
External Evaluation of U.S. Department of Agriculture National Institute of Food and Agriculture Collaborative Projects

**Final Meta-Evaluation Report
of First-Year Program Implementation
2011-12 Program Year**



INTERCULTURAL DEVELOPMENT RESEARCH ASSOCIATION

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Submitted to:

**U.S. Department of Agriculture
National Institute of Food and Agriculture**

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Intercultural Development Research Association

Mission: Strengthening schools that work for all children.

Vision: At IDRA, we develop innovative research- and experience-based solutions and policies to assure that (1) all students have access to and succeed in high quality schools, (2) families and communities have a voice in transforming the educational institutions that serve their children, and (3) educators have access to integrated professional development that helps to solve problems, create solutions, and use best practices to educate all students to high standards.

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IDRA pro-actively disseminates cutting-edge information to educators, administrators, decision- and policymakers, parents and community leaders.

External Evaluation of U.S. Department of Agriculture National Institute of Food and Agriculture: Collaborative Projects – Final Meta-Evaluation Report of First-Year Implementation, 2011-12 Program Year

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Executive Summary

This evaluation report presents findings from the first-year of the meta-evaluation of the U.S. Department of Agriculture (USDA), National Institute of Food and Agriculture (NIFA) collaborative projects funded through the Hispanic-Serving Institutions (HSIs) Grants Program. In October 2011, the USDA NIFA, awarded competitive grants to seven HSIs in four states and Puerto Rico to enhance the ability of these universities to support underserved students and develop a skilled American workforce. These grants support collaborations between HSIs and USDA agencies, such as the Natural Resources Conservation Service (NRCS), Forest Service (FS), Food and Nutrition Service (FNS), Agricultural Research Service (ARS), Animal and Plant Health Inspection Service (APHIS), and Food Safety Inspection Service (FSIS).

Program Goals and Objectives of HSI Grant Program

Funding requirements for the collaborative projects stipulated that the primary focus of their activities was to improve teaching, enrollment, and graduation rates within a degree-granting program. The specific program goals of the HSI Grant Program include:

- Increase 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;
- Enhance the quality of postsecondary instruction within these disciplines;
- Facilitate the skill and competency development of Hispanic students in order to be competitive for jobs in the food and agriculture sector and at the U.S. Department of Agriculture (USDA) and other federal agencies;
- Provide opportunities and access to food and agricultural careers in the civil service; and
- Align the efforts of HSIs and other non-profit organizations in support of the academic development and career attainment of underrepresented groups.

The specific enabling objectives aligned with the program goals include:

- Strengthen institutional educational capacities to develop and enhance curriculum, faculty, instruction delivery systems, and infrastructure including libraries and scientific instrumentation, in order to respond and serve the needs of Hispanics/Latinos in identified state, regional, national, or international educational needs in the food and agricultural sciences;
- Recruit, retain, and support underrepresented undergraduate and graduate students from HSIs, especially Hispanics, who are severely underrepresented in professional jobs related to food and agricultural sciences, in order to prepare them for careers related to the food, agricultural, and natural resource systems of the United States. Recruitment may start with mentoring high school students and continue by providing financial support for students from undergraduate through graduate level toward completion of doctoral degrees;
- Facilitate cooperative initiatives between two or more HSIs or between HSIs and units of state government or the private sector, such as non-profit organizations serving Hispanics, in order to maximize the development and use of resources and to improve the food and agricultural sciences teaching programs; and
- Support the activities at institutions of higher education that strengthen the ability to serve as a role model on supporting Hispanic attainment by addressing the needs of this group and allowing the HSIs to enhance educational equity for underrepresented groups.

Projects had the flexibility to address an array of disciplines and subject matter areas. The list of possible disciplines and subject areas to be addressed included:

- General Food and Agricultural Sciences; Agribusiness Management and Marketing (includes Agricultural Economics);
- Agricultural/Biological Engineering;
- Agricultural Social Sciences (includes Agricultural Education, Agricultural Communications, and Rural Sociology);
- Animal Sciences; Aquaculture; Conservation and Renewable Energy and Natural Resources (includes Forestry and Ecology/Wetlands);
- Entomology - Animal;
- Entomology - Plant;
- Environmental Sciences/Management;
- Food Science/Technology and Manufacturing (including Food Safety);
- Human Nutrition;
- Human Sciences/Family and Consumer Sciences (excludes Human Nutrition);
- International Education/Research (enhancement of U.S. programs);
- Plant Sciences and Horticulture (including Turf Sciences);
- Related Biological Sciences (includes General/Basic Biotechnology, Biochemistry, and Microbiology);
- Soil Sciences;
- Veterinary Medicine/Science;
- Water Science/Water Resources (including Water Quality and Watershed Management); and
- Other relevant and subject matter areas including science, technology, engineering, and mathematics (STEM) disciplines.

For more information about the HSI Grant Program and USDA/NIFA, please visit the USDA websites.

Program Evaluation

The Intercultural Development Research Association (IDRA) was contracted to conduct an external meta-evaluation and analysis. Based on the specifications listed in the request for an external evaluator, IDRA would:

- Prepare a work plan that outlines IDRA's approach and methodology for conducting the meta-analysis including the integration of baseline data generated by participating institutions into a comprehensive report delineating programmatic issues and challenges.
- Conduct a meeting of project directors to discuss scope of work, expectations of tasks, requirements for timely delivery, and identification of mitigating strategies to resolve challenges.
- Conduct focus group meeting with all grantees at their annual meeting and conduct a survey of project participants using SurveyMonkey to assess the ongoing status of each project relative to the goals of USDA to recruit, retain and graduate Hispanic students in agriculture, nutrition, and natural resources.
- Review all annual reports of participating projects to assess if institutions have adhered to their reporting requirements, and consolidate results of each project.
- Review all project reports and complete meta-analysis to determine the central tendencies of the projects, the variability of the results, and the best practices.

First-year evaluation activities for the meta-evaluation began in April 2012 and was initially scheduled to end in October 2012. Major deliverables of the first-year evaluation include the development of a student survey, the meta-analysis of baseline data collected by each project, the development of an interim meta-evaluation report, the development of an electronic presentation of findings, the presentation of interim findings at a national convening in Washington, D.C., in October 2012, and the development of a final meta-evaluation report. With this final meta-evaluation report, all deliverables have been completed for the first-year evaluation.

Collaborative Project Grantees

The seven collaborative projects include:

- California State University-San Bernardino (CSU-SB), San Bernardino, California – Watershed Management Experiential Learning for USDA Careers;
- Florida International University (FIU), Miami, Florida – Florida-Caribbean Consortium for Agriculture Education and Hispanic Workforce Development (FCCAgE);
- New Mexico State University (NMSU), Las Cruces, New Mexico – Preparing Students for Career Paths with the USDA Forest Service by Linking Student Success with Experiential Learning Opportunities;
- Texas A&M University-Kingsville (TAMUK), Kingsville, Texas – Step Up to USDA Career Success: Science, Technology and Environmental Programs for Undergraduate Preparation to USDA Career Success (STEP UP);
- Texas State University-San Marcos (TSU), San Marcos, Texas – Food Safety and Agroterrorism Training: Educating Our Future Workforce;

- University of Puerto Rico-Mayagüez (UPR-M), Mayagüez, Puerto Rico – UPR-Mayagüez Center for Education and training in Agricultural and Related Sciences (CETARS); and
- University of Texas-El Paso (UTEP), El Paso, Texas – Building a Regional Energy and Educational Network (BGREEN).

Findings from the Archival Review and Meta-Analysis

The meta-evaluation relied upon archival and extant data made available by the collaborative projects, including grant applications, project abstracts, progress reports, and external evaluation reports. Some key findings include:

- *Project Implementation:* Available data suggests that projects are being implemented as expected, and initial findings indicate that the participating colleges and universities are making strides to improve the opportunities for underrepresented students in the food and agricultural sciences, natural resources, and nutrition.
- *College and University Collaboration:* The average number of collaborating colleges and universities was seven per project. Several projects also collaborated with each other.
- *USDA Agency Partnerships:* The projects collaborated with a wide array of USDA agencies in addition to USDA NIFA. All of the projects partnered with USDA NRCS; six of seven (85.7 percent) were partners with USDA FS; five of seven (71.4 percent) were partners with USDA APHIS and USDA ARS.
- *Student Participation and Demographics:* The collaborative projects reported that they collectively served 385 students. Of this number, 205 (53.2 percent) were female and 180 (46.8 percent) were male, and 323 (83.9 percent) were of Hispanic origin.
- *Number of USDA agency and other internships.* Participating students were involved in 234 internships including 134 with USDA agencies and programs, and 100 with other partners. Some participating students are on target to receive employment in USDA jobs.

Findings from the Student Survey

As part of the meta-evaluation, a survey to participating students was conducted. The survey collected pertinent information organized in seven areas: (1) Background, Degree Plans and Goals, (2) Academic Interests and Career Plans, (3) College/University, Programs and Course of Study, (4) Recruitment of Under-Represented Students, (5) Supports and Opportunities for Experiential Learning, (6) USDA related Internships, Jobs, and Communications, and (7) Preparation for your field of interest and overall goals. Survey administration spanned the period of September 2012 through February 2013.

Survey Highlights

Background, Degree Plans and Goals

- Twenty-seven institutions from the seven projects participated in the survey.
- Most students were Hispanic (83.6 percent) with a slightly higher proportion of female (55.2 percent).

- Most students were enrolled in a study program connected with agriculture, such as environmental sciences (13.4 percent), biology (11.9 percent), animal science (7.8 percent), and chemistry (5.2 percent).
- Nearly 40 percent (39.9 percent) of the students indicated a GPA greater than 3.50 but less than 4.0. A similar proportion (38.8 percent) reported a GPA between 3.00 and 3.50. About five percent (5.2 percent) entered a GPA below 2.51, and 8.2 percent reported a perfect 4.0.
- A substantial majority of the students (62.7 percent) had an officially sanctioned degree plan.

Academic Interests and Career Plans

- Overall, students (69.9 percent) had a strong interest in agriculture-related fields.
- The students (97.4 percent) were also very satisfied with the program in which they are enrolled.

College/University, Programs and Course of Study

- With more than 80 percent agreement (81.2 percent), students had a strong positive perspective on their colleges or universities.
- Most students (76.1 percent) indicated that their current college was their first choice.
- The students (91.8 percent) were very satisfied with the program of study offered by the college or university in which they were enrolled.
- They (93.3 percent) also indicated that the courses they were taking were academically challenging and that the degree they would receive would prepare them for graduate or post-graduate school.

Recruitment of Under-Represented Students

- With an overall agreement of 77.9 percent, students thought that their college or university was taking proactive steps to recruit more students in the agriculture field and in particular under represented students, including Hispanics.
- In this area, the highest agreement was with the statement, "The College/University I attend is taking pro-active steps to include diversity/multicultural perspectives in classes, presentations, assignments and discussions." The level of agreement was 80.5 percent.

