact in all the aspects of my life.

Name: ***Sepúlveda López, Wilniady***
Hometown: **Hormigueros, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Chemistry**
Expected date
of graduation: **December 2015**
Degree: **BS in Chemistry**
USDA Agency
of interest: **Food and Nutrition Service FNS**
Email: **wilniady.sepulveda@upr.edu**

Career experience/location: Worked in a research project with CETARS program under the supervision of Dr. Marco A. De Jesús.

Description of career experience (what I learned): I worked in the development a new method to find bacteria in food. I used Raman Spectroscopy and an electroevaporisator to synthesize silver nanoparticles.

What is your perception of agriculture now? It is vital for the subsistence of the entire humanity. We can Learn and development new technologies to increase nutritional facts and healthier food.

How has this career experience broadened your employment opportunities? I learned how to use Raman spectroscopy and how to analyze bacteria in a PDMS with silver nanoparticles. Know about these techniques would open doors in the future.

Career and research aspirations: I aspire to finish my B.S. then complete a M.S. in Food Chemistry or related field. In five years, I see myself with graduate degree and working in the USDA. In ten years I want to be an Agency's Director in one of the USDA agencies, preferably FNS.

Skill Set: -Bilingual Spanish/English -computer literate Office -leadership skills -microbiological techniques
-good working in groups -fast learning

The impact of my career experience: The undergraduate research experience gave to me another vision of the importance of the food science. Actually the agricultural science and related fields is increasing to provide better services, safety and healthy foods. I want to be one of these scientists and contribute in the development of techniques to ensure the safety, quality and health of the agricultural products. I will love to work in at USDA, where I can contribute with my knowledge, efforts and dedication to increase food safety.

The undergraduate research experience gave to me another vision of the importance of the food science. Actually the agricultural science and related fields is increasing to provide better services, safety and healthy foods.



Name: **Smith Torres, Darsy K.**
Hometown: **Aguas Buenas, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Senior**
Major: **Crop protection**
Expected date
of graduation: **December 2014**
Degree: **BS**
USDA Agency
of interest: **ARS Beltsville Maryland**
Email: **darsy.smith@upr.edu**

Career experience/location: I worked as a soil conservationist in the USDA-NRCS Kalispell, Montana and as a biological technician at the USDA-ARS Beltsville, Maryland. Also research in the plant breeding program of pumpking at the Agricultural Experiment Station of Puerto Rico looking for resistance to Papaya ringspot virus. At the University of Maryland –College Park collaborated in a research to find the salt tolerance on mutant plant of *Arabidopsis thaliana*.

Description of career experience (what I learned): I experienced a professional and personal improvement by orienting the citizens about natural resources issues, how the agency can help them to conserve their fields. Also built maps with GPS's programs and the data in the Web Soil Survey. I also improved my leadership skills.

What is your perception of agriculture now? I learned about the importance to educate about the agriculture issues including food security.

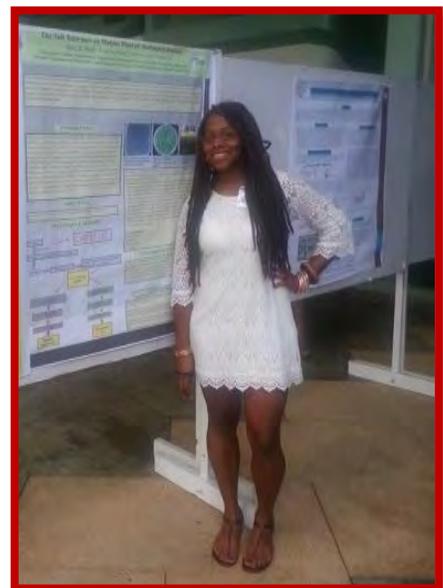
How has this career experience broadened your employment opportunities? The Acquired experience at the field and at the laboratory level including experiences as a biological technician prepared me to compete for future employment at USDA.

Career and research aspirations: I will graduate with a bachelor degree in Crop Protection on December 2014. During the next 5 years I will work on a PhD program related to plants. In 10 years I would like to collaborate or work as a scientist in the USDA-ARS.

Skill Set: -Extract DNA from plants -ELYZA test -electrophoresis -aseptic techniques -design experiment sampling -maintenance nursery planting site -Infostat -web soil survey -build maps -GPS

The impact of my career experience: The career experiences with the USDA have improved my leadership, the ability to find solutions to the problems efficiently and the ability to communicate in English. Also it made me understand that I really want to be focus on my education until finishing graduate school with a PhD. The K-12 experiences have helped me to express myself when I'm teaching. Now I feel the obligation to learn the concept very well such I can teach and share the information with the K-12 students from public schools and motivate them to study agriculture or related careers.

The career experiences with the USDA have improved my leadership, the ability to find solutions to the problems efficiently and the ability to communicate in English. Also it made me understand that I really want to be focus on my education until finishing graduate school with a PhD.



Name: **Vega Suárez, Ana María**
Hometown: **Mayaguez, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Animal Science**
Expected day
of graduation: **May 2016**
Degree: **PhD in Veterinary**
USDA Agency
of interest: **FSIS**
Email: **ana.vega4@upr.edu**

Career experience/location: Worked as a Food-Inspector with FSIS-USDA. This career experience was under the supervision of Investigator William Tirado at Guaynabo, Puerto Rico. I also worked doing K-6 outreach activities with elementary students in Mayaguez and Hormigueros.

Description of career experience (what I learned): I have been working for the CETARS program since August 2012 to present in the outreach project. I have learned about different fields of agriculture, how to be a leader and I have improved my relationships with people from different ages, including children.

What is your perception of agricultural now? Agriculture is the basis for human survival and it is very important to learn how to improve old methods to increase productivity in agriculture.

How has this career experience broadened your employment opportunities? Working with CETARS program would probably help me get a job with USDA, even as a veterinarian. It can also help me get new summer internships that are related to my field.

Career and Research aspirations: I aspire to finish my bachelor's degree in Animal Science and to become a Veterinarian or to continue with a Master's Program in Animal Science. In 10 years, I see myself working with animals, either as a veterinarian or working in a farm.

Skill Set: -Computer programs Word, Excel, PowerPoint, Movie Maker, and Camtasia -bilingual English/Spanish -good interpersonal -communication skills -animal science related skills vaccination, castration, slaughtering, feedlotting

The impact of my career experience: The outreach experience with the CETARS program has given me the opportunity to acquire new knowledge about Agriculture and has taught me the importance of using the scientific method in Agriculture. I also learned about public speaking, how to be a leader, how to be a teacher and how to manage my time better. It has also allowed me to meet and work with food inspectors, with food investigators and with veterinarians from FSIS-USDA. My long term goals are to become Veterinarian or get a Master's Program in Animal Science. If I reach my goal as a Veterinarian, I would like to work in a Zoo with large animals or work with FSIS-USDA in food inspection service. Otherwise, I would like to go to graduate school, in a program related to farm animal reproduction.



The outreach experience with the CETARS program has given me the opportunity to acquire new knowledge about Agriculture and has taught me the importance of using the scientific method in Agriculture. I also learned about public speaking, how to be a leader, how to be a teacher and how to manage my time better.

Name: **Velazquez-Nieves, Glory M.**
Hometown: **San Sebastian, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Undergraduate**
Major: **Chemistry**
Expected date
of graduation: **May 2015**
Degree: **Bachelor in Chemistry**
USDA Agency
of interest: **APHIS**
Email: **glory.velazquez@upr.edu**

Career experience/location: Worked in the research laboratories of Dr. Felix Roman, found in the Department of Chemistry, University of Puerto Rico Mayaguez Campus, synthesizing a variety of cross-linked chitosan beads.

Description of career experience (what I learned): Through experimentation, I have gained knowledge on Chitosan benefits, strengths, imperfections and how they are able to attach different pollutants. I have learned to prepare solutions of chitosan-cellulose, chitosan-glutaraldehyde and others in order to improve the mechanism and structure of the bead.

What is your perception of agriculture now? Agriculture is the set of skills and knowledge to cultivate the land. It comprises a set of human actions that transforms the natural environment to make it more suitable for the growth of crops.

How has this career experience broadened your employment opportunities? I'm currently learning how to use the HPLC to identify and quantify the components in various mixtures. By learning how to manage this technique, I can expand my knowledge for future employment.



Career and research aspirations: I aspire to finish my BA in Chemistry and begin Graduate studies in Chemistry or Pharmacology. To collaborate in the USDA-ARS program is one of my primary options. In 10 years, I visualize myself working in research laboratories. Later, I would like to educate future chemists as a professor.

Skill Set: -Bilingual English/Spanish -Office 2010 Excel -analytical techniques -microscopy -leadership -HPLC -biology -chemistry -Power Points -meeting participation -decision making -motivation -teamwork -patience -responsibility -analytical balance -UV -spectrophotometer -planning -organizing -time and project management

The impact of my career experience: By working in the analytical laboratory, I acquired various skills that can help me keep up with more complex and demanding jobs. I have learned how to organize my time in order to work under pressure. Over time, I hope to be sufficiently trained to perform more advanced research and analysis. During my time in this project, I did several synthesis of cross-linked chitosan to decontaminate the environment through adsorption mechanism. My long term goal is to be a part of several animal and vegetable health-related researches. Another of my aspirations is to work in the food chemistry research department.

Agriculture is the set of skills and knowledge to cultivate the land. It comprises a set of human actions that transforms the natural environment to make it more suitable for the growth of crops.

University of Puerto Rico CETARS - Mayaguez Graduate Students

Name: **Cotty Más, Marlyn**
Hometown: **Dorado, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayagüez Campus**
Rank: **Graduate**
Major: **Food Science and Technology**
Expected date
of graduation: **May 2015**
Degree: **Bachelor Degree in Chemistry**
USDA Agency
of interest: **FNS, FSIS, FDA**
Email: **marlyn.cotty@upr.edu**

Career experience/location: Worked as a laboratory research specialist in FALCC laboratory (NDL-USDA) in Virginia Tech University.

Description of career experience (what I learned): Performed total lipid extraction and gravimetric determination of total lipids in food samples, and performed methylation of lipid extracts from food sample for fatty acid analysis. Carried out extraction of ascorbic acid in diverse foods, and performed quantitative analysis of ascorbic acid in food extracts using HPLC.



What is your perception of agriculture now? Agriculture it's essential for a good nutrition and health. Agriculture in Puerto Rico and in other countries needs to be improved. We must learn how to use the latest technologies to increase agricultural yields to feed a growing human population.

How has this career experience broadened your employment opportunities? I learned how to perform a post-harvest quality study in a tropical fruit, chemical and proximal composition analysis in different food samples. All this knowledge and analysis experience can open doors to me in government agencies and research laboratories.

Career and research aspirations: I aspire to finish my MS in Food Science and Technology within the next 1.5 years and find a job at the USDA-FNS, FSIS or FDA. In 10 years I would like to be a group leader and have an established career record in a government agency.

Skill Set: -Bilingual English/Spanish communication -computer skills in Nutricionist Pro program, Chemstation[®], Turbochrom[®], Millennium[®] programs and Microsoft Office Suite: Word[®], Excel[®], PowerPoint[®] -proficient in HPLC, UV-Spectrophotometer, Polarimeter, TOC, Texturometer, Colorimeter, Conductivity-meter, Titrino and Coulometer Karl Fischer, RapidStill II, Ankom fat analyzer -equipment to train students in physical and chemical food analysis

The impact of my career experience: All the work and research experiences at FALCC research laboratory and pharmaceutical companies has given me the necessary skills to become a competent scientist for the future, and to meet and work with scientists. It was a great opportunity for me to continue developing my knowledge in sciences, learning how to use new instruments and lab equipment outside of my current scope. Developing methods to analyze food product samples was an absolute and huge step for my career. My long term goal is to find a leadership research position at USDA-FNS or FDA agency to have a significant and positive implication for human beings and the environment as well for developing a better quality of life.

Agriculture it's essential for a good nutrition and health. Agriculture in Puerto Rico and in other countries needs to be improved. We must learn how to use the latest technologies to increase agricultural yields to feed a growing human population.

Name: **Cuadrado-Castillo, Wesley**
Hometown: **Humacao, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Graduate**
Major: **Mechanical Engineering**
Expected date
of graduation: **May 2014**
Degree: **MS in Mechanical Engineering**
USDA Agency
of interest: **ARS Beltsville Maryland**
Email: **wesley.cuadrado@upr.edu**

Career experience/location: Worked at USDA-Agricultural and Marketing Service (AMS) at Washington, D.C. Performed a heat and ventilation loads analysis of USDA Farmer's Market Community Kitchen. Task required equipment selection and construction materials according to working parameters; maintaining a human-comfortable room temperature according to the Farmers Market localization. The job required the use of AutoCAD and Microsoft Office for the analysis.

Description of career experience (what I learned): By having the opportunity of working with an architect I learned to design structures according to the Florida's Building Code.

What is your perception of agriculture now? Agriculture is the essence of human life. Is important to design systems to develop and sustain products of good quality for our safety.



How has this career experience broadened your employment opportunities?

I enhanced my communication skills by working directly with customer at the Farmer's Market. Also I learned the requirements of structure design according to Florida's Building Code: Mechanical.

Career and research aspirations: I would like to continue studies in the field of Material's Science and Engineering or Chemical Engineering. I would love to work in the design of new materials that enhance food quality and production.

Skill Set: -Software: AutoCAD, Solid Works, Pro-Engineer, ANSYS, MATLAB, COMSOL, STAR-CCM+, Image J, Microsoft Office, Adobe Photoshop. - language: English and Spanish fully written and spoken -knowledge of: 1. metallography which includes cold working, heat treatments, polishing, etching and microscopy. 2.

powder sintering which include porosity, percolation and sieves analysis. 3. fabrication of glass/ TiO₂ composites by heterogeneous nucleation method. 4. characterization of materials by x-ray diffraction and tensile test machine.

Agriculture is the essence of human life. Is important to design systems to develop and sustain products of good quality for our safety.

The impact of my career experience: Career experience is essential to improve professional and personal goals by the acquisition of knowledge, ideas and in some cases, advices.

Name: **Diaz Diaz Eduardo J.**
Hometown: **Vega Baja, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayagüez Campus**
Rank: **Graduate**
Major: **Food Science and Technology (CITA)**
Expected date of graduation: **May 2014**
Degree: **BS Chemistry, MS in Chemistry**
USDA Agency of interest: **ARS**
Email: **Eduardo.diaz1@upr.edu**

Career experience/location: Mango Flavor and Aroma research at the Food Chemistry Research Laboratory located in Alfredo Ramirez de Arellano Building (UPR, Mayagüez).

Description of career experience (what I learned): I worked in the evaluation of different mango cultivars (*Mangifera indica* L.) in the process to obtain the fruit's natural essence. We have identified more than 60 volatile compounds in both, the fruit and the extracted fruit essence.

What is your perception of agriculture now? I see agriculture as the most important resource economic stability. It's been decaying exponentially over the years, but I know the related government agencies are very concerned and are improving and promoting awareness among the population; are investing in projects, research, and many other fields to achieve a sustainable agriculture.

How has this career experience broadened your employment opportunities?

With this given opportunity I've learned everything about modern extraction techniques for volatile compounds in fruits such as SPME. I also learned how to use a GC-MS coupled with GC-O technique and its applications for food analysis and sensory training. With the addition of this experience I feel prepared to be part of the ARS division to help improve their research result database in terms of nutrition and food composition.

Career and research aspirations: This is my last year as graduate student. My first goal is to obtain my Masters degree in Food Science and Technology. Then, with my knowledge and experience I hope to join a Federal Regulatory Agency such as USDA (on any subdivision) or the Food Industry. Also I would like to work in counseling, regarding Food Safety and/or Food Defense; I'm certified and I think more and more people need to get legal advised.