Supports and Opportunities for Experiential Learning

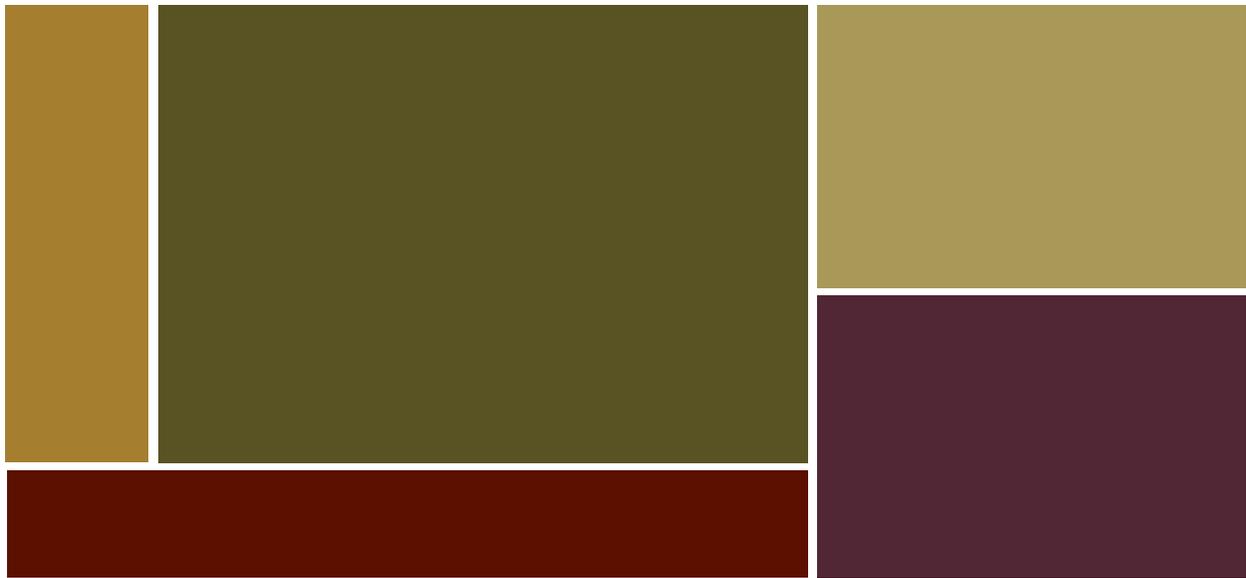
- Areas with high support (more than 80 percent agreement) include: Academic support with course requirements, partnering with faculty in research activities, faculty mentoring, and professional meeting and conferences.
- Areas with the least support (less than 65 percent agreement) include: Social and emotional counseling, out-of-state internships, visits to non-USDA agencies, and publishing opportunities. These are the areas the institutions should consider to improve on their offers for opportunities for experiential learning.
- Students felt comfortable getting what they need to succeed academically (93.7 percent), understanding what they need to do to meet graduation requirements (93.7 percent), and getting their questions answered when they have doubts (91.8 percent).
- The students' four most frequent challenges were: Financial issues/problems (20.5 percent), classes (14.6 percent), accessing information about internships (10.8 percent), and accessing information about jobs (9.3 percent).

USDA related Internships, Jobs, and Communications

- With more than 80 percent (82.8 percent) in the affirmative, students were aware of internships and experiential learning opportunities within their USDA agency.
- However, 63.4 percent applied for them and 46.8 percent were successful in acquiring an internship or experiential learning opportunity within their USDA agency.
- On the other hand, 37.5 percent applied for an internship or experiential learning opportunity in a non-USDA agency and 30.5 percent were successful in acquiring an internship or experiential learning opportunity in a non-USDA agency.

Preparation for your field of interest and overall goals

- Nearly three-fourths of the students (73.7 percent) felt that they were well prepared in high school.
- More than 80 percent (84.0 percent) indicated that their high school encouraged them to enroll in college.
- And virtually all of them pointed out that their dream has always been to have a professional career (95.1 percent) and getting a college degree (97.0 percent).
- Comparatively, fewer (69.4 percent) indicated that their immediate goal was a career in a USDA related area. However, few (6.3 percent) disagreed with this goal; mostly they (24.3 percent) were neutral or uncommitted.



Introduction

This evaluation report presents findings from the first-year of the meta-evaluation and analysis of information from the U.S. Department of Agriculture (USDA), National Institute of Food and Agriculture (NIFA) collaborative projects funded through the Hispanic-Serving Institutions (HSIs) Grants Program. In October 2011, the U.S. Department of Agriculture, National Institute of Food and Agriculture, awarded competitive grants to seven HSIs in four states and Puerto Rico to enhance the ability of these universities to support underserved students and develop a skilled American workforce. These grants support collaborations between HSIs and USDA agencies, such as the Natural Resources Conservation Service, Forest Service, Food and Nutrition Service, Agricultural Research Service, Animal and Plant Health Inspection Service, and Food Safety Inspection Service.

Overview of the USDA/NIFA HSI Grant Program

The U.S. Department of Agriculture (USDA) is the federal agency given the charge of supporting education in the food and agricultural sciences through USDA's Research, Education and Economics (REE) 2012 Strategic Goal #6: *Education and Science Literacy to recruit, cultivate, and develop the next generation of scientists and leaders, and to produce a highly-skilled workforce for food, agriculture, natural resources, forestry, and environmental systems.* Through the National Institute of Food and Agriculture (NIFA), Hispanic-Serving Institutions (HSIs) Grant Program, USDA funds higher education teaching programs in institutions that serve Hispanics at the regional and/or national level. These education awards focus on improving teaching, enrollment, and graduation rates of underrepresented students, particularly Hispanics, in the food and agricultural sciences.

Title V of the *Higher Education Act* defines HSIs as degree-granting public and private institutions of higher education with a full-time equivalent Hispanic student enrollment of at least 25 percent. Additionally, the *Food, Conservation and Energy Act of 2008* (FCEA) authorized establishment of new group HSIs referred to as Hispanic-serving agricultural colleges and universities (HSACUs). The NIFA annually certifies HSACUs under three criteria: (1) At least 25 percent of the institution's full-time student enrollment is Hispanic; (2) the institution offers accredited agriculture-related programs; and

(3) Hispanic students receive at least 15 percent of the degrees awarded in agriculture-related programs over the two most recent completed academic years.

The specific program goals of the HSI Grant Program include:

- Increase 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;
- Enhance the quality of postsecondary instruction within these disciplines;
- Facilitate the skill and competency development of Hispanic students in order to be competitive for jobs in the food and agriculture sector and at the U.S. Department of Agriculture (USDA) and other federal agencies;
- Provide opportunities and access to food and agricultural careers in the civil service; and
- Align the efforts of HSIs and other non-profit organizations in support of the academic development and career attainment of underrepresented groups.

The specific enabling objectives aligned with the program goals include:

- Strengthen institutional educational capacities to develop and enhance curriculum, faculty, instruction delivery systems, and infrastructure including libraries and scientific instrumentation, in order to respond and serve the needs of Hispanics/Latinos in identified state, regional, national, or international educational needs in the food and agricultural sciences;
- Recruit, retain, and support underrepresented undergraduate and graduate students from HSIs, especially Hispanics, who are severely underrepresented in professional jobs related to food and agricultural sciences, in order to prepare them for careers related to the food, agricultural, and natural resource systems of the United States. Recruitment may start with mentoring high school students and continue by providing financial support for students from undergraduate through graduate level toward completion of doctoral degrees;
- Facilitate cooperative initiatives between two or more HSIs or between HSIs and units of state government or the private sector, such as non-profit organizations serving Hispanics, in order to maximize the development and use of resources and to improve the food and agricultural sciences teaching programs; and
- Support the activities at institutions of higher education that strengthen the ability to serve as a role model on supporting Hispanic attainment by addressing the needs of this group and allowing the HSIs to enhance educational equity for underrepresented groups.

In order to address the future workforce needs in the food and agriculture sector, USDA/NIFA has refocused its mission by addressing its agricultural sciences research, education, and extension programs in five priority areas:

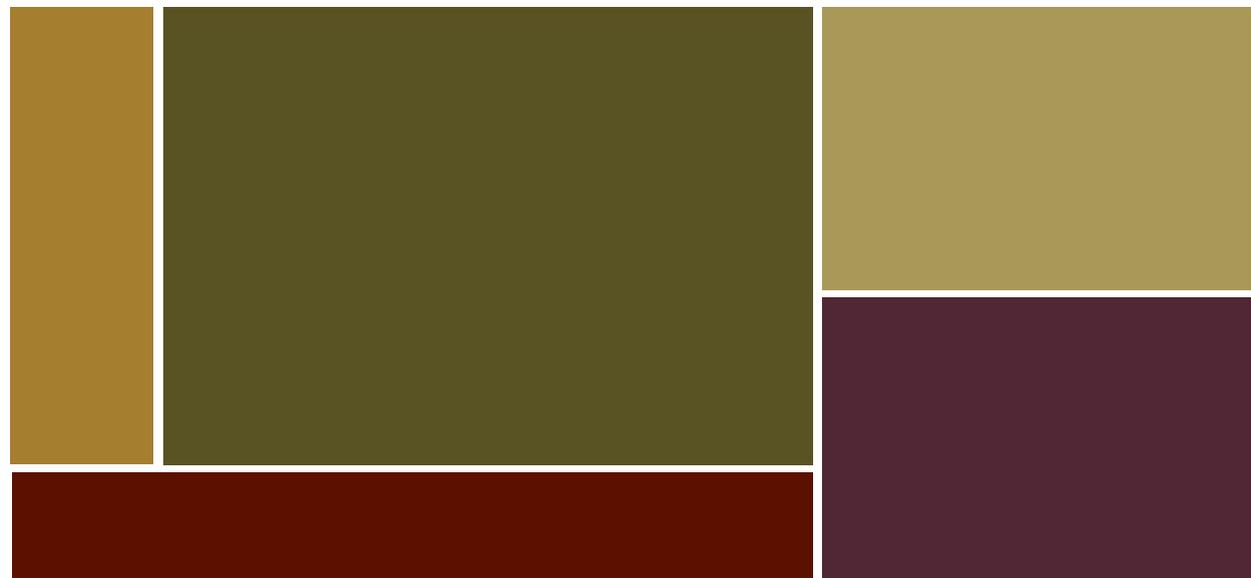
1. Global Food Security and Hunger;
2. Climate Change;
3. Sustainable Energy;
4. Childhood Obesity; and
5. Food Safety.

Funded projects have the flexibility to address an array of disciplines and subject matter areas. The list of possible disciplines and subject areas to be addressed included:

- General Food and Agricultural Sciences;
- Agribusiness Management and Marketing (includes Agricultural Economics);
- Agricultural/Biological Engineering;
- Agricultural Social Sciences (includes Agricultural Education, Agricultural Communications, and Rural Sociology);
- Animal Sciences;
- Aquaculture;
- Conservation and Renewable Energy and Natural Resources (includes Forestry and Ecology/Wetlands);
- Entomology – Animal;
- Entomology – Plant;
- Environmental Sciences/Management;
- Food Science/Technology and Manufacturing (including Food Safety);
- Human Nutrition;
- Human Sciences/Family and Consumer Sciences (excludes Human Nutrition);
- International Education/Research (enhancement of U.S. programs);
- Plant Sciences and Horticulture (including Turf Sciences);
- Related Biological Sciences (includes General/Basic Biotechnology, Biochemistry, and Microbiology);
- Soil Sciences;
- Veterinary Medicine/Science;
- Water Science/Water Resources; (including Water Quality and Watershed Management); and
- Other relevant and subject matter areas including science, technology, engineering, and mathematics (STEM) disciplines.