Skill Set: -Knowledge and application of instruments and procedures such as gas chromatography, mass spectroscopy, gas chromatography -olfactometry, proximal analysis, dietary fiber content analysis, and many other -AOAC food analysis' techniques -sensory and statistical data analysis (ANOVA) -Spanish/English languages -leadership and teamwork

The impact of my career experience: CETARS has given me the opportunity to grow as a scientist and a professional. Getting related to all the USDA programs, internships, seminars and available job positions have helped me to choose what I want to do after I finish my studies.



I see agriculture as the most important resource economic stability. It's been decaying exponentially over the years, but I know the related government agencies are very concerned and are improving and promoting awareness among the population; are investing in projects, research, and many other fields to achieve a sustainable agriculture.

Name: **Gonzalez-Velazquez, Jomarys**
Hometown: **Moca, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Graduate Research Assistant**
Major: **Chemistry**
Expected date
of graduation: **May 2018**
Degree: **PhD in Chemistry**
USDA Agency
of interest: **ARS Beltsville Maryland**
Email: **jomarys.gonzalez@upr.edu**

Career experience/location: Worked in a research internship under the supervision of Dr. M Laura Lopez at the University of Puerto Rico at Mayaguez Campus.

Description of career experience (what I learned): In this research I worked on literature review on phytoremediation of metals and nanoparticles to develop experiments in this area. Also I learn how to cultivate the Rubia plant using the in vitro method; this plant will be used to develop the future experiments.

What is your perception of agriculture now? Agriculture is essential for humanity so it's important to preserve it and use the latest technology to clean up contaminated areas.

How has this career experience broadened your employment opportunities? I learned how to cultivate plants using the in vitro method; this technique is useful because plants are obtained in a shorter period of time and allows to obtaining disease-free plants (fungi, bacteria, viruses and other). Knowledge in these techniques can open doors in the biotechnology research laboratories.



Career and research aspirations: I aspire to obtain a doctoral degree within the next five years. In ten years I visualize myself working in a university as a professor and mentor, sowing the seeds of knowledge of science to future professionals.

Skill Set: -Bilingual English/Spanish -computer literate -Office 2010 -interpersonal skills -organized and self starter -proficient in atomic absorption -gas chromatography -mass spectrometry -high performance liquid chromatography -UV visible spectroscopy

Agriculture is essential for humanity so it's important to preserve it and use the latest technology to clean up contaminated areas.

The impact of my career experience: The research experiences will give me the necessary skills to work in the phytoremediation of metals and nanoparticles which is my research field; with these skills and others that I will become a competent scientist in the near future. These experiences will prepare me to compete in a future work in a research area. My long-term goal is to work as a professor and a research scientist at a university.

Name: **Gratacós-Velázquez, Grecia V.**
Hometown: **Las Piedras, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Graduate**
Major: **Chemistry**
Expected date
of graduation: **May 2015**
Degree: **MS in Chemistry**
USDA Agency
of interest: **ARS Beltsville Maryland**
Email: **grecia.gratacos@upr.edu**

Career experience/location: Worked in a research internship at the USDA-ARS Maryland under the supervision of Dr. Robert Li and of Dr. Talo Pastor-Corales.

Description of career experience (what I learned): I worked in the identification of soybean rust and rust resistance in common bean plants. Genome-sequencing and DNA-isolation were some of the main topics learned during the summer.

What is your perception of agriculture now? Agriculture is the vein of a socio-cultural and economic growth in the world. It is important because it determines the future of a country's development.

How has this career experience broadened your employment opportunities? I had the opportunity in seeing first-hand the importance of agriculture and research in agricultural related fields. This experience has broadened my professional and personal knowledge. I have learned techniques such as PCR, DNA Extraction, DNA Sequencing, and Rust evaluation in the common bean plant.

Career and research aspirations: I aspire to finish my MS in analytical/food chemistry within the next two years and find a job at the USDA-ARS in Beltsville Maryland or any other location. In 5-7 years I would like to go back to school and finish my PhD and eventually return to USDA-ARS to work and serve future generations of young scientist and mentor them into pursuing a career in agricultural related sciences.

Skill Set: - Bilingual English/Spanish -surface enhanced raman scattering -analytical chemistry -microbiological techniques -cGMP's -food quality and assurance amateur molecular chemistry -food chemistry -nanotechnology -leadership skills -computer skills Word/PowerPoint/Excel

The impact of my career experience: The research experiences at the USDA-ARS have given me the necessary skills to become a competent scientist in the near future. The opportunity in Beltsville Agricultural Research Center has equipped me with knowledge in the areas of molecular biology, food chemistry and environmental chemistry, allowing me to diversify myself as a scientist. In the near future I plan on finishing my MS in Analytical Chemistry and long term plans y will pursue a PhD in agricultural/food chemistry. Hopefully this will equip me with the necessary skills to obtain a job with the US Department of Agriculture.



Agriculture is the vein of a socio-cultural and economic growth in the world. It is important because it determines the future of a country's development.

Name: **López-Morales, José L.**
Hometown: **Aguada, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **MSc. PhD student**
Major: **Chemistry**
Expected date
of graduation: **May 2014**
Degree: **PhD in Chemistry**
Agency
of interest: **ARS**
Email: **Jose.lopez21@upr.edu**



Career experience/location: Graduate student, researcher, and mentor of two undergraduate students.

Description of career experience (what I learned): My research is focused on using recycling materials such as tire crumb rubber for the removal of antimicrobials and organic compounds from aqueous systems.

What is your perception of agriculture now? Agriculture is growing stronger each day thanks to initiatives taken by the USDA and the Universities to reach out to young people so they can learn the importance of agriculture in our lives. Every country in the world should put considerable effort and resources to have a sustainable agriculture. The importance of agriculture should be taught at every level, and not wait until high school or college to introduce children to this science that is fundamental to our survival. That is why projects such as CETARS with its K-12 outreach component are very important.

How has this career experience broadened your employment opportunities? Through this career experience I had access to state-of-the-art instruments such as a liquid chromatograph/ion trap mass spectrometer (LC/MS); high performance liquid chromatographs equipped with detectors such as diode array, UV and fluorescence (HPLC/DAD,UV,FL); inductively coupled plasma/mass spectrometer (ICP/MS) and microwave technology for samples digestion or extraction (MAE/MAD). In addition, I learned techniques and methodologies useful in the qualitative and quantitative analysis of samples of agricultural origin.

Agriculture is growing stronger each day thanks to initiatives taken by the USDA and the Universities to reach out to young people so they can learn the importance of agriculture in our lives.

Career and research aspirations: My immediate goal after obtaining my PhD is to find a job at the USDA. I aspire to grow professionally and as a scientist, to contribute in the development of new techniques and methodologies for a sustainable environment and agriculture.

Skill Set: -Bilingual: English, Spanish -proficient in MS Excel, Word and Power Point -vast experience in instruments such as HPLC, GC, GC/MS, GC/ECD/NPD, UV/VIS, ICP-OES, AAS, and IR -experience with instruments such as LC/MS, ICP/MS, IC and GC/FID -vast experience with MAD and MAE systems, and SPME techniques -vast experience in process control in WWTP: jar tests, TSS, COD, VSS, pH and turbidity -knowledge of EPA regulations and methods -excellent communication skills and interpersonal relationships -can work in groups or individually -extremely motivated -fast learner -effective in problem solving techniques

The impact of my career experience: The acquired research experiences have given me the opportunity to expand my skills at the scientific level, increasing my chances to find a job after graduation. I had the opportunity to work with state-of-the-art instrumentation that is currently used in advanced research laboratories in federal agencies such as the EPA, FDA and USDA. In addition, I learned new methods and techniques for the analysis and determination of organic and inorganic compounds of agricultural and environmental importance. Moreover, these experiences helped me to improve my skills writing technical reports, scientific papers and presentations among other things. My goal is to find a research position at a federal agency, preferable at the USDA, to grow up professionally and contribute with the knowledge acquired.

Name: **Luna-Pineda, Tatiana**
Hometown: **Hormigueros, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **MSc. PhD**
Major: **Chemistry**
Expected date
of graduation: **May 2014**
Degree: **PhD in Chemistry**
USDA Agency
of interest: **ARS**
Email: **Tatiana.luna@upr.edu**

Career experience/location: I worked in research at The University of Puerto Rico Mayaguez under de mentorship of Felix R Roman and Dr. Oscar Perales and am also mentoring one undergraduate student.

Description of career experience (what I learned): I worked in the adsorption of arsenic and chromium compounds using a magnetic nanocomposite (Calcium Alginate-DMSA-magnetite beads). We were able to remove over 10 mg/L of these compounds from contaminated water.

What is your perception of agriculture now? It is the most important issue in this moment for humans; it is important to develop new technologies to increase agricultural yields and new soils and water remediation strategies.

How has this career experience broadened your employment opportunities? I learned how to use inductive coupled plasma mass spectrometry (ICP-MS) for the analysis of elements and compounds related to agriculture. I also learned how to perform the synthesis of nanoparticles and its functionalization and its applications in water remediation. Knowledge about these techniques can open doors in USDA-ARS research laboratories.

Career and research aspirations: I aspire to finish my PhD in environmental chemistry within the next year and find a job at the USDA-ARS. In 10 years, I also aspire to be a scientist that can contribute to the development and implementation of new techniques in the field of environmental remediation.

Skill Set: -Office 2010 -statgraphics -proficient in inductive coupled plasma mass spectrometry, gas chromatography liquid, chromatography, Raman spectroscopy, infrared spectroscopy, x-ray diffraction, vibrating sample magnetometer, thermal gravimetric analysis, scanning electron microscopy, microbiological techniques and synthesis of nanoparticles -knowledge of EPA regulations -excellent in communication and interpersonal relationships -strong believer in teamwork -highly motivated -fast learner -effective in problem solving techniques



It is the most important issue in this moment for humans; it is important to develop new technologies to increase agricultural yields and new soils and water remediation strategies.

The impact of my career experience: The research experiences at CETARS have given me the necessary skills to become a competent scientist in the near future. I worked with state-of-the-art instrumentation that is available at major research facilities and institution. I also learned to use novel methods of analysis for a variety of compounds of agricultural and environmental interest. These experiences will prepare me to compete in the job market specifically at USDA.

Name: **Ortiz-Mattei, Maria**
Hometown: **Ponce, Puerto Rico**
Institution: **University of Puerto Rico**
Campus: **Mayaguez Campus**
Rank: **Graduate**
Major: **Chemistry**
Expected date
of graduation: **May 2014**
Degree: **MS in Chemistry**
USDA Agency
of interest: **ARS Beltsville, Maryland**
Email: **maria.ortiz38@upr.edu**

Career experience/location: Worked on research in the University of Puerto Rico, Mayagüez campus, under the supervision of Dr. Félix Román.

Description of career experience (what I learned): We worked with the optimization of the process of removing atrazine in water using chitosan beads.

What is your perception of agriculture now? Agriculture today is of great importance to our national economy and human survival. Basic and applied research can optimize and improve agricultural processes for better food production.

How has this career experience broadened your employment opportunities? The research experience in the field of agriculture has been very satisfactory. It will be useful, as it has given me the opportunity to work in a lab where I learn and apply research techniques aimed at the branch of chemistry in which I want to specialize.

Career and research aspirations: In the near future I hope to finish my degree in chemistry with a specialization in the environmental area. After the masters I will apply to do my PhD in the field of environmental sciences. In the next 10 years I hope to have the experience needed to find work in a federal agency in Puerto Rico, to help improve agricultural labor and environmental development.

Skill Set: -Excellent communication skills -interpersonal and presentations -multitasking -proficiency in both Mac and PC software platforms -Microsoft Office and other popular software applications -excellent photographic skills -excellent skills in internet research -excellent writing skills in Spanish -reads, understands and can communicate in English -proficient in high-performance liquid chromatography and optical microscope

The impact of my career experience: The experience of working on research in the field of agriculture has been very rewarding on a professional and personal level. It has helped me become aware of the importance and development of agriculture in my Puerto Rico and other countries. On the other hand, having this kind of experience helps my professional improvement. The experience of working in the laboratory has also helped me develop and apply research in the field of agriculture. Besides, this type of research has awakened in me the curiosity to continue studying and knowing about environmental and agricultural issues. The development of the research has made me a more prepared and confident woman when it comes to applying my knowledge in the workplace.



Agriculture today is of great importance to our national economy and human survival. Basic and applied research can optimize and improve agricultural processes for better food production.

University of Puerto Rico CETARS Inter-American University San German Undergraduate Students

Name: **Concepción Abreu, Rosa B.**
Hometown: **Mayaguez, Puerto Rico**
Institution: **Inter-American University of Puerto Rico**
Campus: **San German Campus**
Rank: **Senior**
Major: **Chemistry**
Expected date
of graduation: **December 2013**
Degree: **BS**
USDA Agency
of interest: **Food Safety and Inspection Services FSIS**
Email: **rosa.concepcion@gmail.com**



Career experience/location: UPRM CETARS 2013 Summer Internship: Synthesis of $Zn_xMg_{1-x}O$ solid solution and the assessment of its antimicrobial activity against *Escherichia coli* with Dr. Oscar Perales and Dr. Yarilin Cedeño.

Description of career experience (what I learned): I have learned how to synthesize nanoparticles of MGOZNO and evaluate its antimicrobial capacity against *E. Coli*.

What is your perception of agriculture now? It is a very important field of study today, because I believe that human life depends on it more than we realize. As technology grows, we discover new ways to help counteract problems encountered. I believe that there is much more that can be done to better preserve and supply food to everyone.

How has this career experience broadened your employment opportunities? Ever since I started this program I have been given the chance to be part of a scientific society that has helped me grow in a personal and professional level. By participating in this program I have gained valuable experience that I can use in future employment opportunities, given the fact the nowadays it is very difficult to be considered for a job when you have no previous working experience.

Career and research aspirations: I want to pursue post graduate studies in chemistry to become a skilled professional. In some way, help contribute to improve the quality of life in Puerto Rico. Moreover, work in researches related to the environment, specifically in the area of agriculture of crop protection using nanotechnology.

Skill Set: -Technical proficiency in Chemistry software's: Scigress, Project Leader, Chems sketch -laboratory techniques using instrument such as PARR Bomb calorimeter, Fenske viscosimeter, construction of galvanic cells, spectrometers -broad knowledge of spectroscopy (IR, UV-VIS, NMR, MS), XRD instrument -computer literacy: Microsoft Office 2003-2010 -bilingual (fluent in Spanish and proficient in English) -comfortable with public speaking and working with others

It is a very important field of study today, because I believe that human life depends on it more than we realize. As technology grows, we discover new ways to help counteract problems encountered.

The impact of my career experience: In the time I spent in my career experience I had the opportunity of working and interacting with student and professional researchers. The experience was incredible; I worked in a lab cultivating bacteria that would be used to test antimicrobial efficiency later on. It was because of this research opportunity that I started to gain interest in working in the USDA. At this point my main goal is to pursue a post graduate degree while continuing to participate in research programs like CETARS. It has also become very clear that I intend to pursue a career in the USDA. For me working in CETARS has been an amazing opportunity that has opened countless doors in my professional life.

Name: **Cruz Vélez, Frank O.**
Hometown: **Las Marías**
Institution: **Inter American University of Puerto Rico**
Campus: **San Germán Campus**
Rank: **Junior**
Major: **Biology**
Expected date of graduation: **May 2015**
Degree: **BS**
USDA Agency of interest: **Food Safety and Inspection Service FSIS**
Email: **frankocv_328@hotmail.com**

Career experience/location: Phytoplankton Survey in Six Reservoir of Puerto Rico: A Comparative Study of Algae Abundance and Diversity. Sponsored by EPA on the University of Puerto Rico - Mayagüez Campus.

Description of career experience (what I learned): I learned to analyze aquatic ecosystems and differentiate microscopic algal species and the specific conditions in which they thrive. At the same time, he acquired the technique to use different mechanisms, such as the Utermöhl's sedimentation chamber.

What is your perception of agriculture now? Since my participation in the program, I think that we have to respect more the agriculture because it is the foundation of our nation.

How has this career experience broadened your employment opportunities? This experience had helped me to think to choose again where I want to work in the future after I graduate. At this time, I have not applied for any job; but, as soon as I get my BS degree I will consider applying to any job similar to this experience.

Career and research aspirations: My current career aspiration is to work in the medical field. If I get more experience in the marine biology sector I would like to apply for them. Also, inside the USDA, I would like to make an internship on the Food Safety and Inspection Service or at the Research facility; specifically on a microbiological or farm animal area.

Skill Set: -Computer skills -microbiological techniques -data base management (Excel) -aquatic biology techniques -able to work on a team -Chemistry techniques -fluent in written and spoken Spanish and English languages

The impact of my career experience: This opportunity has helped me be more aware of the importance of the marine ecosystems and how important is for us to protect these fragile environments. I have also given me hand-on experience in the utilization of instrumentation to study water quality. I am confident that this experience has prepared me to be more competent when applying for future jobs or graduate school.



This opportunity has helped me be more aware of the importance of the marine ecosystems and how important is for us to protect this fragile environments. I have also given me hand-on experience in the utilization of instrumentation to study water quality.

Name: **López, Karina M.**
Hometown: **Sabana Grande, PR**
Institution: **Inter American University of Puerto Rico**
Campus: **San Germán**
Rank: **Junior**
Major: **Biology**
Expected date
of graduation: **May 2015**
Degree: **In progress**
USDA Agency
of interest: **Food Safety and Inspection Service FSIS**
Email: **karinalopez60@yahoo.com**

Career experience/location: I worked with Phytoplankton survey in the aquatic biology laboratory of the University of Puerto Rico at Mayaguez campus. Also with endophytic fungi associated with leaf of plants, native from Puerto Rico in the Inter American University at the San Germán campus.

Description of career experience: Both research projects, granted me the opportunity to work in a laboratory; therefore acquiring skills to inoculated plates and use the inverted microscope. Also, I had assisted to scientific conferences.

What is your perception of agriculture now? While participating in CETARS I perceived that agriculture influences in our daily life, and I acknowledge the importance of such to our subsistence.

How has this career experience broadened your employment opportunities? This career experience gave me the opportunity to expand my knowledge in microbiological techniques, thus becoming an adequate professional. This career experience also helped me, develop my social skills, as well my responsibility.

Career and research aspirations: My aspirations are to complete my degree in biology, then continue my post-graduate studies in biology or related field. In ten years I visualize myself working in plant breeding research.

Skill set: -Computer skills -microbiological techniques -responsible and determined with all I peruse

The impact of my career experience: This career experience has allowed me to grow as a student and as a scientist. It also allowed me to get acquainted with many of the techniques used in a biology research laboratory. I am very confident that it will help me become a more competent student and more motivated to continue to a graduate program in biology.



While participating in CETARS I perceived that agriculture influences in our daily life, and I acknowledge the importance of such to our subsistence.

University of Puerto Rico CETARS Inter-American University
San German Graduate Students

Name: *Naqueira Gonzalez Colon*
Hometown: **Mayaguez**
Institution: **Interamerican University**
Campus: **San German Campus**
Rank: **Graduate Environmental Science**
Major: **Environmental Chemistry**
Expected date
of graduation: **May 2014**
Degree: **Master**
USDA Agency
of interest: **Natural Resources and Conservation Services NRCS**
Email: **Nakkeira@Hotmail.com**



Certifications: -Puerto Rico State Department -Potable Water Treatment Plant and System Operator type 4 - Wastewater Treatment Plant and System Operator type 4

Career experience/location: During the summer, I participated in an internship at the University of Puerto Rico at Mayaguez Campus in the Chemistry Department with CETARS program.

Description of career experience: During the internship, I had the opportunity to participate in different workshops as laboratory safety, workshops on how to write research papers and agriculture and nanotechnology. Also practiced techniques in the laboratory such as HPLC operation and handling of different chemicals in the laboratory. In Addition this career experiences reminds me the commitment, dedication and responsibilities that this area will require us as professionals.

What is your perception of agriculture now? My area of interest has always been the natural environmental sciences and agriculture, as well as the research area. I consider environmental conservation and agriculture to be as important aspect for human health and vital to continue educating people. This will allow us to continue improving the quality of human life, the preservation of ecosystems and resources.

How has this career experience broadened your employment opportunities? My participation in the program has helped me to strengthen my skills as a scientist and as a graduate student. I know that in the future this experience will open doors for employment opportunities, already has helped in the personal and professional development.

Career and research aspirations: In the future I would like to begin my doctoral program in environmental sciences. I would also like to get a job opportunity with a federal agency related to Natural Resources and Conservation Services. I also aspire to be able to have a job where I can use my knowledge and skills in order to contribute and improve the conservation of our natural resource, which are fundamental in agriculture. I am very interested in agriculture and other areas related to the conservation of the environment and its resources.

My area of interest has always been the natural environmental sciences and agriculture, as well as the research area. I consider environmental conservation and agriculture to be as important aspect for human health and vital to continue educating people. This will allow us to continue improving the quality of human life, the preservation of ecosystems and resources.

Skill Set: -Good communication skills -Microsoft programs Excel and others -I am able to work under pressure with others or individual -fluent in Spanish and English -I am able to adapt to any work environment

The impact of my career experience: During this career experience I also had the opportunity to impact many young people in schools about agriculture and the importance of resource conservation. For me, it is important to continue educating k-12 students about environmental conservation and promoting the benefits of agriculture.

Name: *Vega-Negrón, Ángel L.*
Hometown: **Sabana Grande, Puerto Rico**
Institution: **Inter American University of Puerto Rico**
Campus: **San Germán Campus**
Rank: **Graduate**
Major: **Environmental Chemistry**
Expected date of graduation: **May 2014**
Degree: **Master**
USDA Agency of interest: **Agricultural Research Service ARS**
Email: **angel_vega_negron@yahoo.com**



Career experience/location: Internship: Simultaneous adsorption of cationic and anionic dyes onto biosorbents for wastewaters treatment at University of Puerto Rico, Mayaguez Campus.

Description of career experience (what I learned): I learned all the necessary skill to be a good leader, such as initiative to solve situations under my control, ability and commitment to teamwork, and most important, responsibility. Also, I demonstrated a willingness and desire to learn and to create an environment to continuous improvement.

What is your perception of agriculture now? Since I was accepted to CETARS proposal, I understood much better about agriculture, and learn that this term is not only planting and harvesting.

How has this career experience broadened your employment opportunities? I learned to work in strict conditions which allowed me to develop as a good researcher, good leader and responsible. Being a good leader and responsible is the most powerful tool for an employment opportunity.

Career and research aspirations: I want to make an important and practical contribution for the preservation and conservation of the environment. Once I complete my master's degree, I want to obtain a doctoral degree in Environmental Chemistry where I can apply my skills and continue conducting research whose main objective is the preservation of the environment. In 10 years I expected to work for an agency under USDA such as ARS, FSIS, NRCS, NIFA, RMA, or APHIS.

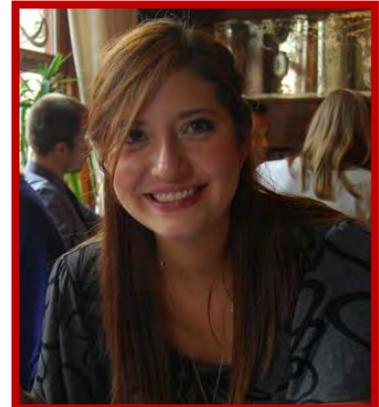
Skill Set: -Computational chemistry skills -analytical techniques such as: HPLC Techniques -ATR -FTIR techniques -data base management -leadership

The impact of my career experience: My career experience as an intern with the Center for Education and Training in Agriculture and Related Sciences (CETARS) Proposal at University of Puerto Rico, Mayaguez Campus, I had the opportunity to work with my thesis research. During this internship, I enriched the knowledge in HPLC analysis in conjunction with other analytical skills. With this research I want to make an important and practical contribution for the preservation and conservation of the environment. Once I complete my master's degree, I want to obtain a doctoral degree in Environmental Chemistry to apply my skills and continue conducting research with the main objective of the preservation our environment. Moreover, with these experiences and knowledge, I expected to work for an environmental agency as a scientist to contribute to their missions of protecting the environment. For my long term objective, I expected to use my knowledge to educate students and community about the preservation and conservation of our environment and enjoy it.

I want to make an important and practical contribution for the preservation and conservation of the environment. Once I complete my master's degree, I want to obtain a doctoral degree in Environmental Chemistry where I can apply my skills and continue conducting research whose main objective is the preservation of the environment.

University of Puerto Rico CETARS
University of Texas at El Paso Graduate Student

Name: **Barrios, Ana Cecilia**
Hometown: **El Paso, Texas**
Institution: **University of Texas at El Paso**
Campus: **El Paso**
Rank: **Graduate**
Major: **Chemistry**
Expected date
of graduation: **May 2015**
Degree: **Master of Science in Chemistry**
USDA Agency
of interest: **FSIS**
Email: **acbarrios@miners.utep.edu**



Career experience/location: Worked in a research lab at the University of Texas at El Paso under the supervision of Dr. Jorge Gardea-Torresdey.

Description of career experience (what I learned): I worked analyzing the physical and biochemical changes produced by cerium oxide nanoparticles in edible plants such as tomato and cilantro. ICP-MS and ICP-OES, among other techniques were used to quantify the micro and macro nutrients as well as metals in plant tissues.

What is your perception of agriculture now? Agricultural knowledge is key to our survival. By learning about the newest technological advances we can increase the production of crops and produce food with better quality.

How has this career experience broadened your employment opportunities: I learned how to use Inductively Coupled Plasma Optical Emission Spectroscopy for the analysis of various elements found in the plant tissues. Knowing these techniques can potentially help me obtain a job at FSIS.

Career and research aspirations: I am determined to finish my MS in analytical and environmental chemistry within the next two years and later on my PhD. All of this will hopefully be accomplished within the next 2-5 years. I would like to find a job at the USDA-FSIS and in the next 10 years become an established scientist in the agricultural field and help other students fulfill their careers.

Agricultural knowledge is key to our survival. By learning about the newest technological advances we can increase the production of crops and produce food with better quality.

Skill Set: -Bilingual English/Spanish -proficient in x-ray fluorescence -inductively coupled plasma optical emission spectroscopy -communication -leadership skills -data base management -Synchrotron sample analysis

The impact of my career experience: The research experience provided by the USDA has given me the required training and has helped me developed the skills to become an independent and competent scientist in the next years to come. Working with recognized scientists around the nation and with state-of-the-art instrumentation, the research project has not only become an idea, but also, a reality. I have learned to use various analytical techniques and employ them to my research and to other agricultural-related fields. All of these opportunities will prepare me to become a skilled and proficient when looking for an USDA job. My long term goals are to find a research position at an USDA agency, specifically FSIS. By being involved in this research I have an idea of what the USDA is looking for and all the hard work that I must complete to fulfill my long term goal. Working with the right people, in the right environment is key to success and all these experiences have motivated me to continue working and to strive to accomplish a greater goal: to flourish among the scientific community, help other Hispanics and obtain a job at the USDA.

University of Texas at El Paso Project Page

BGREEN - Building a Regional Energy and Educational Network: A Partnership to Integrate Efforts and Collaboration to Shape Tomorrow's Hispanic Sustainable Energy Leaders

**Project Director:
Heidi A. Taboada (UTEP)**

**Co-Project Directors:
Shad Nelson (TAMUK)
Tongdan Jin (TX State)
Delia Valles (NMSU)**

Project Overview:

A consortium comprised of the University of Texas at El Paso (UTEP), Texas A&M University-Kingsville (TAMUK), Texas State University-San Marcos (TX State), New Mexico State University (NMSU), and USDA-ARS proposes to establish an educational network to increase the number of Hispanic students enrolled in studies related to Sustainable Energy and facilitate the employment of Hispanics in critical occupations to USDA's mission in renewable energy and rural development. The breadth and diversity of the faculty involved and the range of resources and activities that are available across the partner institutions and USDA and agricultural research partners provide unique opportunities for students to engage in interdisciplinary Sustainable Energy education, and cutting-edge research.

BGREEN adopts an integrated approach composed of four key components 1) Outreach & Recruitment, 2) Education, 3) Experiences, and 4) Dissemination directed to advance Sustainable Energy research and education which bases its strength in identified regional and national needs to educate and train future Hispanic sustainable energy leaders. This project is clearly aligned with the all university partners' strategic missions and visions.

University of Texas El Paso BGREEN
New Mexico State University Undergraduate Students

Name: **German Montes**
Hometown: **Las Cruces, New Mexico**
Institution: **New Mexico State University**
Major: **Electrical Engineering**
Rank: **Sophomore**
Expected date
Of graduation: **Fall 2015**
Degree: **Bachelor of Science**
USDA Agency
of interest: **FAS, ARS**

Career and Research Aspirations: Find a job I can enjoy.

About my summer 2013 Internship:

Location: Las Cruces, New Mexico
Employer: NMSU/USDA
Mentor: Dr. Delia Valles. Associate Professor NMSU

What I learned: I learned what the drying process of the plants is and also how to make plant into the desired size of grain wanted even if it is really smart, worked with all the grinders available to turn it into different grain sizes.



Name: ***Fernando Perez***
Hometown: **Las Cruces, New Mexico**
Institution: **New Mexico State University**
Major: **Industrial Engineering**
Rank: **Junior**
Expected date
of graduation: **May 2014**
Degree: **BS**
USDA Agency
of interest: **ARS, NASS, RMA**

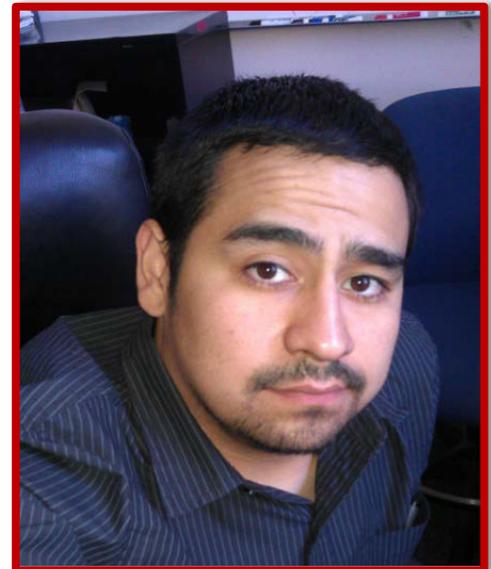
Career and Research Aspirations: Sustainability and Renewable energy, making a healthier world.

About my summer 2013 Internship:

Location: Las Cruces, NM
Employer: New Mexico State University
Mentor: Dr. Delia Valles - Associate Professor NMSU

What I learned: I learned about agricultural waste products and the possibility of using these products in different ways. The overall goal of my summer research was highly focused on developing wood-polymer composites, where the source of the wood is organic waste produced in the agricultural industry. Due to the research project I was able to obtain a solid understanding of the composition of all the byproducts being produced in the industry as well as understanding the ecological and economic feasibility of developing this material composite

I learned about agricultural waste products and the possibility of using these products in different ways. The overall goal of my summer research was highly focused on developing wood-polymer composites, where the source of the wood is organic waste produced in the agricultural industry.