Overview of Report

This evaluation report provides a summary of evaluation findings to date including those from the archival review of baseline and outcome data indicators, and findings from the online student survey. The next chapter of the report provides an overview of the collaborative projects. Following the overview of the projects, the next chapter will present the evaluation approach and methods. Next, the results of the archival review and meta-analysis will be presented, followed by the findings from the online survey. Lastly, the report will present conclusions and discussions of findings, and next steps in the evaluation.



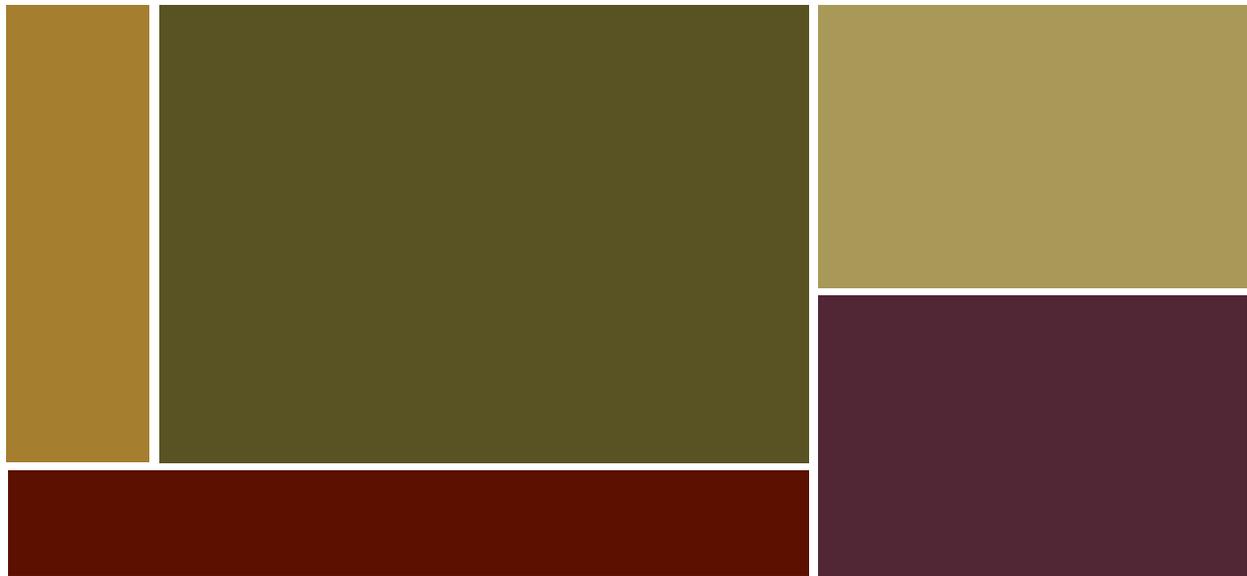
Overview of the Collaborative Projects

There were 356 HSIs in the United States and Puerto Rico in 2011-12, and this number continues to grow every year as the number of Hispanic/Latino students attending college continues to increase. As defined in federal law, HSIs are degree-granting public and private institutions of higher education with a full-time equivalent Hispanic student enrollment of at least 25 percent. In October 2011, NIFA funded seven groups of HSIs in four states and Puerto Rico to enhance the ability of these universities to support underserved students and to develop a skilled workforce in the food and agriculture sciences, natural resources and nutrition. The seven collaborative projects are listed in the table below (see Exhibit 1). All of the project grantees were HSIs. One of the grantees (NMSU) is a land grant university based on federal law in 1862, 1890, and 1994. For the 2011-12 academic school year, four of the seven grantees were certified as HSACUs including CSU-SB, FIU, TAMUK, and UTEP. See Appendix A for a more detailed overview of each project.

Exhibit 1: List of USDA/NIFA Collaborative Projects		
Grantees/Projects	Project Title	Brief Project Description
California State University-San Bernardino, San Bernardino, California (CSU-SB)	Watershed Management Experiential Learning for USDA Careers	This project will increase the retention and graduation of underrepresented students for careers in the USDA's workforce through an innovative paid experiential-learning Watershed Management Internship program.
Florida International University, Miami, Florida (FIU)	Florida-Caribbean Consortium for Agriculture Education and Hispanic Workforce Development (FCCAge)	This project will train Hispanic students in biological and natural sciences for career placement in USDA and other federal agencies.

Exhibit 1: List of USDA/NIFA Collaborative Projects

Grantees/Projects	Project Title	Brief Project Description
New Mexico State University, Las Cruces, New Mexico (NMSU)	Preparing Students for Career Paths with the USDA Forest Service by Linking Student Success with Experiential Learning Opportunities	This project will mentor cohorts of under-represented students through innovative academic and experiential learning opportunities to prepare them for careers in natural resource management.
Texas A&M-Kingsville, Kingsville, Texas (TAMUK)	Step Up to USDA Career Success: Science, Technology and Environmental Programs for Undergraduate Preparation to USDA Career Success (STEP UP)	This project will assist in the training and education of under-represented South Texas Hispanic students for careers in USDA agencies.
Texas State University-San Marcos, San Marcos, Texas (TSU)	Food Safety and Agroterrorism Training: Educating Our Future Workforce	This project will fund 50 undergraduate students and employ six graduate students, who will become certified by the U.S. Department of Homeland Security and be introduced to food safety vulnerabilities through field trips to dairies, food processing factories, and the United States/Mexico livestock border crossing.
University of Puerto Rico, Mayagüez, Puerto Rico (UPR-M)	UPR-Mayagüez Center for Education and training In Agricultural and Related Sciences (CETARS)	This project will provide students from agriculture and related disciplines with graduate research assistantships, undergraduate research stipends and educational and training experiences.
University of Texas-El Paso, El Paso, Texas (UTEP)	Building a Regional Energy and Educational Network (BGREEN)	This project will create a collaborative network of researchers, educators, USDA agencies, and non-profit organizations to coordinate efforts, share resources, and increase educational, training and post-graduation opportunities for Hispanic students pursuing careers in sustainable energy.



Evaluation Methodology

The Intercultural Development Research Association (IDRA) was contracted to conduct an external meta-evaluation and analysis. Based on the specifications listed in the request for an external evaluator, IDRA would:

- Prepare a work plan that outlines IDRA's approach and methodology for conducting the meta-analysis including the integration of baseline data generated by participating institutions into a comprehensive report delineating programmatic issues and challenges.
- Conduct a meeting of project directors to discuss scope of work, expectations of tasks, requirements for timely delivery, and identification of mitigating strategies to resolve challenges.
- Conduct focus group meeting with all grantees at their annual meeting and conduct a SurveyMonkey survey of project participants to assess the ongoing status of each project relative to the goals of USDA to recruit, retain and graduate Hispanic students in agriculture, nutrition, and natural resources.
- Review all annual reports of participating projects to assess if institutions have adhered to their reporting requirements, and consolidate results of each project.
- Review all project reports and complete meta-analysis to determine the central tendencies of the projects, the variability of the results, and the best practices.

The term meta-evaluation, introduced by Dr. Michael Scriven (1969), describes a plan to evaluate educational products. In its simplest term, meta-evaluation is the evaluation of the quality of evaluations. The HSIs Collaboration Grants meta-evaluation will aggregate information from seven individual project evaluations to identify lessons learned and improve organizational learning. The meta-evaluation will be conducted concurrently with the project evaluations and will provide the meta-evaluators opportunities to give formative feedback and summative judgments about the findings of the evaluations. It also will enable the projects to document some of the outcomes and impacts they are accomplishing as a group.

First-year evaluation activities for the meta-evaluation began in April 2012 with scheduled completion in October 2012. The meta-evaluator met with project directors on May 30-31, 2012, to discuss the first-year work plan and timelines. Major deliverables of the first-year evaluation include the development of a student survey, the meta-analysis of baseline data collected by each project, the development of an interim meta-evaluation report, the development of an electronic presentation of findings, and the presentation of interim findings at a national convening in Washington, D.C., in October 2012, and the development of a final meta-evaluation report.

Evaluation Questions

The overarching evaluation research questions for the meta-evaluation include the following:

1. **Institutional Efficacy:** How was institutional efficacy and capacity strengthened in terms of attracting and supporting undergraduate and graduate students from under-represented groups in food and agricultural sciences programs in terms of: (a) practices/policies; (b) numbers of students attracted; (c) student support systems; (d) numbers of students graduated; (e) facilities (libraries, etc.); and (f) faculty and faculty development?
2. **Collaborative Action:** How did the project achieve collaboration among the consortia of HSLs in terms of: (a) improved opportunities for collaboration; (b) sharing of resources (faculty, resources, etc.); (c) collaborative planning and problem-solving; and (d) sharing lessons learned?
3. **Collective Impact:** How did the initiative enhance the capacity and collective impact of agricultural departments in graduating (undergraduate and graduate) students from under-represented groups in terms of: (a) creating and disseminating models of effective practice; (b) increasing numbers of underrepresented students in food and agricultural sciences; and (c) increased state or private sector involvement in food and agricultural sciences programs?

Baseline and Outcome Data Collection

Each project had an external evaluator and/or an internal evaluator who was required to collect baseline data that was to be submitted in an annual progress report. The baseline and outcome data to be collected are listed in the table below (Exhibit 2).

Exhibit 2: Baseline and Outcome Data Indicators	
Baseline Data Category	Data Description
Baseline data and recruitment	Number of students served; gender; number of courses/credits; GPA at end of year; major interest; first generation; institutional retention rate
Grant activities and tracking students' progress-interventions	Agency visits; workshops; special speakers; students ambassadors; applied research opportunities

Exhibit 2: Baseline and Outcome Data Indicators

Baseline Data Category	Data Description
Working with USDA and other federal agencies to meet job placements	Potential partnerships; point of contact at human resources; jobs targeted; use of technology; identifying requirements; developing interdisciplinary faculty teams
Student placement and tracking	Survey job/agency of preference; determine requirements; orientation to ensure student understands expectations; understanding public service institution retention rate; exceed institutional retention rate
Budget adjustments (percentage per category)	Staff; scholarships

The USDA NIFA program leader and the project directors from the seven collaborative projects selected 20 outcome indicators to measure outputs and impact of project implementation. These indicators are listed in the box below. Project directors provided information on these indicators in progress reports, annual reports, and AD-421 reports entered into the Current Research Information System (CRIS) website.

Twenty Outcome Indicators for USDA/NIFA Collaborative Projects

1. Total number of USDA agencies and partners
2. Total number of internships (USDA vs. other)
3. Total number of students served including gender and ethnicity
4. Total percent of retention (undergraduate/graduate/Ph.Ds.)
5. Total number of students in experiential learning (research) mentoring
6. Total number of participants presenting
7. Total number of students enrolled in disciplines applicable to USDA jobs
8. Total number of degrees awarded with USDA qualifications
9. Total number of students publishing
10. Comparison of GPA's before and after
11. Developing curriculum and faculty for required USDA courses
12. Comparison of female success (before and after): gender and ethnicity
13. Total number of students honors advising and tutoring
14. Tracking students placement into jobs or Ph.D.s/ student mobility
15. Track research activities/English skills
16. K-12 activities (and freshmen)
17. Community engagement activities
18. Budget implementation
19. Program activities/implementation
20. Agency/participant survey

Exhibit 3 summarizes the archival data and other evaluation activities provided by each project.

Exhibit 3: Data Collection Submissions by Project							
Item	CSU-SB	FIU	NMSU	UPR-M	TAMUK	TSU	UTEP
Proposal: Complete	✓	✓	✓	✓	✓	✓	✓
USDA Project Abstract	✓	✓	✓	✓	✓	✓	✓
Logic Model	✓	✓	✓	✓	✓	✓	✓
Name of External Evaluator(s)	✓	✓	✓	✓	✓	✓	✓
Name of Internal Evaluator(s)	✓			✓			
Progress Report	✓	✓	✓	✓	✓	✓	✓
AD-421 Report	✓	✓	✓	✓	✓	✓	✓
Baseline/Outcome Indicator Data	✓	✓	✓	✓	✓	✓	✓
External Evaluation Report						✓	✓
Examples of Student Survey Instrument				✓		✓	✓
Institutional Review Board (IRB) Approval	✓	✓	✓	✓	✓	✓	✓
Note: ✓ denotes submission							

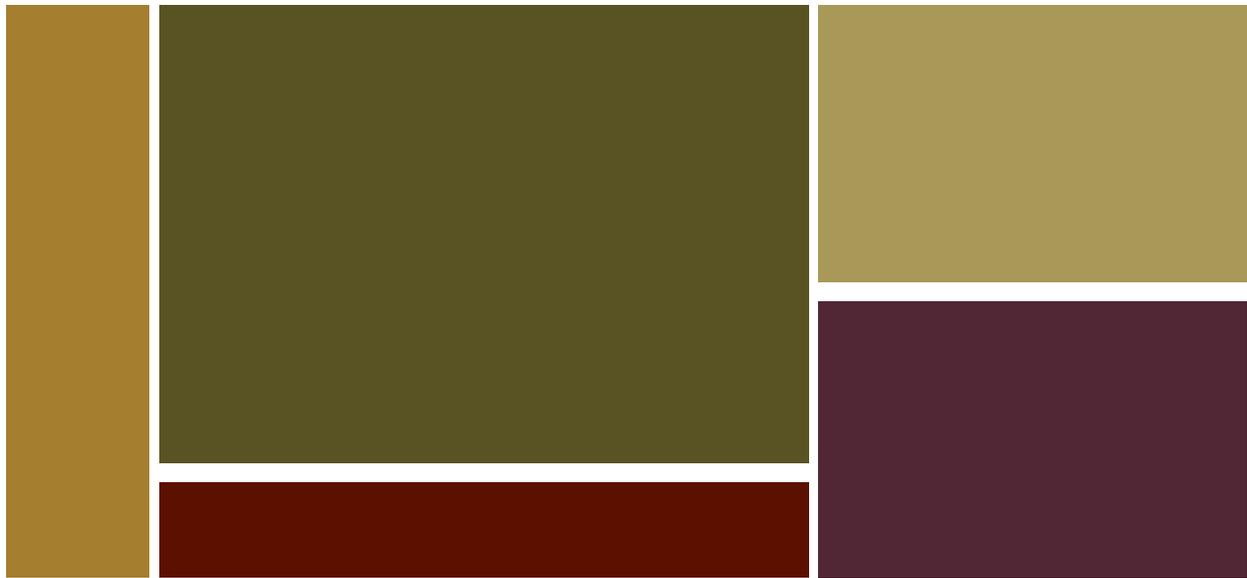
Project Logic Model

The logic model in the figure below presents the evaluation methodology and approach (see Exhibit 4). The meta-evaluation brought together information provided by the individual projects and resulted in the meta-analysis of baseline and outcome data. While the meta-evaluation sought to assess the collective effects and outcomes of project implementation, the focus was not to determine the statistical significant or power of the sample size or the statistical significance of the resulting outcomes.

Exhibit 4: Logic Model for USDA/NIFA Meta-Analysis Evaluation

Objective: Conduct a meta-analysis evaluation of seven projects funded by the Department of Agriculture to (1) support the activities of consortia of HSIs to enhance educational equity for underrepresented students; (2) strengthen institutional educational capacities including libraries, curriculum, faculty, scientific instrumentation, instruction delivery systems; and student recruitment and retention; (3) attract and support undergraduate and graduate students from underrepresented groups to prepare them for careers related to the food, agricultural, and natural resource systems of the United States; and (4) facilitate cooperative initiatives between two or more HSIs or between HSIs and units of state government or the private sector.

Inputs	Activities	Outputs	Outcomes – Impact		
			Institutional Efficacy	Collaborative Actions	Collective Impact
<p>Each project allocated funding for this meta-analysis evaluation</p> <p>Projects' external evaluators</p> <p>Project Directors</p> <p>Students from underrepresented groups</p>	<p>I. Attend a meeting of all projects to meet with project directors to discuss scope of work and expectations of the tasks.</p> <p>II. The contractor shall prepare a work plan that outlines the contractor's approach and methodology for accomplishing the tasks outlined in the deliverables.</p> <p>III. The contractor will conduct focus group meeting with all grantees at their annual meeting and conduct a SurveyMonkey of project participants.</p> <p>IV. At the end of the project year the contractor will review all annual reports to assess if institutions have adhered to their reporting requirements and consolidate the results of each project.</p> <p>V. The contractor will review all institutional reports and complete meta-analysis to determine the central tendencies of the projects, the variability of the results, and the best practices.</p>	<ol style="list-style-type: none"> 1. Interact with seven local evaluators quarterly Jan-Oct 2012 2. Provide guidance on metrics for local project and group evaluation Jan-Oct 2012 3. Data review and analysis August 2012 4. Meta analysis of seven projects September 2012 5. Rating of performance of each project September 2012 6. Present findings at conference in October 2012 in Washington, D.C 7. Share deliverables (2 hard copies, 10 CDs) NIFA 	<p>Institutional efficacy and capacity to attract and support students from underrepresented groups in food and agricultural sciences programs are strengthened as evidenced by:</p> <ol style="list-style-type: none"> a) effective enrollment and retention practices and policies, b) increased numbers enrolled and graduated, c) culturally responsive student support systems, d) facilities (libraries, etc.), e) program and faculty development. 	<p>Collaboration and networking among the consortia of Hispanic-Serving Institutions in have increased as evidenced by:</p> <ol style="list-style-type: none"> a) greater and improved opportunities for collaboration, b) sharing of resources (faculty, resources, etc.), c) collaborative planning and problem-solving, d) sharing lessons learned. 	<p>Initiative enhanced the capacity and collective impact of agricultural departments to enroll serve 350 graduate and undergraduate students from underrepresented groups as evidenced by:</p> <ol style="list-style-type: none"> a) creating and disseminating models of effective practice, b) increasing numbers of underrepresented students in food and agricultural sciences, and c) increased state or private sector involvement in food and agricultural sciences programs.
<p>Assumptions: (1) All seven projects have integrated into their evaluation designs a uniform set of metrics to respond to the meta-analysis evaluation requirements. (2) Each project has a unique set of responses to the grant objectives. (3) Each project has responded to the three major grant objectives delineated in the RFP.</p>		<p>External Factors: (1) Fidelity of implementation, (2) Timeliness of data, (3) State and IHE policies, (4) Collaboration, and (5) Adequacy of data collection systems.</p>			



Findings from the Archival Review

Collaborating Colleges and Universities

Collectively, 36 of the proposed 41 colleges and universities enrolled students in the project. An unduplicated count of 36 colleges and universities including the seven lead institutions and 29 collaborating institutions enrolled students in the project in 2011-12 (see Exhibit 5). Several lead institutions also collaborated with each other in the enrollment of participating students. (See Exhibit 6 below and Exhibit A-8 to Exhibit A-10 in Appendix A for lists of collaborating site).

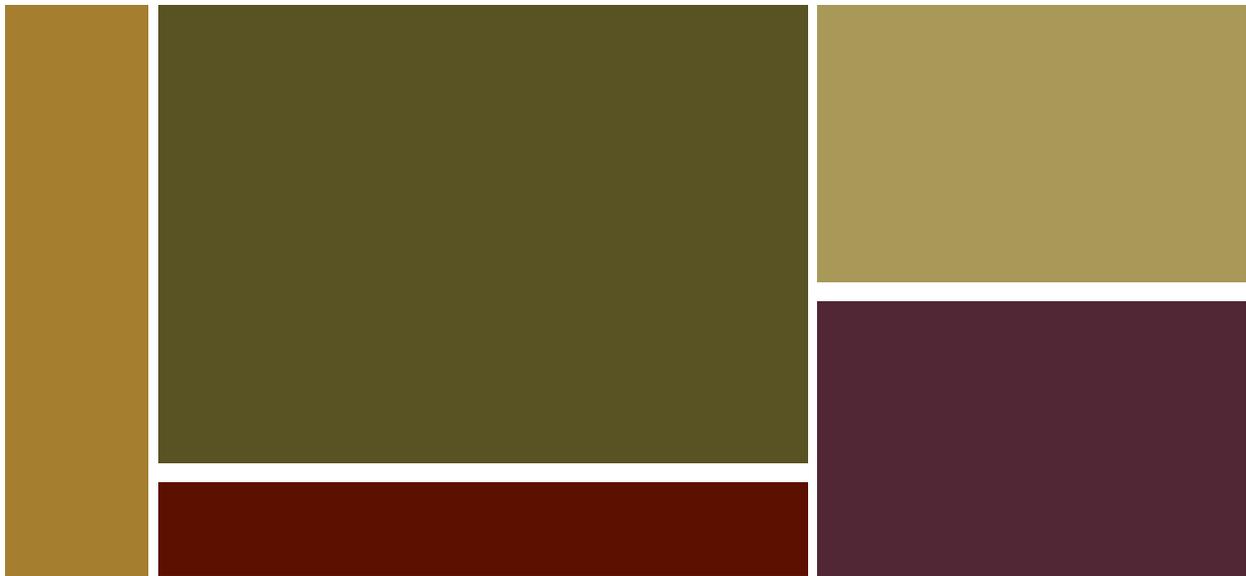
Exhibit 5: Number of Collaborating Colleges and Universities By Project, 2011-12						
Project Sites	Universities		Colleges		Total	
	Proposed	Actual	Proposed	Actual	Proposed	Actual
California State University-San Bernardino (CSU-SB)	14	9	0	0	14	9
Florida International University (FIU)	3	3	1	1	4	4
New Mexico State University (NMSU)	8	8	4	4	12	12
Texas A&M University-Kingsville (TAMUK)	2	2	3	3	5	5
Texas State University-San Marcos (TSU)	1	1	3	3	4	4
University of Puerto Rico-Mayagüez (UPR-M)	5	5	0	0	5	5
University of Texas-El Paso (UTEP)	4	4	0	0	4	4
Total (Duplicated)	37	32	11	11	48	43
Total (Unduplicated)	30	25	11	11	41	36