Name: **Gabriela Rodriguez**
Hometown: **Sunland Park New Mexico**
Institution: **New Mexico State University**
Major: **English Creative Writing and Biochemistry**
Rank: **Junior**
Expected date
of Graduation: **Spring 2015**
Degree: **Bachelor of Science BS**
USDA Agency
of interest: **ARS, NASS, RMA**

Career and Research Aspirations: Being able to experience college is a great way to grow and learn about one self and about what you are passionate about.

About my summer 2013 Internship:

Location: Las Cruces, NM
Employer: New Mexico State University
Mentor: Dr. Nirmala Khandan, Professor NMSU

What I learned: Being able to learn more and find what is I am passionate about has allowed me to work under Dr. Khandan learning about biofuels. Learning and being able to help around the lab is a great way for me to learn through hands-on experience, and be able to learn and apply what I learn in the classroom. I hope to graduate in the spring of 2015 and continue my education with my PhD or masters. I am interested in water and how we could find new ways incleaning it and protecting it better. I was born in El Paso Texas, but grew up in Sunland Park New Mexico, which so happens to be right next to El Paso. I am the first in my family to go to college and to be getting a degree from a university.



Being able to experience college is a great way to grow and learn about one self and about what you are passionate about.

Name: **Alain Simental**
Hometown: **El Paso, Texas**
Institution: **New Mexico State University**
Campus: **Las Cruces, New Mexico**
Rank:
Major: **Mechanical Engineering, Aerospace Engineering**
Expected date
of graduation: **May 2014**
Degree: **Mechanical Engineering**
USDA Agency
of interest:
Email: **a1ain@nmsu.edu**



Career experience/location: During summer 2013 I participated in the BGREEN–USDA internship in Temple, Texas.

Description of career experience (what I learned): I had the opportunity to work in several fields of the research projects conducted in the USDA laboratories. I was working with Dr. Kiniry and other postdoctoral employees on the switch grass research and simulation project as well as the Biofuel grass nutrient cycling project. I was studying the effects of atmospheric carbon dioxide on native grassland productivity and diversity, the effects of precipitation variability on the productivity of native grasses used in bioenergy production, and the differences in productivity between diverse and monoculture grasslands. We also had the opportunity to go out and work directly in the nitrogen tunnels where plants had a very strict controlled environment.

What is your perception of agriculture now: This was a great experience that gave me an understanding of how research is done in the professional level. My perception of agriculture changed drastically and now I am interested in this field. It opened my eyes on how different it is to actually work on a project related with agriculture rather than just judge without prior experience.

How has this career experience broadened your employment opportunities: This opportunity has influenced my interests of what I would like to do for future employment and also gave me a stronger resume. With this internship I can demonstrate that I have experience and interests in Biofuels as well as any renewable resource project. This experience has motivated me to work in the agriculture or energy related fields.

Career and research aspirations: If I had the opportunity to work with in the USDA laboratories again I would surely take the position. My future plans are to finish school and obtain my mechanical engineering degree. I would like to continue my education with a master's in the engineering field and if possible also have a job as an engineer at the same time. I see myself working on research or either long term projects in the future.

This was a great experience that gave me an understanding of how research is done in the professional level. My perception of agriculture changed drastically and now I am interested in this field. It opened my eyes on how different it is to actually work on a project related with agriculture rather than just judge without prior experience.

Skill Set: -Mathematical skills -computer data skills -management skills -software skills -problem solving skills -critical thinking skills -bi-language skills -organizational skills -interpersonal skills -communication skills -designing skills -instrument/apparatus skills -analyzing skills

The impact of my career experience: One thing I had to understand as an engineer is that learning is never going to stop, so you have to get used to it. There is always something more to learn and something new to discover. There is no doubt I would want to further my education in the future. My main goal is to get a job in order to get some experience and if the opportunity is given, also start my master's degree while working. I would like to work for an energy company or in the agricultural field. I am very interested in energy, resources, and biofuels. Anything related to those topics is very interesting to me and it would be a pleasure to work for a company that offers those types of research or work. I would like to try several fields throughout my employment which means I would seek a new job or new projects in my current job as much as I can.

University of Texas El Paso BGREEN
New Mexico State University Graduate Students

Name: **Alejandro Bernal**
Hometown: **El Paso**
Institution: **New Mexico State University**
Campus: **Las Cruces**
Major: **Doctor of Economic Development**
Expected date
of graduation: **May 2015**
USDA Agency
of interest: **Economic Research Service ERS**
Email: **abernal@nmsu.edu**

Career experience/location: Currently I'm working as a Food System Policy Intern at La Semilla Food Center, a non-profit organization located in the Paso del Norte region of southern New Mexico and El Paso, Texas. I'm also a research assistant at New Mexico State University (NMSU).

Description of career experience (what I learned): I am learning best practices and model ordinances & policies on urban agriculture. I have also learned how to perform research on food policy. My presentation and research skills have also been improved because of weekly meetings where I conduct presentations over the research I have done at NMSU and La Semilla.

What is your perception of agriculture now: Agriculture plays a major part in our lives because most of the products we use every day come from agriculture, and without agriculture the human race would not survive.

How has this career experience broadened your employment opportunities: Working at La Semilla and NMSU has influenced my decision of where to seek employment by showing the importance of economic development for building a healthy, self-reliant, fair, and sustainable economy in a region. Through La Semilla I have seen the importance of a local non-profit organization.

Career and research aspirations: I hope to be creating a better environment for individuals to live in. There are many ways to go about this, for example, improving education, nutrition, or even saving an endangered species. In 5 years, I should be working for a local non-profit organization that's main mission is to create a better environment for people to live. In 10 years, I will be doing the same thing, but I will have a specific method for doing this, and will be good and efficient at doing my job.

Skill Set: -Computer skills -bilingual in Spanish/English -statistical software skills -oral and written communication skills -record keeping skills -organization skills -research skills

The impact of my career experience: My career experience at La Semilla and NMSU has impacted my future education by providing me with the specific knowledge that I will need to gain in the future. This is important by making me more efficient when getting educated. Future employment is impacted through my career experience by confirming my thinking of what type of job, and even more detailed what type of organization I want to work at. When a person works at a place that makes him happy, that person will have less stress. Working in a stressful environment is harmful for a person's health. Goals and long term objectives were not impacted by my time working at La Semilla because I have always wanted to help people. I have gained useful research techniques and skills at NMSU that are useful in everyday situations.



Agriculture plays a major part in our lives because most of the products we use every day come from agriculture, and without agriculture the human race would not survive.

Name: **Arturo Del Valle**
Hometown: **El Paso Texas**
Institution: **New Mexico State University**
Campus: **Main**
Rank: **PhD**
Major: **Industrial Engineering**
Expected date
of graduation: **Summer 2015**
Degree: **PhD**
USDA Agency
of interest: **Risk Management Agency RMA**
Email: **advalle@nmsu.edu**

Career experience/location: I have been working in the area of Computational Molecular dynamics Simulation in order to optimize sustainable materials. Additionally I have been performing independent research in the area of wind turbine simulations. The simulations are geared towards the improvement of the aerodynamic qualities of the wind turbine blades with the aim of maximizing energy production in the New Mexico Area taking into account the wind profile of the region.

Description of career experience (what I learned): There has been ample learning in the area of computer simulation and code writing in order to learn the area of materials optimization. The area of Computational Fluid Dynamics and additionally Molecular Dynamics has been an area of important learning progress

What is your perception of agriculture now: Agriculture is the foundation in the development integrity of any economical society that wishes to progress and develop further. Hence, it is important to support agricultural development and improvement in any country.



How has this career experience broadened your employment opportunities: Hopefully it will give me the ability to be able to consider different job options when graduation date approaches. Right now I am trying to learn as many tools as possible to broaden job placement.

Career and research aspirations: The future of my career I see myself in the sustainable/renewable energy industry in particular in the area of Research and Development. Finding new ways to increase the profile of sustainable development will have a great impact and support from federal organizations in the immediate future. As such the future generations need to be trained in this area.

Skill Set: -Computer simulations -programming -statistical analysis
-network programming -renew-able/sustainable materials and energy
analysis -systems

Agriculture is the foundation in the development integrity of any economical society that wishes to progress and develop further. Hence, it is important to support agricultural development and improvement in any country.

The impact of my career experience: My experience gained in the industry is related to renewable/sustainable development. As a consequence I have learned plentiful in the particular areas of the industry which I believe will be of great use in the immediate and long term future. It is necessary for the students of today to prepare themselves on the areas of immediate need for the future of the society. I believe that the areas of renewable energy production and/or sustainable materials optimization that will be of great use by the overall spectrum of the new industries.

Name: *Jody Lynn Elias*
Campus: **New Mexico State University, Las Cruces**
Rank: **MS**
Expected date
of Graduation: **May 2013**

Skills: I received my BSEE at NMSU where I also received a minor in Environmental Management. It was through those classes that I developed a great interest in alternative resources in power generation and materials. This led me to pursue a higher education in Industrial Engineering Management and Grad Certificate in Systems Engineering, where I am able to conduct research in manufacturing techniques and materials such as wood plastic composites.

Research Interest: Research in alternative processing methods and materials testing that can replace products and materials already in practice. This will lead to a more durable and less expensive alternatives to current practices. I am currently working to determine a viable replacement for drying tables in use by a local Chile company. This consists of combining and testing wood plastic composite samples implementing physical and computational methods.

Research in alternative processing methods and materials testing that can replace products and materials already in practice. This will lead to a more durable and less expensive alternatives to current practices.



Name: **Hector Hernandez**
Hometown: **Las Cruces, New Mexico**
Institution: **New Mexico State University**
Campus: **Main campus**
Rank: **MS**
Major: **Agricultural Economics**
Expected date of graduation: **May 2014**
Degree: **Master's**
USDA Agency of interest: **Economic Research Service ERS, Foreign Agricultural Service FAS**
Email: **hhernan@nmsu.edu**

Career experience/location: Research assistant at New Mexico State University, Las Cruces, New Mexico.

Description of career experience (what I learned): Learned how to conduct economic research and analyze data.

What is your perception of agriculture now: Did not fully appreciate the economics involved in agriculture before beginning the Master's degree and working as a research assistant. Now have a better understanding of the application of economic principles in agriculture.

How has this career experience broadened your employment opportunities: Has encouraged me to pursue a PhD in Agricultural Economics immediately following this program. Having research experience only helps with later work in academics or as a professional economist.

Career and research aspirations: After obtaining a PhD in Agricultural Economics I can pursue one of two paths. Either I stay in academia as a professor and conduct research, or I work with an agency like the USDA (or another major development agency) and conduct research that influences policy of agricultural programs. In 5 years I plan to be done with a PhD, and in 10 years I should be well established in my career.

Skill Set: -Economics -econometrics -international development -computers -4 languages -business -finance

The impact of my career experience: The experience as a research assistant has encouraged me to continue my education by enrolling in a PhD program in Agricultural Economics beginning fall 2014. As for future employment, I believe that I will consider looking at opportunities as an Economist with the USDA Economic Research Service or the USDA Foreign Agricultural Service. My career goals will most likely focus on work in economic development, particularly African development of agriculture. My long term objectives will remain tied to working as an economist with a focus on economic development of Africa.



Did not fully appreciate the economics involved in agriculture before beginning the Master's degree and working as a research assistant. Now have a better understanding of the application of economic principles in agriculture.

Name: **German Reyes**
Campus: **New Mexico State University**
Rank: **PhD**
Major: **Industrial Engineering**
Expected date
of Graduation: **December 2014**

Narrative of research project: My research project basically deals with the distribution of fuels in the United States in a sustainable manner. The purpose of the research is to find optimal or near optimal ways of distributing fuels. A heuristic algorithm such as the Ant Colony Optimization (ACO) algorithm is being adapted in order to find the best routes for distribution. ACO is a type of swarm intelligence algorithm that basically imitates the behavior of ants in the real world. Furthermore, a simulation model in SIMIO software is being developed in order to better validate the solutions found from the algorithm. The simulation will help compare and contrast the current distribution systems against the system that will later be proposed.

Skills: -Development of mathematical and simulation models for optimization

Research Interests: My career and research interests lie in the area of transportation and logistics. In general, I believe that good and efficient transportation and distribution systems are imperative in a sustainable world. Furthermore, my interests include developing mathematical models and simulation models in order to improve existing systems.

My research project basically deals with the distribution of fuels in the United States in a sustainable manner. The purpose of the research is to find optimal or near optimal ways of distributing fuels.



Name: **John W. Schutte**
Institution: **New Mexico State University**
Campus: **Las Cruces**
Rank: **PhD**
Major: **Chemical Engineering**
Expected date
of Graduation: **May 2015**

Narrative of research project: Chemical Recycling of Plastic Solid Waste for the Production of Transportation Fuels. Since the first industrial scale production of synthetic polymers (plastics) took place in the 1940s, the production, consumption and waste generation rate of plastic solid waste (PSW) has increased considerably. Plastics are used in our daily lives in a number of applications, from greenhouses, mulches, coating and wiring, building materials to packaging, films, covers, bags and containers. It is only reasonable to find a considerable amount of PSW in the final stream of municipal solid waste (MSW). In the U.S., PSW found in MSW has increased from 11% in 2002 (USEPA, 2002) to 12.4% in 2010 (USEPA, 2012), with the total amount of PSW in the U.S. being 31 Million Tons in 2010. In Dona Ana County alone there was 116.23 tons of PSW sent to recycling centers (NMENV, 2011), and so one can imagine just how much PSW was produced that never reached recycling centers. Thermoplastics make up roughly 80% of plastic production and a typical use of this plastic is packaging (Dewil et al., 2006). Worldwide packaging accounts for over 35% of plastic consumption (Clark and Hardy, 2004). Recent progress in recycling and recovery of PSW has led to new advances in reducing the amount of PSW ending up in landfills. Tertiary recovery (or chemical recycling) has a possibility for economic profit with the production of feedstock chemicals for the chemical industry as well as production of transportation fuels. The development of value added recycling technologies is very desirable as it would increase the economic incentive to recycle polymers (Horvat, 1996). To date only studies limited in scope have been performed on the production of transportation fuels from PSW (Sheirs and Kominsky, 2006). Most studies have been intent on production of monomers and feedstock chemicals for the chemical industry due to their high profit potential. This has led to incomplete knowledge with regards to the best methodologies and most economical means of producing transportation fuels from PSW. Little work has been done with regards to the conditions necessary for the non-catalytic production of transportation fuels from PSW. Studies on catalytic production of transportation fuels from PSW have been limited due to the fact that at the time of these studies fuel prices were not economically justifiable. As prices of transportation fuels have risen over the course of 2012, the economic viability of production of transportation fuels from PSW have improved. Research performed on the optimization of production conditions and into improved catalysts or cheaper catalysts could prove highly beneficial to furthering chemical recycling of PSW. In this study, representative plastic wastes from MSW will be pyrolyzed under varying process conditions and in the presence of previously unstudied catalysts, the resulting gaseous, liquid, oil, wax, and char products will be collected and characterized.



University of Texas El Paso BGREEN
Texas A & M University Kingsville Undergraduate Students

Name: **Angelica F. Arredondo**
Hometown: **Kingsville, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Senior**
Major: **Range and Wildlife Science-Wildlife**
Expected date
of graduation: **May 2014**
Degree: **BS**
USDA Agency
of interest: **APHIS**
Email: **angelica.arredondop182@gmail.com**

Career experience/location: During the summer of 2013 I worked in Kingsville, Texas with the Ceasar Kleberg Wildlife Institute.

Description of career experience (what I learned): I learned how to properly map wetlands for slop and topography. In doing so, I used a laser level, learned how to use a GPS device along with creating maps on G15 software.

What is your perception of agriculture now: As I realized before, even more so, I learned how important agriculture is to our future.