Exhibit 6: List of Collaborating Colleges and Universities, 2011-12

Collaborating Colleges/ Universities	Proposed College and University Collaborators	Actual College and University Collaborators
California State University- San Bernardino (CSU-SB)	California State University-Bakersfield, California State University-Channel Islands, California State University-Dominguez Hills, California State University-Fresno, California State University-Fullerton, California State University-Long Beach, California State University-Los Angeles, California State University-Monterey Bay, California State University-Northridge, California State Polytechnic Institute – Pomona, California State University-San Bernardino, California State University-San Marcos, California State University-Stanislaus, San Diego State University	California State University-Bakersfield, California State University-Fresno, California State University-Los Angeles, California State University-Monterey Bay, California State University-Northridge, California State University-San Bernardino, California State University-San Marcos, California State University-Stanislaus, San Diego State University
Florida International University (FIU)	Florida International University, InterAmerican University of Puerto Rico – San Germán [Universidad Interamericana de Puerto Rico at San Germán], Miami Dade College, St. Thomas University	Florida International University, InterAmerican University of Puerto Rico – San Germán [Universidad Interamericana de Puerto Rico at San Germán], Miami Dade College, St. Thomas University
New Mexico State University (NMSU)	Luna Community College, InterAmerican University of Puerto- Bayamón, New Mexico Highlands University, New Mexico State University-Alamogordo, New Mexico State University-Carlsbad, New Mexico State University-Grants, New Mexico State University (Las Cruces), University of Puerto Rico-Bayamón, University of Puerto Rico-Cayey, University of Puerto Rico-Humacao, University of Puerto Rico-	Luna Community College, InterAmerican University of Puerto- Bayamón, New Mexico Highlands University, New Mexico State University-Alamogordo, New Mexico State University-Carlsbad, New Mexico State University- Grants, New Mexico State University (Las Cruces), University of Puerto Rico-Bayamón, University of Puerto Rico-Cayey, University of Puerto Rico-Humacao, University of Puerto Rico-Mayagüez, University of Puerto Rico-Rio

Exhibit 6: List of Collaborating Colleges and Universities, 2011-12

Collaborating Colleges/ Universities	Proposed College and University Collaborators	Actual College and University Collaborators
	Mayagüez, University of Puerto Rico-Rio Piedras	Piedras
Texas A&M University-Kingsville (TAMUK)	Del Mar College, South Texas College, Texas A&M University-Kingsville, Texas State Technical College -Harlingen, University of Texas-Pan American	Del Mar College, South Texas College, Texas A&M University-Kingsville, Texas State Technical College -Harlingen, University of Texas-Pan American
Texas State University-San Marcos (TSU)	Laredo Community College, Northwest Vista College, Palo Alto College, Texas State University-San Marcos	Laredo Community College, Northwest Vista College, Palo Alto College, Texas State University-San Marcos
University of Puerto Rico-Mayagüez (UPR-M)	InterAmerican University of Puerto Rico – San Germán [Universidad Interamericana de Puerto Rico at San Germán], University of Puerto Rico-Aguadilla, University of Puerto Rico-Humacao, University of Puerto Rico-Mayagüez, University of Texas-El Paso	InterAmerican University of Puerto Rico – San Germán [Universidad Interamericana de Puerto Rico at San Germán], University of Puerto Rico-Aguadilla, University of Puerto Rico-Humacao, University of Puerto Rico-Mayagüez, University of Texas-El Paso
University of Texas-El Paso (UTEP)	New Mexico State University, Texas A&M University-Kingsville, Texas State University-San Marcos, University of Texas-El Paso	New Mexico State University, Texas A&M University-Kingsville, Texas State University-San Marcos, University of Texas-El Paso



Findings from the Meta-Analysis

As mentioned earlier, 20 outcome indicators were selected by the USDA NIFA program leader and the project directors of the seven collaborative projects. The meta-analysis sought to aggregate the outputs of the individual projects in order to measure the collective outcomes and impact of the projects' implementation. Where possible, information was aggregated for the following indicators:

1. Total number of USDA Agencies and Partners
2. Total number of internships (USDA vs. other)
3. Total number of students served/including gender and ethnicity
4. Total percent of retention (undergraduate/graduate/Ph.Ds)
5. Total number of students in experiential learning (research) mentoring
6. Total number of participants presenting
7. Total number of students enrolled in disciplines applicable to USDA jobs
8. Total number of degrees awarded with USDA qualifications
9. Total number of students publishing
10. Comparison of GPA's before and after
11. Developing curriculum and faculty for required USDA courses
12. Comparison of female success (before and after): gender and ethnicity
13. Total number of students honors advising and tutoring
14. Tracking students placement into jobs or Ph.D.s/student mobility
15. Track research activities/English skills
16. K-12 activities (and freshmen)
17. Community engagement activities
18. Budget implementation
19. Program activities/implementation
20. Agency/participant survey

USDA Agency Partners

The projects collaborated with a wide array of USDA agencies and program offices. Exhibit 7 presents the key partnerships with USDA agencies, programs and offices. All of the projects partnered with USDA NCRS; six of seven (85.7 percent) were partners with USDA FS; five of seven (71.4 percent) were partners with USDA APHIS and USDA ARS; two of seven (28.6 percent) were partners with USDA FSIS; one of seven (14.3 percent) was a partner with USDA AMS, USDA FNS and USDA RD. Collectively, the participating projects partnered with 17 different agencies, programs and offices.

Exhibit 7: Project Collaboration with USDA Agencies							
USDA Agencies, Programs and Offices	CSU-SB	FIU	NMSU	TAMUK	TSU	UPR-M	UTEP
USDA Agencies (Excluding National Institute of Food and Agriculture (NIFA) who is the funding agency)							
Agricultural Marketing Service (AMS)				✓			
Agricultural Research Service (ARS)	✓	✓		✓		✓	✓
Animal and Plant Health Inspection Service (APHIS)		✓	✓	✓	✓	✓	
Food and Nutrition Service (FNS)					✓		
Food Safety and Inspection Service (FSIS)					✓	✓	
Forest Service (FS)	✓	✓	✓	✓	✓	✓	
Natural Resources Conservation Service (NRCS)	✓	✓	✓	✓	✓	✓	✓
Rural Development (RD)							✓
Total USDA Agency Collaboration	3	4	3	5	5	5	3
USDA Programs and Offices							
Agricultural Research Service (ARS), National Center for Agricultural Utilization Research (NCAUR)						✓	
Agricultural Research Service Southern Plains Area							✓
Forest Service, Office of Civil Rights, Albuquerque, NM			✓				
Forest Service, Office of Civil Rights, Washington, DC			✓				
Hispanic-Serving Institutions National Program (HSINP)-Florida Regional Office		✓					
Hispanic-Serving Institutions National Program (HSINP)-Puerto Rico Regional Office		✓					
Natural Resources Conservation Service (NRCS), Resources Inventory and Assessment Division (RIAD)							✓

Exhibit 7: Project Collaboration with USDA Agencies

USDA Agencies, Programs and Offices	CSU-SB	FIU	NMSU	TAMUK	TSU	UPR-M	UTEP
Natural Resources Conservation Service (NRCS), Plant Materials Center (PMC)				✓			
National Agricultural Statistics Services (NASS), Crop Production Services (CPS)				✓			
Total USDA Program/Office Collaboration	0	2	2	2	0	1	2
Total USDA Collaboration	3	7	5	7	5	6	5

Source: USDA NIFA Collaborative Projects, 2011-12

National Agency/Organization Partners

Exhibit 8 presents the projects' collaboration with national agencies and organizations. Two of the projects collaborated with the U.S. Geological Survey.

Exhibit 8: Project Collaboration with National Agencies/Organizations

USDA Agencies	CSU-SB	FIU	NMSU	TAMUK	TSU	UPR-M	UTEP
U.S. Geological Survey (USGS)			✓			✓	
National Institute of Environmental Health Sciences (NIEHS)						✓	
U.S. Environmental Protection Agency (USEPA)						✓	
Total National Collaboration	0	0	1	0	0	3	0

Source: USDA NIFA Collaborative Projects, 2011-12

Local, State, Region and Private Partners

Exhibit 9 presents the projects' collaboration with local, state, region, and private entities, organizations, and companies.

Exhibit 9: Project Collaboration with Local, State, Regional and Private Partners							
State, Regional, Private and Other Partners	CSU-SB	FIU	NMSU	TAMUK	TSU	UPR-M	UTEP
State and Territory							
California Department of Fish and Game	✓						
Elkhorn Slough National Estuarine Research Reserve	✓						
USDA Natural Resources Conservation Service (NRCS) in Hollister	✓						
USDA Agricultural Research Service (ARS) in Parlier	✓						
USDA Natural Resources Conservation Service (NRCS) in Salinas	✓						
USDA Natural Resources Conservation Service (NRCS) in CalFire	✓						
Texas AgriLife Research and Extension Service				✓			
Texas AgriLife Research, Integrated Pest Management (IPM)				✓			
Texas A&M Forest Service Nursery and Seed Industry				✓			
Southwest Border Food Safety and Defense Center at New Mexico State University, College of Agricultural, Consumer and Environmental Sciences					✓	✓	
U.S. Environmental Protection Agency (USEPA), Puerto						✓	
Texas AgriLife Research Center at El Paso							✓
Total State, Region, Private and Other Partners	6	0	0	2	1	1	1
Local and Regional							
City of Monterey	✓						
City of Pacific Grove	✓						

Exhibit 9: Project Collaboration with Local, State, Regional and Private Partners

State, Regional, Private and Other Partners	CSU-SB	FIU	NMSU	TAMUK	TSU	UPR-M	UTEP
City of Watsonville	✓						
Marina Coast Water District	✓						
Monterey County Water Resources Agency	✓						
County of Monterey	✓						
Monterey County Health Department, Drinking Water Protection Services	✓						
Monterey Peninsula Water Management District	✓						
Resource Conservation District of Santa Cruz County	✓						
Santa Margarita Ecological Reserve	✓						
San Dieguito River Park	✓						
Fairchild Tropical Botanical Garden		✓					
Earth Learning Foundation		✓					
Miami Dade Public School District		✓					
Texas A&M University Citrus Center				✓			✓
TAMUK Farm				✓			
TAMUK Toxin Center				✓			
University of North Texas (UNT)				✓			
Total Local and Regional Partners	11	3	0	4	0	0	1
Private Industry							
AgBiotech	✓						
Applied Marine Sciences (AMS)	✓						
Denise Duffy and Associates	✓						
Cargill (Food Distributor)				✓			
Golden Acres Genetics				✓			
Noble Foundation				✓			
Total Private Industry Partners	3	0	0	3	0	0	0

Source: USDA NIFA Collaborative Projects, 2011-12

Number of Internships

Participating students participated in about 134 internships with USDA agencies, programs, and offices. During the 2011-12 project year, participating students were involved in 234 internship experiences including 134 with USDA agencies and program and 100 with others collaborating partners (see Exhibit 10).