How has this career experience broadened your employment opportunities: Due to this experience, I have made connections with both professors and ranch managers that can influence, and help with future career goals, and opportunities.

Career and research aspirations: As of now, I have come to the realization that I would like to pursue wildlife education.

Skill Set: -GPS -GIS -computer word processing -data collection
-laboratory techniques -field techniques -wetland mapping

The impact of my career experience: Prior to working on the internship, I developed an interest for wetlands, their ecology and conservation, due to a course I had taken the previous semester. While working on the internship I was able to work with several wetlands. By accomplishing this, it only reaffirmed my interest towards conservations and education about wetlands or just the environment and it resources in general. With that being said, as of now, my career goals are wildlife education, because I firmly believe that education is the foundation for conservation. Without the internship, I would have never fully recognized the importance of not only wetlands, but different habitats, and that they are inhabited by vast amounts of flora and fauna. Due to this opportunity, it has made me realize my future goals and long term career choices, and for that I am so grateful that I had this experience.



I firmly believe that education is the foundation for conservation. Without the internship, I would have never fully recognized the importance of not only wetlands, but different habitats, and that they are inhabited by vast amounts of flora and fauna.

Name: **Jessica Castellano**
Hometown: **McAllen, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Junior**
Major: **Ag Science-Certified**
Expected date
of graduation: **Spring 2014**
Degree: **BS**
USDA Agency
of interest: **APHIS, NRCS**
Email: **jrcastellano@yahoo.com**

Career experience/location: During the summer 2013 I worked in Natural Resources Conservation Service (NRCS) in Cameron County, Texas.

Description of career experience (what I learned): I learned about the daily duties as an NRCS employee. I learned that when a client first comes in you must sit down and ask them what their intentions are with their land. I learned how to take GPS points along property lines to find out if the customer is in compliance with their contract. I also learned how to locate property on older maps, to see how the property has changed over the years. I also learned how to report on customer contracts, with minimal supervision.

What is your perception of agriculture now: I have a great appreciation for agriculture and producers who work hard to feed this country.

How has this career experience broadened your employment opportunities: The NRCS is something I always considered, and after this summer I am strongly considering it as a future career. I have always heard about the NRCS, but never truly understood what it stood for. After this summer, I got to meet many inspiring people both employees and producers, who had many wonderful things to say about the NRCS and what impact it has had on the environment.

Career and research aspirations: I plan to graduate with my bachelors in AG Science-certified, so that I can teach agriculture and FFA to youth of society.

Skill Set: -GPS -oral communication



I have a great appreciation for agriculture and producers who work hard to feed this country.

The impact of my career experience: My career experience has allowed me to have the option of choosing the NRCS as a potential career. I have made many connections throughout my time with the agency, with employees as well as producers in the Rio Grande Valley. My career experience has given me insight into the “behind the scenes” aspect of agriculture, because I was able to see what producers go through every day to feed our world. I plan on working as an Agriculture teacher improving the lives of high school students through my agriculture/FFA program. This experience has allowed me to become more outgoing, and learn to speak in front of groups of people.

Name: **Christina R. Escobedo**
Hometown: **Kingsville, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Junior**
Major: **Ag Business**
Expected date
of graduation: **Summer 2014**
Degree: **BS**
USDA Agency
of interest: **Agri-Life**
Email: **c_escobedo@live.com**

Career experience/location: Interned at the King Ranch Feed Yard located on the Santa Gertrudis Division in Kingsville, Texas.

Description of career experience (what I learned): In this field I learned a lot about the buying and selling process of a feed yard as well as learning how to input data into the Feed Yard 3000 system, write up sells statements and do a lot of calculations involving hot weights and gross pay.

What is your perception of agriculture now: Agriculture has a lot of impact in the world and should be treated with more respect for the hard work that goes into it.

How has this career experience broadened your employment opportunities: This has broadened my career opportunities because it has given me personal contact with the main bosses of the King Ranch who know me by and name and if I needed a job I am sure I could get one with their references.

Career and research aspirations: The good thing about this internship is that for about seventy percent of the time I was sitting at a desk doing calculations and writing up data. I have learned that I do not want to be behind a desk for all of the day I would rather do hands on work. I can see myself owning my own agriculture business one day.

Skill Set: -Computer skills -data base mgmt -Feed Yard 3000 program -sales statements -affidavit -selling cattle -checking hot weights

Agriculture has a lot of impact in the world and should be treated with more respect for the hard work that goes into it.

The impact of my career experience: King Ranch is a world known name and I was thankful to be able to work at the Feed yard. I also spent time in the Production Office where the main bosses are at and know my name. This can help if I need a future reference from them or if the King Ranch is hiring I could possibly receive a job there. This experience has taught me I do not want to sit behind a desk for the whole day, I would rather have hands on work and for the future I hope to own my own agriculture business. This internship has taught me a lot because when I had to start the internship my daughter was barely three months old and being a new mother it was frightening to be away from my child and family. This has helped me learn what I would like to do with my life as well and emotionally being attached to my family.



Name: **Rodrigo Franklin**
Hometown: **Mission, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Junior**
Major: **Plant and Soil Sciences-Agronomy**
Expected date
of graduation: **Spring 2014**
Degree: **BS**
USDA Agency
of interest: **NRCS**
Email: **gotty_06@outlook.com**

Career experience/location: During summer 2012 I had the opportunity of working in Lubbock, Texas with USDA-ARS.

Description of career experience (what I learned): During my summer internship we researched on forage sorghum drought stress, we collected some data of heat damage on grain sorghum leaves, and we run some sugar analysis in the lab.

What is your perception of agriculture now: I believe agriculture is a really important career because it is where we get our food, but we still need to educate more people about biotechnology because that is the future of agriculture.

How has this career experience broadened your employment opportunities: Thanks to this internship I met a lot of different professional related to agricultural field that they are willing to work with me on the future.

Career and research aspirations: Agriculture is my passion, I would like to finish my plant and soils degree and then go for the agribusiness masters. In 5 years I see myself working for a grain company as a sell rep, and in a future I would like to become a director.

Skill Set: -Laboratory techniques -multitasking -public speaking
-data collection -field techniques -oral communication -secondary language

The impact of my career experience: Three years ago I was studying in university of Texas Pan Am, I was planning to get a civil engineering degree just because my brother was a civil engineer and also because of the salary, then I realized that I had to go for something I like or I loved, and then I decided to transfer to Texas A&M Kingsville, to go for the only thing I always wanted, be an agronomist. This decision has changed my life because I have found the career of my dream, right after I entered TAMUK I had the opportunity of doing a summer internship in Lubbock, Texas. It was not only the salary that I was happy of, but the experience, the opportunity of meeting new people, so I believe that in order to get the best of you, you need to do what you really love.



I believe agriculture is a really important career because it is where we get our food, but we still need to educate more people about biotechnology because that is the future of agriculture.

Name: **Viviana Garza**
Hometown: **Freer, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Junior**
Major: **Animal Science**
Expected date of graduation: **Spring 2015**
Degree: **BS**
USDA Agency of interest: **APHIS, ARS**
Email: **vivi_garza2011@yahoo.com**

Career experience/location: This summer 2013 I worked in the molecular biology laboratory at Texas A&M University Kingsville in Kingsville, Texas.

Description of career experience (what I learned): I learned how to conduct certain experiments such as PCR (Polymerase Chain Reaction), cell culture and tissue and cell extraction.

What is your perception of agriculture now: I think agriculture is very important in our daily lives. Since working in the Laboratory I am currently employed at I have realized how important research is. It not only affects agriculture but it also affects us.

How has this career experience broadened your employment opportunities: I am currently employed in the laboratory where I interned. This experience showed my boss that I was capable of working hard and I made me realize this is what I enjoyed.

Career and research aspirations: My internship had made me enjoy laboratory work and I plan on pursuing a job in research. I plan on continuing to pursue a career in research. I plan on pursuing a job with the company Viagen in Austin, Texas. I am very fascinated by laboratory research and the cloning side of reproduction

Skill Set: -PCR -cell culture -cell -tissue extraction -pipetting -Microsoft Excel -microbiological techniques

The impact of my career experience: My experience has given me a greater appreciation for research. Before this internship, I had no idea that I would like doing research. I didn't even know anything about laboratory research and I was afraid I wouldn't like it. I took the opportunity though to learn something knew not knowing whether I would like it or not and I did. My internship has put me ahead and not many undergraduate students do the procedures I do. I can say I do graduate work as an undergraduate. I plan on doing an internship with viagen, which is the company I will pursue a job with, this coming summer and this job and internship has prepared me for that.



I think agriculture is very important in our daily lives. Since working in the Laboratory I am currently employed at I have realized how important research is. It not only affects agriculture but it also affects us.

Name: ***Katherine Jazzel Sanchez Wolfe***
Hometown: **Weslaco, Texas**
Institution: **Texas A&M University**
Campus: **Kingsville**
Rank: **Senior**
Major: **Agriculture Science-Certification**
Expected date
of graduation: **May 2014**
Degree: **BS**
USDA Agency
of interest: **ARS**
Email: **katwolfe93@yahoo.com**

Career experience/location: This past summer I worked with USDA-ARS on the Arundo Donax Project in Edinburg, Texas.

Description of career experience (what I learned): Working on the Arundo Donax Project furthered my knowledge of plant and soil science. During my internship I had the opportunity to work both out in the field and in the lab. I learned how to identify different types of plants in the field and learn to work in a level three biosecurity lab facility as well.

What is your perception of agriculture now: Making a difference through agriculture is beneficial not only for humans, but our planet as a whole. Not many people understand what key role agriculture plays in their lives, and I feel it's up to us to educate them.

How has this career experience broadened your employment opportunities: I believe my internship provided me with the best of both worlds. I got to broaden my horizon in both the lab and outside in the field. With the skills I gained, I feel I am now capable of gaining a job with any branch of the USDA. I also plan to carry the knowledge and skills I gained with me into my teaching career and share them with my students.

Career and research aspirations: When I graduate I hope to be an Ag Science teacher at the high school level. During that time I plan to work on my masters, so that I can eventually teach at the college level. However, through my internship I now feel a job with the USDA might also be a possibility as well.

Skill Set: -Field techniques -lab techniques -documentation -proper biosecurity facility technique -data collection -multitasking -plant identifying skills

The impact of my career experience: The positive possibilities that are to come from my internship are endless. Education wise; I have gained so much more knowledge in the fields of plant and soil science. It opened my eyes to a lot of information I was unaware of, and taught me things I wouldn't have learned otherwise. I now have a new appreciation for plant and soil science. It's funny how after almost twenty one years of living in the Rio Grande Valley surrounded by Arundo, I had no clue what damage it was causing. Due to its relevance to my home, I would be interested in continuing Arundo research. I am also looking forward to seeing the final product of the Arundo Donax Project. Therefore, a job with the ARS branch is now my second option for future career choices. With my first choice being teaching, I plan to share all the knowledge I've learned with my future students. Hopefully that will ignite a spark of interests in them, and increase the number of people interested in agriculture.



Making a difference through agriculture is beneficial not only for humans, but our planet as a whole. Not many people understand what key role agriculture plays in their lives, and I feel it's up to us to educate them.

University of Texas El Paso BGREEN
Texas State University Undergraduate Students

Name: **Armita Gina Adibi**
Hometown: **Katy, Texas**
Institution: **Texas State University**
Rank: **Junior**
Major: **Industrial Engineering**
Expected date
of graduation: **August 2015**
Degree: **Bachelor of Science in Industrial Engineering**
Email: **g_a3@txstate.edu**



BGREEN at Texas State University, San Marcos Texas.

Throughout my experience with BGREEN, I learned many different factors are incorporated into designing the simplest things. My experience included designing an eco-friendly vehicle charge stations by integrating renewable energy resources from wind turbines and photovoltaic panels. We used different simulations to optimize the profit while minimizing the cost and service time for each vehicles.

This career experience will be very helpful for me in the future because almost every company in the world is attempting to use other resources than just oil and gas to produce their products. This project was a relatively well introduction of what my future job will be consisted of. I do believe this experience has influenced my job opportunities.

I would like to be involved in a supply and chain or perhaps become a project manager in the future, but as of now I am very open minded about my future career.

I learned many different factors are incorporated into designing the simplest things. My experience included designing an eco-friendly vehicle charge stations by integrating renewable energy resources from wind turbines and photovoltaic panels.

Skill Set: -MS word -PowerPoint -Excel -AutoCAD -fluent in Farsi language

Name: ***Cassandra Cantu***
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Major: **Environmental Engineering Technology**
Rank: **Junior**
Expected date
of graduation: **December 2015**
Degree: **Bachelor of Science**
USDA Agency
of interest: **NRCS, USFS**

Career and Research Aspirations: Sustainable Energy

What I learned: I've learned about sustainable energies (solar photovoltaic panels and wind turbines), and I have researched incorporating them into large semiconductor manufacturing companies.



Name: **Marissa Certvantes**
Hometown: **Victoria, Texas**
Institution: **Texas State University**
Campus: **San Marcos, Texas**
Rank: **Senior**
Major: **BS Agriculture Animal Science**
Expected date
of graduation: **August 2014**
Degree: **BS**
Career and
USDA Agency
of interest:
Email: **MAC232@Txstate.edu**

Research Aspirations: Improve environment with the use of microbiota

Career experience/location:

Location: San Marcos Texas
Employer: Texas State University
Advisor: Dr. Reed Richardson

Description of career experience: I have learned working under BGREEN research team how unique microbiotic life is to its surround environment and the species that consumes them. I have had the experience to learn to generate research projects that can be very beneficial to the surrounding community and environment.

What is your perception of agriculture now: Agriculture is a growing industry with absolutely limited boundaries to what can be researched and accomplished. There are many new arriving niche markets that have begun to sky rocket that never have before. I hope eventually our research will turn into one of these niche markets.

How has this career experience broadened your employment opportunities: With the opportunity to be a part of an undergraduate research team with Bgreen, I hope future employers can entail things about me as a person. I hope it accentuates the soft skills present and it projects the diligence it takes a person to be committed to research outside of their academia career.

Career and research aspirations: I hope to graduate from Texas State University and land a successful career with the USDA or be accepted into a college of Veterinary Medicine. I'd like to continue on with our research goals and let it carry my partners and I as far out as we can take it. In 5 Years I wish to eventually have completed my doctorate in Veterinary Medicine.

The impact of my career experience: My experience with BGreen has allowed me to brighten the horizon with my future academia career. As I approach completing my bachelor's degree my initial goal was to get my bachelors and hopefully make my way into vet school. Now I have considered going to graduate school regardless of that outcome and pursuing a masters. My future employment has broadened with more networking with other graduate researchers and outstanding professors, as well as helps me build my soft skills and persona. My goal is to get a masters and pursue research that involves things of my interest as much as I can.



Agriculture is a growing industry with absolutely limited boundaries to what can be researched and accomplished. There are many new arriving niche markets that have begun to sky rocket that never have before. I hope eventually our research will turn into one of these niche markets.

Name: **Sergio C. Espinoza**
Hometown: **Kilgore, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Senior**
Major: **Manufacturing Engineering**
Expected date
of graduation: **Fall 2014**
Degree: **Bachelor of Science**
USDA Agency
of interest:
Email: **sle43@txstate.edu**

I am currently a senior by hours at Texas State University. I chose this school for its opportunities in combining my passion in Art & Design with Engineering. I grew up in Kilgore Texas and am very well known around the area due to my part-time jobs. I then decided to take a step further and finish out my education at Texas State being the first of my family from Mexico to pursue a bachelor's degree.