Exhibit 10: Number of Internships								
Type of Internships	CSU-SB	FIU	NMSU	TAMUK	TSU	UPR-M	UTEP	Total
Total Internships	50	36	45	58	1	18	26	234
Internship with USDA agencies, programs and offices	3	34	45	24	1	12	15	134
USDA AMS				1			2	3
USDA APHIS			1	8			1	9
USDA ARS	1	15		2			1	19
USDA ARS Temple, Texas							3	3
USDA ARS Lubbock, Texas							1	1
USDA ARS-APHIS		13		3				16
USDA ARS NCAUR						1		1
USDA FS		2	42	1	1	NR		46
USDA FSIS		1				NR		1
USDA NASS CPS				2				2
USDA NIFA							2	2
USDA NRCS	2	3	1	4		2	4	14
USDA NRCS PMC				3			1	5
USDA NRCS NC						1		1
USDA NRCS ND						1		1
Not Reported (NR)			1			7	0	8
Internships with other partners	47	2	0	34	0	6	11	100
AgBioTech	1							1
Applied Marine	1							1
CalFire	1							1
Cargill				1				1
City of Monterey	1							1
City of Pacific Grove Public Works Department	1							1
City of Watsonville	1							1
CSU-Bakersfield	5							5
CSU-Fresno	2							2

Exhibit 10: Number of Internships

Type of Internships	CSU-SB	FIU	NMSU	TAMUK	TSU	UPR-M	UTEP	Total
CSU Fresno w/ California Fish & Game	1							1
CSU-Los Angeles	2							2
CSU-Monterey Bay	3							3
CSU-Northridge	2							2
CSU-San Bernardino Water Resources Institute	3							3
CSU-San Marcos	2							2
CSU-Stanislaus	4							4
Denise Duffy & Associates	1							1
Environmental Protection Agency						1		1
Elkhorn Slough National Estuarine Research Reserve	1							1
Golden Acres Genetics				1				1
Hispanic Association of Colleges and Universities						1		1
INTEL-Albuquerque							2	2
Marina Coast Water District	1							1
Monterey County Health Department	1							1
Monterey County Water Resources Agency	1							1
Monterey Peninsula Water Management District	3							3
County of Monterey, Public Works Stormwater Department	1							1
National Science Foundation-Sponsored Activities						3		3
New Mexico State University							7	7
Noble Foundation				1				1
Resource Conservation District Santa Cruz	1							1
San Diego State University	5							5
San Dieguito River Park	2							2
Texas A&M University-Kingsville (TAMUK)				2				2
TAMUK Citrus Center				3			1	4

Exhibit 10: Number of Internships

Type of Internships	CSU-SB	FIU	NMSU	TAMUK	TSU	UPR-M	UTEP	Total
TAMUK Farm				1				1
TAMUK Nursery/Gardens				1				1
TAMUK Toxin Center				2				2
Texas AgriLife Research				10				10
Texas AgriLife Research- Integrated Pest Management (IPM)				2				2
Texas AgriLife Research Center at El Paso							1	1
University of North Texas (UNT)				2				2
University of Texas-Pan American (UTPA)				8				8
U.S. Army Corps of Engineers						1		1
Not Reported		2						2

Note: The 36 summer internships of FIU with USDA agencies and partners were unpaid. At NMSU, 35 of the USDA summer internships were through the Student Temporary Employment Program (STEP) and 15 were through the Student Career Experience Program (SCEP).

Source: USDA Collaborative Projects, 2011-12

Number of Students Served and Demographics

A total of approximately 385 students participated in the collaborative projects. The collaborative projects reported that they collectively served about 385 students (see Exhibit 11). Of this number, 205 (53.2 percent) were female and 180 (46.8 percent) were male, and 323 (83.9 percent) were of Hispanic origin. Eight out of 10 (79.2 percent) participating students were enrolled as undergraduates and 20.8 percent were graduates. With regards to degree programs in which the participating students were enrolled, 239 (62.1 percent) were enrolled in a bachelor's degree program, 60 (15.6 percent) were enrolled in a master's degree program, and 19 (4.9 percent) were enrolled in a doctoral degree program.

Exhibit 11: Number of Students Served and Demographics								
Indicator	CSU-SB	FIU	NMSU	TAMUK	TSU	UPR-M	UTEP	Total
Number of Students Served	50	54	53	70	50	55	53	385
Gender								
Female	27	28	30	30	33	38	18	205
Male	23	26	23	40	17	17	35	180
Ethnicity								
Asian	6	0	0	0	0	0	1	7
Black/African American	0	4	1	0	0	0	1	6
Hispanic	23	48	52	50	50	55	45	323
Native American	2	0	0	0	0	0	0	2
Pacific Islander	0	0	0	0	0	0	0	0
White	17	2	0	0	0	0	6	25
Other	2 (Middle Eastern)	0	0	0	0	0	0	2
Not Reported				20				20
Degree Program								
Associates	0	0	0	31	36	0	0	67
Bachelors	27	49	42	30	14	42	35	239
Masters	23	4	9	8	0	7	9	60
Doctoral (Ph.D.)	0	1	2	1	0	6	9	19
Classification Level								
Undergraduate	27	49	42	61	49	42	35	305
Graduate	23	5	11	9	1	13	18	80
Not Reported								
First Generation								
First Generation	NR	26	28	NR	NR	NR	NR	NR
Retention Rate								
Retention Rate	98%	92%	100%	94%	96%	100%	100%	98%
NR = Not Reported								
Source: USDA/NIFA Collaborative Projects, 2011-12								

Number of Students Enrolled by Major

The participating students were enrolled in a variety of disciplines which related to USDA jobs. The top five disciplines included biology and biological sciences, chemistry, agriculture, environmental sciences, and biotechnology (see Exhibit 12).

Exhibit 12: Number of Students Enrolled in Majors Applicable to USDA Jobs								
Majors of Interest	CSU-SB	FIU	NMSU	TAMUK	TSU	UPR-M	UTEP	Total
Biology/Biological Sciences	10	25	3	15	12		1	66
Chemistry		6		1	3	17	6	33
Agriculture					20		1	21
Environmental Science	3	2	6		6		3	20
Biotechnology		7	1	9		2		19
Crops and Agro-Environmental Sciences						17		17
Industrial Engineering							17	17
Civil Engineering	2		5			3	4	15
Coastal and Watershed Science and Policy	15							15
Agricultural Technology				11				11
Animal Science (ANSC)				3			6	9
Environmental Studies		9						9
Environmental Technology			1			8		9
Wildlife Science			9					9
Nutrition Science					8			8
Forestry			7					7
Geography	7							7
Geology	5		1					6
Chemical Engineering						4	1	5
Plant and Soil Science-Soil Science				3			2	5
Plant and Soil Sciences (PLSS)				5				5
Animal Science- Pre vet				3			1	4
Agriculture Business				2			1	3
Agriculture Science (AGSC)				2			1	3
Fisheries			3					3
Industrial Chemistry						3		3
Wildlife Management			3					3
Agricultural Science -Certified				2				2
Biology/Chemistry				1			1	2
Computer Science				1			1	2

Exhibit 12: Number of Students Enrolled in Majors Applicable to USDA Jobs

Majors of Interest	CSU-SB	FIU	NMSU	TAMUK	TSU	UPR-M	UTEP	Total
Criminal Justice		1		1				2
Electrical Engineering							2	2
Industrial Technology	2							2
Information Technology			1		1			2
Plant and Soil Science-Agronomy				2				2
Agriculture and Community Development			1					1
Agricultural Economics							1	1
Agricultural Science-Soils minor				1				1
Agricultural Science-Wildlife Recreational Entrepreneurship				1				1
AgriBusiness-Ranch Management				1				1
Biology/Criminal Justice				1				1
Environmental Biology		1						1
Microbiotechnology			1					1
Chemistry/Biotechnology				1				1
Computer Science/Computer Engineering	1							1
Conservation Ecology			1					1
Civil Engineering-Technology			1					1
Mechanical Engineering						1		1
Economic Development-Sustainability							1	1
Environmental Studies and International Relations		1						1
Environmental Health			1					1
Forestry and Spanish			1					1
Forestry and Biology			1					1
Forestry and Fire Science			1					1
Environmental Geology (minor in music)			1					1
Natural Resource Management (concentration in Geology)			1					1
German	1							1
Health Sciences	1							1
Landscape & Horticulture		1						1
Mathematics	1							1

Exhibit 12: Number of Students Enrolled in Majors Applicable to USDA Jobs

Majors of Interest	CSU-SB	FIU				UPR-M	UTEP	Total
Nutrition and Dietetics		1						1
Photography	1							1
Plant Science	1							1
Psychology	1							1
Plant and Soil Science- Horticulture				1				1
Soil Microbiology				1				1
Range Science			1					1
Range Science, minor in Livestock Production			1					1
Range and Wildlife Sciences				1				1
Transportation Logistics							1	1
Water Resources							1	1
Wildlife Biology							1	1
Wildlife Science, History, Spanish (minor Linguistics)			1					1
Total	53	54	53	70	50	55	53	388

Note: Some students had more than one major.

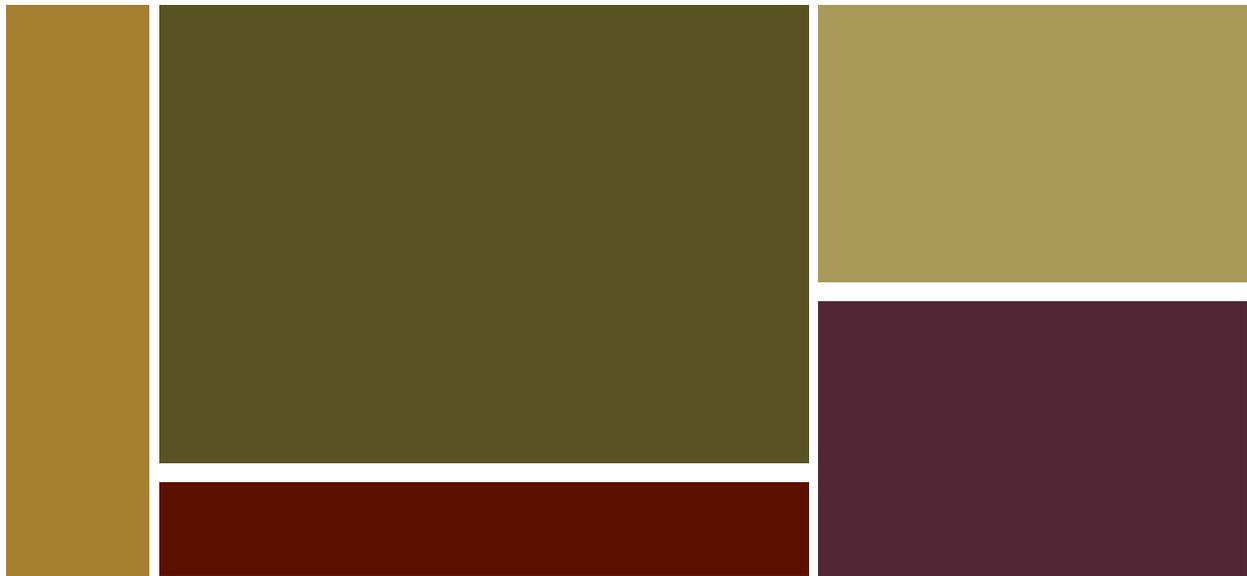
Source: USDA Collaborative Projects

Other Indicator Results

The participating students were involved in a number of experiential learning activities and presentation opportunities. The collaborative projects reported that participating students were provided an array of experiential learning activities including research projects (see Exhibit 13). Participating students presented at a number of local and national conferences and were involved in producing posters and research publications. See Appendix A and Appendix C for additional information on individual project outcomes.

Exhibit 13: Other Outcome Indicator Results								
Outcome Indicators	CSU-SB	FIU	NMSU	TAMUK	TSU	UPR-M	UTEP	Total
Number of students in experiential learning (research) mentoring	50	54	49	65	50	37	53	358
Number of students presenting	4	32	3	7	2	23	15	86
Number of students publishing	2	3	0	1	0	12	13	31
Number of students graduating	1			4		4		9
Number of degrees awarded with USDA qualifications	1			5		4		10
Associate's degree								
Bachelor's degree				5		3		8
Master's degree	1					1		2
Doctorate (Ph.D.s)								
Number of students offered jobs or paid internships	6		12	1				19
Number of students employed in USDA agencies, programs or offices			12	1				13
USDA FS			12					13
USDA NRCS				1				1

Source: USDA NIFA Collaborative Projects, 2011-12



Findings from the Online Student Survey

This section presents first-year results of the online student survey. Findings are organized in seven key areas in which the survey was organized: (1) Background, Degree Plans and Goals, (2) Academic Interests and Career Plans, (3) College/University, Programs and Course of Study, (4) Recruitment of Under-Represented Students, (5) Supports and Opportunities for Experiential Learning, (6) USDA related Internships, Jobs, and Communications, and (7) Preparation for your field of interest and overall goals. At the end of this section, key implications are presented.

Survey Highlights

Background, Degree Plans and Goals

- Twenty-seven institutions from the seven projects participated in the survey.
- Most students were Hispanic (83.6 percent) with a slightly higher proportion of female (55.2 percent).
- Most students were enrolled in a program of study connected with agriculture, such as environmental sciences (13.4 percent), biology (11.9 percent), animal science (7.8 percent), and chemistry (5.2 percent).
- Nearly 40 percent (39.9 percent) of the students indicated a GPA greater than 3.50 but less than 4.0. A similar proportion (38.8 percent) reported a GPA between 3.00 and 3.50. About five percent (5.2 percent) entered a GPA below 2.51, and 8.2 percent reported a perfect 4.0.
- A substantial majority of the students (62.7 percent) had an officially sanctioned degree plan.

Academic Interests and Career Plans

- Overall, students (69.9 percent) had a strong interest in agriculture-related fields.
- The students (97.4 percent) were also very satisfied with the program in which they are enrolled.

College/University, Programs and Course of Study

- With more than 80 percent agreement (81.2 percent), students had a strong positive perspective on their colleges or universities.
- Most students (76.1 percent) indicated that their current college was their first choice.

- The students (91.8 percent) were very satisfied with the program of study offered by the college or university in which they were enrolled.
- They (93.3 percent) also indicated that the courses they were taking were academically challenging and that the degree they would receive would prepare them for graduate or post-graduate school.

Recruitment of Under-Represented Students

- With an overall agreement of 77.9 percent, students thought that their college or university was taking proactive steps to recruit more students in the agriculture field and in particular under represented students, including Hispanics.
- In this area, the highest agreement was with the statement, “The College/University I attend is taking pro-active steps to include diversity/multicultural perspectives in classes, presentations, assignments and discussions.” The level of agreement was 80.5 percent.

Supports and Opportunities for Experiential Learning

- Areas with high support (more than 80 percent agreement) include: Academic support with course requirements, partnering with faculty in research activities, faculty mentoring, and professional meeting and conferences.
- Areas with the least support (less than 65 percent agreement) include: Social and emotional counseling, out-of-state internships, visits to non-USDA agencies, and publishing opportunities. These are the areas the institutions should consider to improve on their offers for opportunities for experiential learning.
- Students felt comfortable getting what they need to succeed academically (93.7 percent), understanding what they need to do to meet graduation requirements (93.7 percent), and getting their questions answered when they have doubts (91.8 percent).
- The students' four most frequent challenges were: Financial issues/problems (20.5 percent), classes (14.6 percent), accessing information about internships (10.8 percent), and accessing information about jobs (9.3 percent).

USDA related Internships, Jobs, and Communications

- With more than 80 percent (82.8 percent) in the affirmative, students were aware of internships and experiential learning opportunities within their USDA agency.
- However, 63.4 percent applied for them and 46.8 percent were successful in acquiring an internship or experiential learning opportunity within their USDA agency.
- On the other hand, 37.5 percent applied for an internship or experiential learning opportunity in a non-USDA agency and 30.5 percent were successful in acquiring an internship or experiential learning opportunity in a non-USDA agency.

Preparation for your field of interest and overall goals

- Nearly two-third of the students (73.7 percent) felt that they were well prepared in high school.
- More than 80 percent (84.0 percent) indicated that their high school encouraged them to enroll in college.
- And virtually all of them pointed out that their dream has always been to have a professional career (95.1 percent) and getting a college degree (97.0 percent).
- Comparatively, fewer (69.4 percent) indicated that their immediate goal was a career in a USDA related area. However, few (6.3 percent) disagreed with this goal; mostly they (24.3 percent) were neutral or uncommitted.

As part of the evaluation, a survey to students served by the USDA National Institute of Food and Agriculture Collaborative Projects was conducted. In total, 268 students participated in the survey, which was available from September 12, 2012 to February 19, 2013, or 160 days, about five months and 10 days. The survey was closed on February 19, 2013, in the afternoon. The most recent response was entered on February 15, 2013, four days before the survey was closed. The earliest response was entered on September 14, 2012, two days after the survey was opened to participants. This was a comprehensive survey that collected information pertinent to the following seven key areas:

- Background, Degree Plans and Goals
- Academic Interests and Career Plans
- College/University, Programs and Course of Study
- Recruitment of Under-Represented Students
- Supports and Opportunities for Experiential Learning
- USDA related Internships, Jobs, and Communications
- Preparation for your field of interest and overall goals

This section of the document presents the final results of that survey, organized by each of these areas. At the end of this section, key implications are presented.

Background, Degree Plans and Goals

Student Demographics

The exhibit below shows the student demographic compiled from the survey. Most students were Hispanic (83.6 percent) with a slightly higher proportion of female (55.2 percent). They (91.1 percent) naturally spoke Spanish, but also spoke English *Very Well* or *Well* (96.3 percent). Some also spoke other languages, including Portuguese, French, Italian and Vietnamese (see Exhibit 14).

Exhibit 14: Student Demographics			
Variables		Number	Percent
Gender			
	Male	120	44.8
	Female	148	55.2
Race/Ethnicity How do you describe yourself?			
	American Indian or Alaska Native	3	1.1
	Hawaiian or Other Pacific Islander	0	0.0
	Asian or Asian American	8	3.0
	Black or African American	7	2.6
	Hispanic or Latino	224	83.6
	Non-Hispanic White	27	10.1
	Other	12	4.5
Do you speak a language other than English?			
	Yes	198	73.9
	No	70	26.1

Exhibit 14: Student Demographics		
Variables	Number	Percent
Languages Spoken (Other than English)		
Spanish	175	91.1
Portuguese	3	1.6
French	2	1.0
Italian	2	1.0
Vietnamese	2	1.0
Arabic	1	0.5
Bangla	1	0.5
Chinese	1	0.5
Haitian creole	1	0.5
Hindi	1	0.5
Luanda	1	0.5
Malayalam	1	0.5
Tagalog	1	0.5
How well do you speak English?		
Very well	198	73.9
Well	60	22.4
Not well	9	3.4
Not at all	1	0.4

College/University

An overall survey response rate of 71 percent was achieved. The survey listed all the campuses and universities participating in the projects. All universities have cleared their Institutional Review Board (IRB) and participated in the survey. Exhibit 15 below shows the response rate for each USDA/NIFA project. Most of the institutions had participation rate above 50 percent, for an average overall response rate of 71 percent.

Exhibit 15: Response Rate for USDA/NIFA Student Participant Survey				
USDA/NIFA Project Site	Project Title	Expected Response	Actual Response	Response Rate
California State University-San Bernardino	CSU-SB: Watershed Management Experiential Learning for USDA Careers	50	32	0.64
Florida International University	FIU: Florida - Caribbean Consortium for Agriculture Education and Hispanic Workforce Development	42	42	1.00
New Mexico	NMSU: Preparing Students for Career	57	25	0.44

Exhibit 15: Response Rate for USDA/NIFA Student Participant Survey				
USDA/NIFA Project Site	Project Title	Expected Response	Actual Response	Response Rate
State University	Paths with the USDA Forest Service by Linking Student Success with Experiential Learning Opportunities			
Texas A&M University-Kingsville	TAMUK: Step Up to USDA Career Success: Science, Technology and Environmental Programs for Undergraduate Preparation to USDA Career Success	70	42	0.60
Texas State University-San Marcos	TSU: Food Safety and Agro- terrorism Training: Educating Our Future Workforce	51	47	0.92
University of Puerto Rico-Mayagüez	UPR-M: UPR-Mayagüez Center for Educational and Training In Agricultural and Related Sciences	55	50	0.91
University of Texas-El Paso	UTEP: BGREEN – Building a Regional Energy and Educational Network	53	30	0.57
Total (All Sites)		378	268	0.71

To this point, 27 colleges or universities participated (Exhibit 16). More than 40 percent (43.3 percent) of participants came from three institutions. With 17.2 percent, the University of Puerto Rico had the largest participation, with Mayagüez alone accounting 12.7 percent of the total student participation. The second largest group attended Texas State University with 14.2 percent, and the third was California State University, accounting for 11.9 percent of participation.

Exhibit 16: College/University Students Attend		
Variables	Number	Percent
CSU - Bakersfield	5	1.9
CSU - Fresno	3	1.1
CSU - Los Angeles	2	0.7
CSU - Monterey Bay	11	4.1
CSU - Northridge	1	0.4
CSU - San Bernardino	2	0.7
CSU - San Diego State	1	0.4
CSU - San Marcos	4	1.5
CSU - Stanislaus	3	1.1
Del Mar College	5	1.9
Florida International University (FIU)	11	4.1
InterAmerican University of Puerto Rico - San Germán	14	5.2

Exhibit 16: College/University Students Attend

Variables	Number	Percent
Laredo Community College (LCC)	9	3.4
Miami Dade College (MDC)	14	5.2
New Mexico Highlands University	7	2.6
New Mexico State University	18	6.7
Northwest Vista College (NWVC)	8	3.0
Palo Alto College	7	2.6
St. Thomas University (STU)	7	2.6
Texas A&M University - Kingsville	21	7.8
Texas State Technical College	8	3.0
Texas State University - San Marcos	23	8.6
University of Puerto Rico - Aguadilla	8	3.0
University of Puerto Rico - Humacao	4	1.5
University of Puerto Rico - Mayagüez	34	12.7
University of Texas - El Paso	30	11.2
University of Texas - Pan American	8	3.0
Total	268	100.0

Study Program

Participating students were enrolled in an array of disciplines related to agriculture. As would be expected, most students were enrolled in a study program connected with agriculture, such as environmental sciences (13.4 percent), biology (11.9 percent), animal science (7.8 percent), and chemistry (5.2 percent). Very few were enrolled in less-related programs, such as computer science (0.4 percent) and mechanical engineering (0.4 percent). However, there was a great diversity of study programs, totaling 53 different areas. Exhibit 17 lists the various study programs the students indicated in the survey.