I was born in San Luis Mexico where I lived for three years before moving to the U.S. I grew up in Kilgore which is in the middle of nowhere in east Texas. I received my basic K-12 education there. During high school I spent my years involved in sports, the art club, and the science club. After high school I studied two years at Kilgore College earning Associates in Applied Science where it was then that I decided that I wanted to pursue a higher education degree and to leave my hometown in which I had spent the majority of my life. So far my experience at Texas State has been a very interesting ride. Thanks to Dr. Jin and Dr. Tate hiring me under BGREEN to conduct research, my knowledge has developed strong in the forefront of innovation in advanced material products and related manufacturing process development. I currently work as a research assistant for Dr. Jitendra Tate at the university in the Composites and Plastics lab. Working in this facility has allowed me much experience in conducting material testing and characterization studies in accordance with ASTM standards, making composite parts by (multiple) modern manufacturing methods, and conducting research to improve both of these processes and the resulting parts. I am also on the board to establish nanotechnology safety and its implications on society in all aspects at Texas State University and UT Tyler in which I have co-authored in technical writing with Dr. Fazarro at UT. Who would have thought that a small town boy would have been given such a grateful position.



At the university I have been involved heavily in leadership positions. I am Vice President for the 2013-14 school year in The Society of Mexican American Engineers and Scientists (MAES) here at Texas State. I was also selected by MAES to attend the MAES National Leadership Conference in Washington D.C. on February 13-17, 2013. I built on my leadership skills and gained amazing experience and knowledge; knowledge that I will apply to anything I dedicate myself to. I have made the best with my time at Texas State and want to take every opportunity I can to better myself.

My people and communication skills have lead me to acquire great trust amongst fellow team members. My practice is to lead and include each and every one, starting with the weakest member. Thanks to this I have established well rounded friendships that I cherish from people of different backgrounds here at Texas State. I can honestly say that there are no limits to what you can do but to never give up on any goals that you want to accomplish.

I can honestly say that there are no limits to what you can do but to never give up on any goals that you want to accomplish.

Name: **Natalie Gardini**
Hometown: **Austin, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Senior**
Major: **Industrial Engineering**
Expected date
of graduation: **May 2015**
Degree: **Bachelor of Science**
USDA Agency
of interest: **DOE**
Email: **ng1125@txstate.edu**

Career experience/location: I am and undergraduate research assistant for the BGREEN program. I am working out of the CHIPS Lab at Texas State University.

Description of career experience (what I learned): I learned about wind energy and how different wind turbines have different load capacities. While gathering wind data we used Excel to simulate the power output for various cities across the country and a few international cities. We are looking to implement batteries in the simulation to increase the impact of using renewable energy.

What is your perception of agriculture now: I have learned that agriculture is more than just farming. There are many different components that come in to play in the field of agriculture. I appreciate the field more now that I have more knowledge then before entering the program.

How has this career experience broadened your employment opportunities: Through this experience I have been exposed to the many career opportunities in the field of alternative energy. I look forward to the many doors that experience in this field will open.



Career and research aspirations: After graduation I plan to go to graduate school to pursue and MBA. The Master's degree will help give me vision to the business side of the industry and help me be able to understand both the technical and business sides of the industry. In five to ten years I picture myself still in the Austin with a job in the green energy field. This field is rapidly growing and the research I have been taking a part in will help me achieve this goal of staying in the green energy industry.

Skill Set: Data collection -data organization -Excel simulations -Excel functions

The impact of my career experience: Overall this experience has benefited me in ways that I can't even imagine it would. I am more interested in the field of green energy and consider it a very valid career path after graduation. I am interested in learning more about the implementation of PV panels and wind turbines. Right now we are focusing on implementing only at wafer fabrication plants but I am looking forward to the many different places that technology can be implemented. This has set a foundation for what I consider to be a great future I am interested over years to come.

I have learned that agriculture is more than just farming. There are many different components that come in to play in the field of agriculture. I appreciate the field more now that I have more knowledge then before entering the program.

Name: **Sarah Martinez**
Hometown: **Houston, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Senior**
Major: **Animal Science**
Expected date
of graduation: **Fall 2014**
Degree: **Bachelor of Science in Agriculture**
Email: **spm53@txstate.edu**

Career experience/location: I am currently working with other Agricultural students on a BGREEN research project dealing with the use of probiotics.

Description of career experience (what I learned): I have learned so much about how an animal's digestive system can influence the animal's growth, immune system and well-being, but more importantly I am learning just how important the diet of an animal is.

What is your perception of agriculture now: I think that agriculture is an amazing industry that a lot of other industries depend on. Agriculture is an important aspect of what it takes to feed and clothe the world.

How has this career experience broadened your employment opportunities: I have not been part of this program long enough to appreciate the employment opportunities it comes with, but it has made me more aware of different avenues of employment that I would have never known about.

Career and research aspirations: I would love to be involved in any research that would better the lives of animals, and in return would benefit the human race. My goal for a career would to be doing anything that revolved around animals, and then in a few years go back to school for veterinary medicine.

Skill Set: -Computer skills -some microbiological technique skills
-experience with a variety of animals (household and livestock) -some familiarity with heavy machinery



I think that agriculture is an amazing industry that a lot of other industries depend on. Agriculture is an important aspect of what it takes to feed and clothe the world.

Name: **David Montoya**
Hometown: **Houston, Texas**
Institution: **Texas State University**
Major: **Industrial Engineering**
Rank: **Undergraduate**
Expected date
of graduation: **Spring 2015**
Degree: **Bachelors of Science**
USDA Agency
Of interest: **NRCS, DOE**

Career and Research Aspirations: I aspire to work with green energy; optimize technology/techniques used to improve industrial development in such ways that influence healthy and adequate living.

Location: San Marcos, Texas
Employer: Dr. Tongdan Jin

What I learned: I learned how to incorporate probabilistic operation research with today's EV infrastructure to optimize the most efficient manner on composing a charging station. With integrated renewables such as solar panels and wind turbines, we transition the producers and consumers relationship from one leading to environmental harm to one of environmental safety. I have learned to research correctly and efficiently.

About me: I have come to realize that as the industry grows, certain values of humanity diminish. One of those values has been our environment. I love the environment. I love having a purpose that influences the best in everyone and everything. GO GREEN.



I aspire to work with green energy; optimize technology/techniques used to improve industrial development in such ways that influence healthy and adequate living.

Name: **Victor A. Santana-Viera**
Hometown: **San Juan, Puerto Rico**
Institution: **Texas State University**
Campus: **San Marcos, Texas**
Rank: **Undergraduate**
Major: **Industrial Engineering**
Expected date
of graduation: **December 2014**
Degree: **Bachelor in Science**
USDA Agency
of interest: **NRCS**
Email: **vas41@txstate.edu**



Career experience/location: I am an Undergraduate Engineering Research Assistant (UERA) at the Center of High Performance Systems (CHiPS) at Texas State University in San Marcos, Texas.

Description of career experience (what I learned): As an UERA, I have been able to expand my knowledge in renewable energy technology, like wind turbines, photovoltaic panels, and other renewable energy technologies. I have learned how WT and PV work, by studying every variable that need to be considered so that these renewable energy technologies are able to produce clean energy. Other skills I have learned are the development of databases for literature reviews, formulation of mathematical models, crafting of simulation models, data analysis, and expansion of programming skills knowledge and languages, and knowledge in energy consumption of various manufacturing facilities.

What is your perception of agriculture now: Now I understand that is our duty to make sure that we protect and conserve our natural resources, and make our way of life greener.

How has this career experience broadened your employment opportunities: The experience that I have acquired has become very important part on the industries I would like to be a part off during my professional career life. When manufacturing industries and research facilities look at my resume, and see the skills and the research I have been doing, they really show themselves as interested and impressed.

Now I understand that is our duty to make sure that we protect and conserve our natural resources, and make our way of life greener.

Career and research aspirations: In the near future I see myself with a master, and maybe even with a doctorate, in engineering, hopefully working with a company that values my academic achievements as well as my leadership and technical skills.

Skill Set: -Computer skills: MS Excel, Minitab, Matlab, MathCad, TORA, AutoCAD, MS Word, PowerPoint, Xpress, Eclipse (C++), R Statistical Software, Design Experts, and VBA (Visual Basic for Applications) -bilingual: English and Spanish -strong analytical skills -ability to handle multiple tasks -industrious, motivated, detail minded, pursues excellence -pro-active leader, communicator, project manager -responsible: takes personal ownership

The impact of my career experience: Thanks to BGREEN and the research I have done, I have been able to decide on what I would like to accomplish in the future. I have developed an interest in the semiconductor manufacturing industry, and the renewable energy industry. These two industries are the two main topics of the research I have done in the BGREEN program, thus inspiring me to be part of these industries, since I have a lot of knowledge that could help me be a great asset for these industries. Also being in the program has open my eyes on how much I still have to learn, for this reason I have decided to continue my studies to the graduate level. With hard work and dedication I will obtain my graduate degree and be working with either the manufacturing or the energy industry within the next 10 years.

Name: **Rachel Wilson**
Hometown: **Highland Village, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Junior**
Major: **Geography-Environmental Studies**
Expected date
of graduation: **May 2016**
Degree: **Bachelor of Science**
USDA Agency
of interest:
Email: **Rlw137@Txstate.edu**

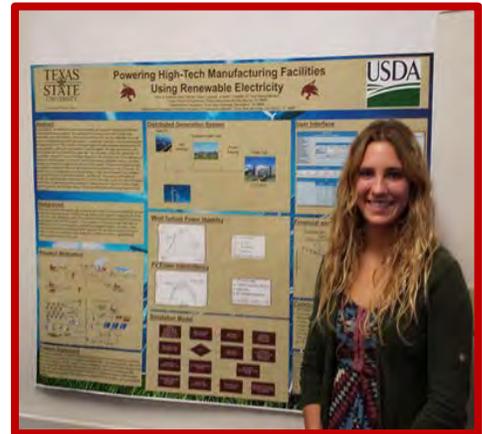
Description of career experience (what I learned): Through the BGREEN program I am learning to collect data regarding wind turbines and solar PV's to integrate into a Smart Grid System. I have learned how to conduct research for data and to simulate these different systems.

How has this career experience broadened your employment opportunities: This program has given me experience in a field where I previously had very little. It has expanded my future job opportunities regarding clean energy use through wind turbines or Solar PV.

Career and research aspirations: In the future I would like to continue doing environmental work. This program has broadened my options to clean energy technology. My goal is to work in environmental preservation.

Skill Set: -Excel skills -researching skills -data collection skills

The impact of my career experience: My career experience helps impact my future because experience is very important. When you have experience in a specific field you are more likely to be successful in that field. Environmental work is my career goals and that can range from a variety of careers.



Through the BGREEN program I am learning to collect data regarding wind turbines and solar PV's to integrate into a Smart Grid System. I have learned how to conduct research for data and to simulate these different systems.

University of Texas El Paso BGREEN
Texas State University Graduate Students

Name: **Charles Hoitt**
Hometown: **Schertz, Texas**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Graduate Student**
Major: **Agriculture Education**
Expected date
of graduation: **August 2014**
Degree: **MEd Agriculture Education**
USDA Agency
of interest: **NRCS, USFS, FAS, FSA**
Email: **ch1675@txstate.edu**

Career experience/location: Graduate Assistant/Texas State University San Marcos, Texas.

Description of career experience: I worked with Dr. Richardson in the classroom and lab session in Wildlife Nutrition and Range Management courses. For BGreen I worked with Steve Riggs, Marissa Cervantas, Sarah Martinez and Chris Gaffney giving them assistance on their projects as well as working on my own thesis studying the Utilization of Mesquite (*Prosopis spp.*) in Texas.

What is your perception of agriculture now: Agriculture is essential to the continued sustainment of human populations in the world. Especially now in westernized countries, individuals are being further removed from the sources of food by supermarket and box store retail world.

How has this career experience broadened your employment opportunities: I feel I have a better grasp of knowledge of agricultural production and would be able to step into a career that demands knowledge of agricultural practice when I complete my Master's degree.

Career and research aspirations: PhD. Arid Lands Study or a Natural Resource Management field Texas Tech University.

Skill Set: -Microsoft Office -using farm equipment -chemical application -animal health monitoring -water quality monitoring -educator

The impact of my career experience: I've expanded my own understanding of range, fish and wildlife management by learning how to teach others. Working with BGreen and Dr. Richardson has expanded my interests to include agriculture production in conjunction with Fisheries and Wildlife management. Long term the work here in BGreen has made me feel more comfortable with my abilities as communicator and educator. Both helping my colleagues with their projects here in BGreen in the Agriculture Department and working with Dr. Richardson in the classroom and lab setting has solidified.

Agriculture is essential to the continued sustainment of human populations in the world. Especially now in westernized countries, individuals are being further removed from the sources of food by supermarket and box store retail world.



Name: ***Fei Sun***
Hometown: **Beijing, China**
Institution: **Texas State University**
Campus: **San Marcos**
Rank: **Graduate**
Major: **Industry Technology**
Expected date
of graduation: **December 2014**
Degree: **Master Degree in Engineering Technology**
Email: **F_S38@txstate.edu**

Description of career experience (what I learned): I learned a lot of knowledge about renewable energy resources, their working principle, how they have evolved over the past couple of years and working capacity in the future. I will find the way to set up a charge station for electric vehicle (EV) with solar energy and wind power integration.

How has this career experience broadened your employment opportunities: It is the excellent experience of working in the SOLAR lab. It is helpful for my career in the future. It would help me to find the job in the fields of renewable energy and EV station.

Career and Research Aspirations: Engineering, Manufacture.

Skill Set: -Computer skills -data base mgmt

I learned a lot of knowledge about renewable energy resources, their working principle, how they have evolved over the past couple of years and working capacity in the future.



Name: **Stephen Riggs**
Hometown: **San Antonio, Texas**
Institution: **Texas State University**
Rank: **Graduate**
Major: **Agriculture and Sustainability**
Expected date
of graduation: **May 2014 and December 2014**
Degree: **Master of Agriculture Education MSIS**
USDA Agency
of interest: **Agriculture**
Email: **steveriggs57@yahoo.com**

Career experience/location: I have learned a great deal with all of the work related experiences I have had. I have researched as many as one hundred and thirty five peer reviewed and publicized articles dealing with my subject matter. Plus, I have had many experiences researching in the physical field.

Description of career experience (what I learned): In the physical field we used a vast array of tools. We literally had to get measurements and physical data so we used everything from kayaks to depth readers, compasses, thermometers, four-wheel drive vehicles, and cameras to document our experiences and findings.

What is your perception of agriculture now: I now understand the great depth of the concept of Agriculture and all of the effects this subject has on people in general.

How has this career experience broadened your employment opportunities: The new skills knowledge that I have acquired during this work has enabled me to expand my abilities for employment in Agriculture not only in Texas but in The United States as a whole.

Career and research aspirations: When I finish my degree in Sustainability, I will be able to enter the workforce at a salary, and in a position, where I will be able to, with comfort, not only continue my research but I will be able to pass on my knowledge to others as well. I will more than likely do this with the State of Texas Agriculture agencies or the USDA. I will hopefully be able to retain any position throughout my future years.

Skill Set: -Water resources -environmental law -organic farming -agriculture -research skills -computer skills
-vector borne disease dynamics -resource management -soils

The impact of my career experience: The majority of my experiences have made me more knowledgeable in the field of not only agriculture but what is needed to maintain the practice of agriculture. In general, I hope to educate and inform, either in an institution or in the field, the practices that I have come to understand through my research experiences. I will probably work for the State of Texas in some capacity to accomplish this endeavor. At the same time I hope to continue my research in any capacity and hopefully gain a PhD in the process of my occupation. This will enable me to possibly work in a more formal institution as well as give my work more credibility in the educational and scientific arenas. But, I have had a great many mentors and I feel the need to not only pass my research findings along to the younger generations but my other skills that I gained from these mentors as well.

The majority of my experiences have made me more knowledgeable in the field of not only agriculture but what is needed to maintain the practice of agriculture. In general, I hope to educate and inform, either in an institution or in the field, the practices that I have come to understand through my research experiences.



University of Texas El Paso BGREEN
University of El Paso Undergraduate Student

Name: *Ileana Delgado Camacho*
Hometown: **El Paso, Texas**
Institution: **University of Texas at El Paso**
Campus: **El Paso**
Rank: **Senior**
Major: **Industrial Engineering**
Expected date
of graduation: **May 2014**
Degree: **BS**
USDA Agency
of interest: **ARS**
Email: **idelgado3@miners.utep.edu**



Career experience/location: During the summer of 2013 I had a funded international experience of Global and Regional Sustainability in Peru. And also worked with Dr. Espiritu in his Sustainability Engineering and Systems Optimization Lab (SESOL) at UTEP.

Description of career experience (what I learned): In the international experience I learned about life cycle assessments. Also, in the lab I learned more about biomass conversion process and how to maximize the production of methane by optimizing the scheduling of batches.

What is your perception of agriculture now: Agriculture for me is now of great importance because improving processes in agriculture can help sustain our future world.

How has this career experience broadened your employment opportunities: Thanks to both experiences I was able to expand my employment opportunities not only to an industry but also into environmental workplace. Also, I created some important connections that can be helpful in opening doors for future opportunities.

Career and research aspirations: I am planning to graduate as an Industrial Engineer, and continue my education with masters in Industrial Engineering as well but focusing even more into the sustainability and environmental education. While studying my master's degree I aspire to keep researching with Dr. Espiritu in his Sustainability Engineering and Systems Optimization Lab (SESOL) by improving past research works and learning more about agricultural processes that can be optimized.

Skill Set: -Data collection -design of experiments -optimization -production -LCA -CES EduPack 2012 -Greet 2013 -Matlab

The impact of my career experience: I developed a huge interest for the sustainability view of the engineering; build in conjunction with the nature, without damaging the environment. In the actuality scarceness in resources is being highlighted while temperatures are rising due to global warming. We are finishing the available resources and if nothing is done to conserve the Earth, the temperatures will keep rising causing the extermination of the left resources. Thru this opportunity I had the opportunity to observe and analyze how the Incas constructed buildings that last through time and were prepare for natural disasters. Also, I realized about the new technologies that are being researched in order to produce electricity by using renewable resources. After this experience, I realized the relevance of agriculture and environment within the engineering for the conservation of the resources. This opportunity help me reinforce my passion for engineering and even more knowing that thru sustainability I could contribute to a way to save our resources; consequently save the Earth.

Agriculture for me is now of great importance because improving processes in agriculture can help sustain our future world.

University of Texas El Paso BGREEN
University of El Paso Graduate Students

Name: **Juan C. Bezares-Cruz**
Hometown: **Puerto Rico**
Institution: **University of Texas El Paso**
Rank: **PhD**
Major: **Civil Engineering (Environmental Engineering)**
Expected date
of Graduation: **December 2014**
Email: **jcbezarescruz@miners.utep.edu**

Career experience/location: In the summer of 2013, I worked in my lab to fully focus in my dissertation.

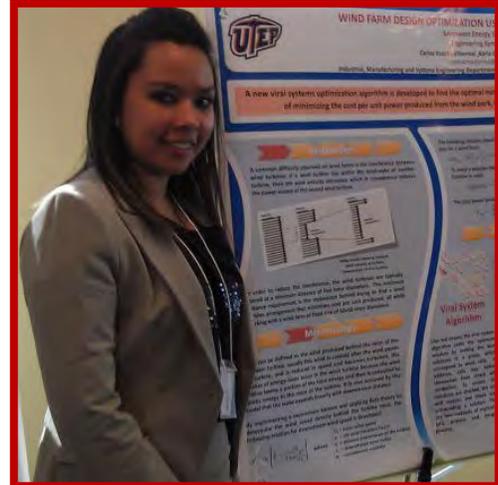
Description of career experience (what I learned): I'm a PhD. student in Civil Engineering at The University of Texas El Paso (UTEP). Previous education experiences include a master degree in Environmental Engineering at Purdue University and bachelor's degree in Industrial Chemistry from The University of Puerto Rico (Humacao Campus). During my early academic career I have developed a great interest in conservation of natural water resources, the environmental impact of current social practices as well as the engineering and application of remediation techniques to enhance their current environmental conditions. In addition I have acquired a good foundation of scientific and engineering skills during the learning experiences received both during my chemistry and engineering education providing a great preparation for interdisciplinary activities. This allowed me to integrate the fields of Chemistry, Biology, Civil Engineering and Industrial Engineering in the performance assessment of wastewater treatment plants in El Paso, Texas.



Career and research aspirations: My professional and research interest focus on endocrine disrupting compounds use, fate and transport in municipal wastewater treatment plants near agricultural areas. Including, development of sustainability metrics of current pesticide use practices and the application of water remediation practices to enhance pesticide removal in currently used water treatment processes.

I have acquired a good foundation of scientific and engineering skills during the learning experiences received both during my chemistry and engineering education providing a great preparation for interdisciplinary activities.

Name: **Karla Gutierrez**
Hometown: **El Paso, Texas**
Institution: **University of Texas**
Campus: **El Paso**
Rank: **Graduate student**
Major: **Environmental Science and Engineering-Energy**
Expected date of graduation: **May 2015**
Degree: **PhD**
USDA Agency of interest: **NIFA**
Email: **krgutierrez@miners.utep.edu**



Career experience/location: During summer of 2013 I worked with USDA/ARS in Temple, Texas.

Description of career experience (what I learned): Working for the Agricultural Research Service gave me the opportunity of learning both the lab and the field work of a soil researcher. I learned how to grind, dry, weight and prepare the soil samples for their further assessment. Also how to read the samples and the usage of the software designed for their examination. All of this to measure the nutrients in each soil sample. Additionally throughout the year I work in the Sustainability Engineering and Systems Optimization Lab (SESOL) investigating about renewable energies, and work related to this topic.

What is your perception of agriculture now: Now, I see agriculture as something more than just the harvesting of crops. I see it, as a real science of growing food. Each produce needs specific nutrients to the soil in order to grow strong, and in consequence deliver the desired nutrients to the general public.

How has this career experience broadened your employment opportunities: The internship provided me with hands on training, which in my lab at UTEP I do not get to experience really often. With the skills I have gained from the field work and the experience in research that I have developed through the years in the SESOL, I consider myself capable of gaining a job with any branch of the USDA.

Career and research aspirations: My research interests are in renewable energies and biofuels as well as investigating technologies to commercialize in these fields. My expertise lays in the investigation, generation and implementation of the state of the art optimization techniques in Industrial and manufacturing engineering such as genetic algorithms, tabu search and the newly developed evolutionary algorithm based on adaptive echolocation.

Now, I see agriculture as something more than just the harvesting of crops. I see it, as a real science of growing food. Each produce needs specific nutrients to the soil in order to grow strong, and in consequence deliver the desired nutrients to the general public.

Skill Set: -Field techniques -data collection and sampling -laboratory skills -verbal communication -research on the generation and implementation of optimization techniques

The impact of my career experience: Thanks to the knowledge I have gained through the BGREEN funding I can now say that I'm ready to pursue a career in a Federal agency like USDA. With the field work realized during the past summer I have developed new skills in the soil science, and also have enhanced my research approaches and techniques. I also want to continue doing outreach programs in my community to educate people and specifically young scholars about sustainability, energy, water scarcity and agriculture.

Name: ***Jesusita Ibarra***
Hometown: **El Paso, Texas**
Institution: **University of Texas at El Paso**
Major: **Environmental Science Engineering**
Expected date
of graduation: **August 2017**
Degree: **PhD**
Email: **jibarra5@miners.utep.edu**

Career experience/location: During the summer of 2013 I worked doing research in the Sustainability Engineering and Systems Optimization Lab (SESOL) under the guidance of Dr. Taboada. At that time, I was a Master student.

Description of career experience (what I learned): After my research experience I learned how to integrate the use of metaheuristic algorithms in order to get the proper logistic design of three different biomass feedstocks.

What is your perception of agriculture now: Agriculture is a vital and important activity for all the people in the world because without it would not be a future for us.

How has this career experience broadened your employment opportunities: Thanks to this research experience I had the opportunity to work with great and knowledgeable people and expand my connections.

Career and research aspirations: Due to this experience, I decided to continue my studies and obtain a PhD in Environmental Science Engineering.

Skill Set: -Programming in Matlab -Microsoft office (Word, Excel, PowerPoint) -data collection -bilingual

The impact of my career experience: The research experience I had gave me a great satisfaction and caught my total attention. Before developing this work, I did not know much about the biomass needed for the biofuels production but now I feel more informed in the area. However, this caught my attention and decided to expand the investigation. The reason is because I consider that it is important to identify how its development affects the agricultural sector. I believe this is important in order to identify proper measures to mitigate a possible negative effect in the area and improve its efficiency.



Agriculture is a vital and important activity for all the people in the world because without it would not be a future for us.

Name: **Olivia C. Moreno**
Hometown: **El Paso, Texas**
Institution: **University of Texas at El Paso**
Campus: **UT El Paso**
Rank: **PhD**
Major: **Environmental Science and Engineering-Energy**
Expected date of graduation: **Spring 2015**
Degree: **Doctoral**
USDA Agency of interest: **NIFA, NRCS**
Email: **ocmoreno@miners.utep.edu**



Career experience/location: Interned at the National Institute of Food and Agriculture (NIFA) Institute of Bioenergy, Climate and Environment (IBCE) in Washington DC.

Description of career experience (what I learned): During the summer of 2013, I worked in Washington DC with USDA-NIFA-Institute of Bioenergy, Climate and Environment. I aided in composing the NIFA-IBCE division of Bioenergy Portfolio and Legislative Authorities Briefing Book that are reports for Congress. I gained insight on the pre and post award management process through CREEMS. Fortunately enough I was able to sit in panels with the National Program Leaders and observe how formula and capacity grants are awarded to schools, universities, and farming communities. Many activities for interns included attending Capitol seminars and hearings to become aware of the popular agriculture issues and hear representatives propose solutions or provide updates on the topic of discussion in Congress or the Senate. Additionally, I was able to create my individual performance plan which included short term and long term goals to achieve in alignment with the agency's AgLearn application.

What is your perception of agriculture now: Agriculture impacts this country every day in every way and I want to be part of the initiative to address the arising problem of being able to feed nine billion people by the end of 2050.

How has this career experience broadened your employment opportunities: My career opportunities have grown because I have gained contacts in case of employment in Washington DC. My goals are to be employed by USDA in the near future and being able to reference to National Program leaders is a great asset.

Career and research aspirations: Being part of these internship opportunities and working at the Sustainability Engineering and Systems Optimization Lab (SESOL) has enabled me to develop my dissertation topic. The controversy of growing crops for consumption or as a feedstock for biofuels has increased the interest in analyzing the sustainability of agricultural systems. When evaluating the sustainability of a particular food/agricultural system, the three pillars of sustainability: economic, environmental and social impact indicators must be thoroughly included. Few have included social impact indicators within the LCIA analysis and I would like to include that in my dissertation topic.

Agriculture impacts this country every day in every way and I want to be part of the initiative to address the arising problem of being able to feed nine billion people by the end of 2050.

Skill Set: -Computer skills -computer word processing, Microsoft Excel -CREEMS grant management system -AgLearn -public speaking -data collection -bilingual

The impact of my career experience: My career experience has enabled me to tailor my dissertation topic to the needs of the agency where I interned for the last two summers. After being fortunate enough to sit in a meeting with Dr. Sonny Ramaswamy and other national program leaders to discuss need based research, the motivation to generate my dissertation topic which includes the development of a comprehensive decision support tool for the assessment of biofuel feedstocks and top ten crop products through their entire supply chain and impact considering the three pillars of sustainability: environmental, social and economic factors.

Name: **Julio E. Padilla**
Hometown: **El Paso, Texas**
Institution: **The University of Texas**
Campus: **El Paso**
Rank: **PhD**
Major: **Chemistry**
Expected Date
of Graduation: **December 2014**
Degree: **PhD**
USDA Agency
of Interest: **Agricultural Research Service ARS**
Email: **jepadilla@miners.utep.edu**

Career experience/location: In the summer of 2014, I had the privilege to intern at the USDA-ARS in Lubbock, Texas under the supervision of Dr. Veronica Acosta-Martinez.

Description of career experience (what I learned): This summer we finished writing an article that has been submitted for publication on the MidIR analysis of wind erosion-generated dust and the effects of land management on its composition.

What is your perception of agriculture now: Agriculture is very important to our national security because it, and its sustainability, is critical to the food supply as well as the economy.

How has this career experience broadened your employment opportunities: I believe I have developed very important professional relationships, as well as recommendations that will facilitate me in finding employment after I graduate.

Career and research aspirations: I hope to begin a very successful career within the federal government, preferably the USDA, in sustainable energy research.

Skill Set: -MidIR -spectroscopy -NMR -TEM -AFM -MS -IR -wet lab techniques -technical writing -teaching -managing a lab -field sampling -data processing

The impact of my career experience: The two summers I have spent working in the ARS have been very fruitful and beneficial. I have submitted an article for publication, networked and collaborated with many ARS researchers, and learned new lab techniques. I hope that next year I can add that these career experiences culminated with a career in the USDA.



Agriculture is very important to our national security because it, and its sustainability, is critical to the food supply as well as the economy.

Name: **Rodney Vance**
Hometown: **El Paso, Texas**
Institution: **University of Texas at El Paso**
Campus: **El Paso**
Rank: **Doctoral**
Major: **Environmental Science and Engineering**
Expected date
of graduation: **August 2014**
Degree: **PhD**
USDA Agency
of interest: **NIFA**
Email: **rvance@miners.utep.edu**

Career experience/location: During the past two summers I had the opportunity to work at USDA's National Institute of Food and Agriculture (NIFA) within the Institute for Bioenergy, Climate, and Environment (IBCE) in Washington, DC.

Description of career experience (what I learned): During my internship at NIFA-IBCE I received valuable experience on grant proposal and funding processes, as well as recognizing the importance of HSI's and the opportunities they offer for Hispanic students to access higher education. Additionally, I had the opportunity to participate and provide data for White House advisory committees and congressional briefings. As a student funded under a USDA grant, BGREEN (Building a Regional Energy and Educational Network), I have conducted research in our Sustainability Engineering and Systems Optimization Lab developing an optimal control model for biofuel feedstock optimization that considers different landscape scenarios and watershed impacts.



What is your perception of agriculture now: I value the importance of improving agricultural productivity and efficiency while preserving our natural resources.

How has this career experience broadened your employment opportunities: My experience with USDA has been extremely rewarding. Having the opportunity to meet with many seasoned professionals within the USDA and others in the area of watershed management allowed me to further develop my research as well as establish contacts for future career paths.

Career and research aspirations: I hope to develop myself as a well-trained environmental scientist and plan to pursue a career within the USDA in the area of sustainable energy and agricultural production. I believe it is important to increase research on renewable energy systems and energy sustainability, as well as promote good land management. I feel it is equally important to improve environmental quality while conserving the natural resources that agriculture depends on.

I hope to develop myself as a well-trained environmental scientist and plan to pursue a career within the USDA in the area of sustainable energy and agricultural production. I believe it is important to increase research on renewable energy systems and energy sustainability, as well as promote good land management.

Skill Set: -GIS -SWAT -optimization

The impact of my career experience: It has inspired me to pursue my goals with a career in agriculture with the USDA. I truly appreciate and value everything I learned over the past two summers with NIFA.

Index

A

Aerospace Engineering	325
Ag Business	191, 334
Ag Science	333
Agribusiness Management	240
Agricultural Economics	329
Agricultural Education	268
Agricultural Engineering	295
Agricultural Extension	294
Agricultural Technology	207
Agriculture	184, 185, 186, 192, 201, 202, 203, 209, 227, 233, 235, 236, 244, 245, 255, 269, 285, 340
Agriculture and Community Development	130
Agriculture and Sustainability	349
Agriculture Business and Management	241
Agriculture Education	234, 347
Agriculture Marketing Service	363
Agriculture Science	337
Agriculture Technology	208, 210
Agroecology	51
Agronomy	65, 152, 187, 195, 200, 289, 299, 335
AMS	173, 191, 192, 194, 195, 201, 294, 295
Animal Science	183, 189, 190, 193, 194, 196, 197, 198, 204, 228, 229, 231, 236, 239, 250, 251, 252, 253, 256, 259, 260, 264, 305, 336, 340, 343, 363
Animal Sciences	158
APHIS	31, 51, 57, 60, 67, 70, 75, 76, 81, 84, 87, 95, 125, 140, 143, 153, 180, 183, 184, 187, 188, 190, 192, 193, 194, 196, 197, 198, 201, 202, 204, 207, 208, 209, 210, 211, 218, 221, 228, 229, 231, 236, 238, 239, 241, 250, 251, 252, 253, 254, 255, 256, 259, 260, 262, 263, 306, 332, 333, 336, 360
Applied Mathematics	230
ARS	15, 26, 34, 46, 48, 49, 52, 53, 57, 59, 60, 62, 66, 69, 71, 73, 75, 76, 78, 81, 82, 84, 88, 89, 90, 91, 92, 93, 94, 96, 97, 117, 126, 143, 171, 179, 181, 182, 186, 189, 193, 211, 214, 216, 219, 222, 224, 230, 237, 249, 252, 271, 276, 278, 285, 291, 292, 293, 296, 298, 299, 300, 301, 302, 304, 308, 309, 310, 311, 312, 313, 314, 319, 322, 323, 324, 336, 337, 350, 355, 361

B

BGREEN - Building a Regional Energy and Educational Network (University of Texas El Paso)	321
Biochemistry	230, 261, 324
Biological Sciences	38, 40, 76, 81, 84, 85, 275
Biology	16, 24, 25, 39, 57, 58, 66, 67, 68, 69, 70, 71, 72, 74, 75, 83, 86, 87, 88, 89, 90, 92, 93, 94, 95, 96, 97, 107, 108, 116, 117, 119, 135, 143, 148, 149, 155, 157, 159, 168, 171, 175, 179, 205, 206, 211, 212, 214, 216, 217, 218, 219, 220, 221, 222, 223, 237, 238, 242, 246, 254, 258, 261, 262, 265, 271, 272, 274, 316, 317
Biomedical	273
Biomedical Sciences	274

Biomedics	276
Biopharmaceutical Sciences	82, 86
Biotechnology	73, 77, 78, 79, 86, 174, 175, 176, 178, 179, 181
BLM	124, 139

C

California State University Project Page	5
CEAH	31
Chemical Engineering	298, 300, 301, 331
Chemistry	53, 56, 69, 91, 97, 179, 214, 224, 277, 278, 279, 280, 281, 282, 284, 288, 302, 303, 306, 307, 309, 310, 311, 312, 313, 314, 315, 318, 319, 320, 355
CITA	309
Civil Engineering	10, 14, 141, 154, 156, 292, 297, 351
Civil Engineering Technology	129
CNPP	177, 249
Coastal and Watershed Science & Policy	18, 21, 22, 23, 26, 27, 28
Coastal and Watershed Science & Policy	20
Computer Engineering	215
Computer Science	32, 146
Conservation Ecology	123, 132
Criminal Justice	80
Crop Protection	153, 296
CSCDRD	29

D

DOE	344
-----	-----

E

Earth and Planetary Sciences	147
Ecology	38, 39, 44, 124, 126, 132
Economic Development	326
Ecosystem Services	158
Electrical Engineering	248, 322
Engineering	356
Engineering-Energy	352, 354
English Creative Writing	324
Entomology	361
Environmental and Resource Studies	41
Environmental Biology	11
Environmental Engineering	17, 145, 339, 351
Environmental Geology	101
Environmental Health	33, 151, 172
Environmental Science	12, 85, 99, 118, 137, 160, 161, 162, 163, 164, 165, 166, 167, 169, 170, 213, 232, 243, 352, 354, 356
Environmental Science and Management	115
Environmental Science Engineering	353
Environmental Studies	48, 49, 50, 51, 52, 54, 55, 59, 60, 61, 62, 63, 64, 65, 346
EPA	284

ERS 61, 326, 329

F

FAS 264, 329, 347
FATE Food Safety and Agroterrorism Training: Educating
Our Future Workforce (Texas State University) 225
FDA 153, 307
Fire 146
Florida International University Project Page 47
Florida-Caribbean Consortium for Agriculture Education
and Hispanic Workforce Development (FCCAgE)
(Florida International University) 47
FNA 219
FNS 68, 83, 177, 249, 303, 307
Food and Safety 79
Food Science and Technology 307, 309
Forest Service 149
Forestry 100, 102, 103, 104, 105, 106, 109
FSA 61, 277, 347
FS-FPL 298, 301
FSIS 33, 68, 80, 84, 90, 203, 226, 230, 233, 249, 257, 260,
288, 305, 307, 315, 316, 317, 320
FWS 153

G

Geographic Information Systems 177
Geography 30, 34, 37, 41, 42, 43, 46, 134, 160, 247, 346
Geography, Sociology, and Political Science 34
Geography/GIS 30
Geology 6, 7, 8, 9, 13, 110, 152
Geospatial Technologies 45
Globalization and Development 46

H

Health Science-Public Health Education 31
HORT 119
Horticulture 85, 126, 240, 241

I

Industrial Chemistry 282, 283, 284
Industrial Engineering 291, 323, 327, 330, 338, 342, 344,
345, 350
Industry Technology 348
International Relations 51

L

Life Science 112

M

Manufacturing Engineering 341
Marine and Watershed Science 19
Marine Biology 20

Mayagüez Center for Education and Training in
Agriculture and Related Sciences (CETARS):
Consolidating the Pipeline in Agriculture and Related
Sciences (Florida International University) 270
Mechanical Agricultural Technology 286
Mechanical Engineering 29, 287, 308, 325
MPA 35

N

NASS 32, 230, 323, 324
National Grasslands 158
Natural Resource Management 113
Natural Sciences 110, 111, 114, 115
New Mexico-Puerto Rico Natural Resource Career Tracks
NRCT (New Mexico State University) Project Page 98
NIFA 57, 230, 249, 261, 280, 352, 354, 356
NOAA 167
NPDN 67
NRCS 12, 14, 18, 19, 20, 21, 22, 23, 25, 27, 28, 33, 37, 42,
46, 52, 54, 55, 57, 61, 67, 71, 81, 112, 113, 129, 130,
137, 145, 151, 152, 159, 160, 161, 162, 163, 164, 166,
169, 172, 176, 177, 178, 183, 185, 188, 195, 197, 199,
200, 202, 213, 216, 220, 223, 224, 235, 240, 243, 252,
255, 266, 268, 269, 279, 286, 290, 318, 333, 335, 339,
344, 345, 347, 354
NRCT 148
NRS 74
Nutrition and Food Science 249
Nutrition and Foods 233, 257
Nutrition and Foods/Dietetics 226
Nutrition Dietetics 267

O

OEM 151, 162, 172
Optometry 85

P

Pathology 78
Physical Therapy 180
Plant and Soil Sciences 187, 199, 200, 335
Plant Science 15
PPQ 87, 184, 198, 210
Pre-Vet 95, 189, 193, 196
Psychology 6, 90, 265
Public Administration 35

R

R&D 297
Ranch Management 191
Range and Wildlife Management 188
Range and Wildlife Science 332
Range Science 136, 139
RD 248

Research	77
Resource Management	12
RMA	162, 177, 324, 327

S

Sociology/Anthropology	50
Soil Conservation	289
Soils	113, 289, 290
Soils Science	138, 362
Speech Communications	181
STEP UP to USDA Career Success: Science, Technology and Environmental Programs (Texas A & M University)	173
Successfully preparing Hispanic students for careers in critical natural resource fields (New Mexico State University)	98
Sustainability	44

T

TARS	67, 72
Texas A & M University - Kingsville Project Page	173
Texas State University Project Page	225
TPW	250

U

University of Puerto Rico Project Page	270
--	-----

University of Texas at El Paso Project Page	321
USAID	130
USFG	107, 109
USFS 6, 7, 8, 9, 10, 11, 13, 16, 17, 18, 22, 23, 24, 26, 30, 33, 35, 36, 38, 40, 41, 43, 44, 45, 50, 52, 58, 59, 60, 63, 64, 66, 73, 80, 99, 100, 102, 103, 104, 105, 106, 107, 111, 112, 115, 120, 121, 123, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 141, 142, 143, 144, 146, 147, 151, 152, 153, 155, 157, 160, 162, 164, 165, 172, 174, 201, 222, 232, 237, 242, 247, 265, 269, 280, 297, 339, 347	
USFWS	114, 120
USGS	168
USPF	146

W

Water Resources and Policy Initiatives	5
Watershed Management Experiential Learning for USDA Careers (California State University)	5
Watershed Science	36
Wildlife Biology	263, 266
Wildlife Management	127, 150
Wildlife Recreational Entrepreneurship	182
Wildlife Science 120, 121, 122, 124, 125, 128, 131, 133, 140, 142, 144	
Wildlife Services	59

Appendix A

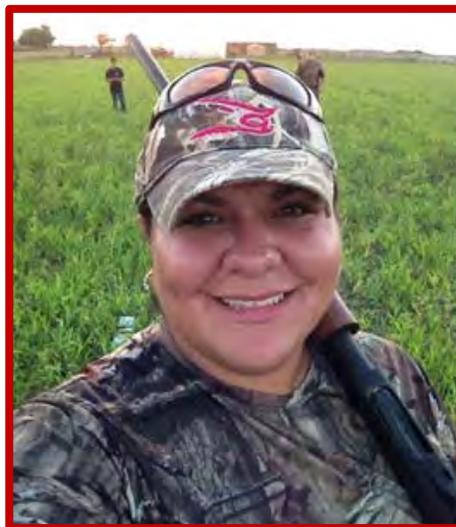
University of Texas El Paso BGREEN Texas A & M University Graduate Students

Name: **Krystal Montemayor**
Hometown: **Santa Rosa, Texas**
Institution: **Texas A&M University - Kingsville**
Campus: **TAMUK**
Rank: **Graduate**
Major: **Animal Science**
Expected date
of graduation: **August 2014**
Degree: **Masters**
USDA Agency
of interest: **APHIS**
Email: **Krystal_sr_22@yahoo.com**

Upon graduation, I would love to have the opportunity to work with USDA APHIS. APHIS is an agency that I know I will excel in, allowing me to bring experience and knowledge of agriculture and its environment educating the general public about rules and regulations within the agency. In 5 years I see myself successfully contributing my expertise within the agency and in 10 years I see myself holding a high ranking position within the agency.

My Skill Set are Research specialist, customer service, retail sales, 50 wpm typing speed, literate in Microsoft Word, Works, Excel, PowerPoint, great communication skills, team leader, trustworthy, confident, efficient, helpful, bilingual, and excellent multi-tasker.

The impact of my career experience in BEGREEN: USDA has given me the opportunity to enhance my knowledge and understanding of agriculture by being given the wonderful opportunity in networking with a variety of people throughout agriculture related fields. A long term goal that I seek is to work with the USDA Animal and Plant Health Inspection Service (APHIS) which would allow me to protect and improve the health, quality, and marketability of our nation's animals which would also include various wildlife species, and animal products. I would assist in taking preventative measures in controlling and eliminating many diseases that animals may have encountered.



USDA has given me the opportunity to enhance my knowledge and understanding of agriculture by being given the wonderful opportunity in networking with a variety of people throughout agriculture related fields.

Name: **Steven Reyna**
Hometown: **Edinburg, Texas**
Institution: **NC State University**
Campus: **Raleigh, North Carolina**
Rank: **Doctoral Candidate**
Major: **Entomology**
Expected date
of graduation: **December 2018**
Degree: **PhD**
USDA Agency
of interest: **ARS**
Email: **Smreyna@ncsu.edu**

I have always had a passion for insects and the way they affect interact with our daily lives. I received my MS in Plant and Soil Science from Texas A&M University- Kingsville where I studied citrus mites in Texas and in Kenya, under the advisement of Dr. Mamoudou Setamou, and I received my BS in Entomology from Texas A&M University, College Station. During my MS, I was awarded the Borlaug Fellowship for Global Food Security and travel to Kenya to conduct research at the International Centre of Insect Physiology and Ecology. I recently started my PhD under the direction of Dr. Yasmin Cardoza in the Department of Entomology at North Carolina State University, Raleigh NC. My project will focus on the ecology of the kudzu bug, an important pest of soybeans in the South Eastern part of the US. Upon completion of my degree I hope to get a research position in extension or with the federal government, where I hope to study sustainable agricultural. In my free time I enjoy long distance running, playing guitar, nature trails and long walks on the beach.

I have always had a passion for insects and the way they affect interact with our daily lives.



Name: **Madahy Romero**
Hometown: **Mission, Texas**
Institution: **Texas A&M University**
Campus: **College Station, Texas**
Rank: **Graduate**
Major: **Soil Science**
Expected date
of graduation: **August 2014**
Degree: **PhD**
Email: **madahyromero@yahoo.com**

My career aspirations include becoming project leader. It is important for me to keep the agricultural aspect but would consider other opportunities. I want to work in a fast paced environment where I'm constantly learning and growing, planning, budgeting, overseeing and documenting all aspects of specific projects.

My Skill Set include Equipment: High Performance Liquid Chromatography (HPLC), Ultra Performance Liquid Chromatography (UPLC), liquid scintillation counter, gas chromatography-mass spectrometry (GC-MS), Microbiology Skills: aseptic and sterile techniques, compound microscopy, bacterial staining, plating methods (streak, spread, and pour), etc. Molecular Biology Skills: DNA extraction and purification, plasmid DNA isolation and purification, etc.; Chemistry Skills: Solution preparation, titrations, extractions, filtrations, separations, analytical scale; Scientific Data Analysis/Graphing Software/Computer Skills: SigmaPlot, Kaleidagraph, Statistical Analysis Software (SAS), Bioinformatics Mothur Software, Scientific Data Analysis/Graphing Software/Computer Skills: SigmaPlot, Kaleidagraph, Statistical Analysis Software (SAS), etc.

My Hobbies: Love to cook, exercise, and spend time at any beach.



Name: **Travis D. Trevino**
Hometown: **Mercedes, Texas**
Institution: **Dick and Mary Lewis College of Agriculture, Natural Resources and Human Sciences**
Campus: **Texas A&M University - Kingsville**
Rank: **Graduate**
Major: **Animal Science**
Expected date
of graduation: **December 2013**
Degree: **Masters of Science in Animal Science**
USDA Agency
of interest: **Ag Marketing Service**
Email: **Travis.Trevino454@yahoo.com**

In the very near future I hope to be employed by a major packing plant, I would like to hold a managerial position. Other future aspirations may include a PhD. Current research includes the use of sorghum grain syrup in processed meats. Future research will hopefully include the issues revolving feeding the world population efficiently. Some of my skills include fabrication knowledge of all the major livestock species, ability to obtain carcass data from beef carcasses and knowledge and certification to artificially inseminate cattle and swine. Hobbies include making processed meats, barbecuing and golfing.