Exhibit 17: Study Programs Student are Enrolled		
Variables	Number	Percent
Environmental Studies	36	13.4
Biology	32	11.9
Animal Science	21	7.8
Chemistry	14	5.2
Agriculture Science	12	4.5
Industrial Engineering	12	4.5
Agronomy	7	2.6
Biological Science	7	2.6
Biotechnology	7	2.6
Chemical Engineering	7	2.6
Civil Engineering	7	2.6
Nutrition	7	2.6
Plant and Soil Science	7	2.6
Forestry	6	2.2
Geography	6	2.2
Geology	6	2.2
Agriculture Business	5	1.9
Wildlife Science	5	1.9
Agriculture	4	1.5
Agriculture Technology	4	1.5
Biomedical Science	4	1.5
Watershed Management Science	4	1.5
Agricultural Engineering	3	1.1
Agro-ecology	3	1.1
Coastal and Watershed Science & Policy	3	1.1
Engineering	3	1.1

Exhibit 17: Study Programs Student are Enrolled

Variables	Number	Percent
Industrial Biotechnology	3	1.1
Industrial Chemistry	3	1.1
Agricultural Education	2	0.7
Applied Chemistry	2	0.7
Biopharmaceutical Science	2	0.7
General Agriculture	2	0.7
Industrial Technology	2	0.7
Agricultural Economics	1	0.4
Biochemistry	1	0.4
Computer Science	1	0.4
Conservation Ecology	1	0.4
Criminal Justice/Horticulture	1	0.4
Economic Development, Sustainability	1	0.4
Environmental Engineering	1	0.4
Environmental Geology	1	0.4
Environmental Technology	1	0.4
General Biology	1	0.4
Genetics	1	0.4
Health Science - Public Health Education	1	0.4
Horticulture	1	0.4
Mechanical Engineering	1	0.4
Mechanical - Agricultural Technology	1	0.4
Microbiology	1	0.4
Molecular Biology	1	0.4
Snake Venom Research	1	0.4
Transportation Logistics	1	0.4
Wetlands Research	1	0.4
Economic Development, Sustainability	1	0.4
Environmental Engineering	1	0.4
Environmental Geology	1	0.4
Environmental Technology	1	0.4
General Biology	1	0.4

Exhibit 17: Study Programs Student are Enrolled		
Variables	Number	Percent
Genetics	1	0.4
Health Science - Public Health Education	1	0.4
Horticulture	1	0.4
Mechanical Engineering	1	0.4
Mechanical - Agricultural Technology	1	0.4
Microbiology	1	0.4
Molecular Biology	1	0.4
Snake Venom Research	1	0.4
Transportation Logistics	1	0.4
Wetlands Research	1	0.4
Total	268	100.0

Current Self-reported GPA

Most students reported a GPA between 3.00 to 3.99. Students were asked to enter their GPA into the survey. More than 35 percent (36.2 percent) indicated a GPA 3.50 and above (see Exhibit 18). A similar proportion (34.3 percent) reported a GPA between 3.00 and 3.49. About 4 percent (3.7 percent) entered a GPA below 2.50, and 8.2 percent reported a prefect 4.0.

Exhibit 18: Student Self-Reported GPA		
Variables	Number	Percent
4.00	22	8.2
3.50 and Above	97	36.2
3.00 and Above	92	34.3
2.50 and Above	44	16.4
Below 2.50	10	3.7
I don't know	3	1.1
Total	268	100

Hours Completed in Program

About a fourth of the students (23.9 percent) reported completing less than 51 hours in the program. Another 20 percent (19.8 percent) indicated completing between 51 and 100 hours. And almost all remaining respondents (17.9 percent) reported completing between 101 and 400 hours. It is important to know that more than a third of the students (36.2 percent) reported not knowing this information, not understanding the question, or simply skipped it (Exhibit 19).

Exhibit 19: Hours Completed in Program		
Variables	Number	Percent
3 - 20	18	6.7
21 - 50	46	17.2
51 - 100	53	19.8
101 - 150	20	7.5
151 - 200	10	3.7
201 - 250	3	1.1
251 - 300	6	2.2
301 - 350	1	0.4
351 - 400	8	3.0
401 - 450	1	0.4
451 - 500	1	0.4
501 - 550	1	0.4
551 - 600	1	0.4
601 - 650	0	0.0
651 - 700	0	0.0
701 - 750	0	0.0
751 - 800	1	0.4
801 - 850	1	0.4
I don't know.	15	5.6
Students skipped question	82	30.6

Degree Program Completed

About 7.5 percent of students had completed a degree upon program entrance. Most students (87.3 percent) had not completed a degree prior to the one they were pursuing (see Exhibit 20). Less than 10 percent (7.5 percent) indicated that they completed a degree, and some listed the completed degree as follows:

- Agricultural Education
- Agronomy
- Associate's Degree in Liberal Studies
- Bachelor in Science on Environmental Technology
- Bachelor of Industrial Engineering
- Bachelor of Science in Biological Sciences
- Bachelor of Science in Chemical Engineering, Minor in Chemistry
- Bachelor of Science in Chemistry, Food Science and Technology minor
- Bachelor of Science in Geology with a minor in Geographic Information Systems
- Biology A.A.
- Biology-Ecology
- Chemistry
- Chemistry and minor in Physics
- Civil Engineering
- Industrial Engineering
- Industrial Technology
- Wildlife Science, Range Science and Biology

Exhibit 20: Degree Program Completed		
Variables	Number	Percent
Yes	20	7.5
No	234	87.3
N/A	14	5.2

Student Classification

Students seemed to be progressing normally. During the 2011-12 academic year, their academic classification was mainly concentrated across the first three levels (freshman, sophomore, and junior), at an average rate of about 20 percent each, with 17.6 percent as senior. By the fall of 2012, the cohorts had moved to the next level. Now the majority were in the latter levels (sophomore, junior and senior), with an average of 24 percent each and less than 5 percent as freshman. The number of graduate students also increased from 34 to 39 and doctoral from 12 to 16. Exhibit 21 shows details of the student classification.

Exhibit 21: Student Classification				
Variables	2011-12 Academic Year		This Fall (2012)	
	Number	Percent	Number	Percent
Freshman	41	16.4	11	4.4
Sophomore	60	24.0	53	21.1
Junior	50	20.0	63	25.1
Senior	44	17.6	65	25.9
Graduate	34	13.6	39	15.5
Doctoral	12	4.8	16	6.4
N/A	9	3.6	4	1.6

Current Degree Plan

About two-thirds of students are in a bachelor's degree program. Most students (64.2 percent) plan to obtain a Bachelor's degree and 11.8 percent were working toward their associate's degree (see Exhibit 22). The second largest group (16.6 percent) aspires to earn their master's degree. The remaining 20 students are working toward their doctorate's degrees.

Exhibit 22: Current Degree Plan		
Variables	Number	Percent
Associate's degree	32	11.8
Bachelor's degree	174	64.2
Master's degree	45	16.6
Doctorate	20	7.4

Have an Official Degree Plan

About two-thirds of students have an official degree plan. A substantial majority of the students (62.7 percent) had an officially-sanctioned degree plan (see Exhibit 23). Of those who did not have an official degree plan, about half reported a date by which they would have one. Out of those who reported a date, most think they will have it by the end of 2012 or 2013 (23 students). The rest indicated dates into 2014 (nine students), 2015 (two students) and 2016 (two students).

Exhibit 23: Have an Official (Approved and Signed) Degree Plan		
Variables	Number	Percent
Yes	168	62.7
No	66	24.6
N/A	34	12.7

Degrees Already Hold

About two-fifths of students held a bachelor's or associate's degree. As expected, most students (56.4 percent) did not have any degree (see Exhibit 24). More than 23 percent (23.5 percent) had bachelor's degrees and about 15 percent (15.2 percent) associate's degrees. Fourteen students (4.8 percent) have a master's degree. None had doctorate.

Exhibit 24: Degrees Students Already Hold		
Variables	Number	Percent
Associate's degree	44	15.2
Bachelor's degree	68	23.5
Master's degree	14	4.8
Doctorate	0	0.0
None of the above	163	56.4

Academic Interests and Career Plans

Most students expressed a strong interest in an agricultural-related career. Overall, students (69.9 percent) had a strong interest in agriculture-related fields (see Exhibit 25). They (97.4 percent) were also very satisfied with the program in which they are enrolled. Only one of them indicated any dissatisfaction with it. More than half (62.9 percent) of the students were considering other careers of interest. This probably indicates that they wanted to expand into other areas, not to substitute their current field for others.

Exhibit 25: Main Areas of Interests and Career or Academic Plans							
Statements		Agree		Neutral/NA		Disagree	
		Number	Percent	Number	Percent	Number	Percent
A.	My career interests are related to agriculture, nutrition and natural resources.	211	79.0	38.0	14.2	18.0	6.7
B.	I am satisfied with the program of study I am enrolled in.	259	97.4	6.0	2.3	1.0	0.4
C.	I have declared and/or plan to declare a major in an agriculture-related field of study.	159	59.8	75.0	28.2	32.0	12.0
D.	I plan to complete a degree in the agriculture-related field in which I am enrolled.	172	64.7	59.0	22.2	35.0	13.2
E.	Upon finishing my undergraduate studies, I plan to enroll in graduate studies in an agriculture-related field.	130	48.9	108.0	40.6	28.0	10.5
A-E	Total interest in agriculture-related field.	931	69.9	286.0	21.5	114.0	8.6
F.	I also am considering other careers of interest.	168	62.9	70.0	26.2	29.0	10.9
Total (A-F)		1,099	68.8	143.0	356.0	22.3	8.9

College/University, Programs and Course of Study

With more than 80 percent agreement (81.2 percent), students had a strong positive perspective on their colleges or universities (see Exhibit 26). Most (76.1 percent) indicated that their current college was their first choice. They (91.8 percent) were very satisfied with the program of study offered by the college or university in which they were enrolled. They (93.3 percent) also indicated that the courses they were taking were academically challenging and that the degree they (90.2) would receive would prepare them for graduate or post-graduate school. The main disagreements were in three areas. About a third (36.7 percent) did not think or were uncertain that their college or university was well known. Some students (17.4 percent) were not sure they would find a job immediately after graduation. About a fourth of the students (29.3 percent) did not fully support the statement that their college or university was one of the best in the country. On the other hand, 70.7 percent did.

Exhibit 26: Student Perspectives on Their College or University

Statements		Agree		Neutral/NA		Disagree	
		Number	Percent	Number	Percent	Number	Percent
A.	The college/university I attend was my first choice of higher education institutions.	204	76.1	32	11.9	32	11.9
B.	The college/university I attend is well known for programs of study related to USDA jobs.	169	63.3	72	27.0	26	9.7
C.	I am satisfied with the program of study offered by the college/university I attend.	246	91.8	16	6.0	6	2.2
D.	The courses I am taking are academically challenging.	250	93.3	15	5.6	3	1.1
E.	A degree from this college/university will help me get a job immediately after graduation.	219	82.6	40	15.1	6	2.3
F.	A degree from this program will prepare me for graduate school or a post-graduate degree.	240	90.2	24	9.0	2	0.8
G.	I consider the program in which I am enrolled at this college/university to be one of the best in the country.	188	70.7	62	23.3	16	6.0
Total		1,516	81.2	91	261	14.0	4.9

Students were asked to provide ideas to improve their college or university. Exhibit 27 lists a compilation of what they said, with minimal editing. In general, students seemed to want more courses related to their areas of concentration, more related degrees or programs, and more support (jobs, technology, labs, and materials) offered in their college or university to strengthen student chances of getting a worthwhile degree that would be valuable in the marketplace.

Exhibit 27: The college/university I attend could be strengthened by...

- Offering more diverse geography courses, including geospatial technology that will prepare students for employment.
- A better organization about the classes they would offer.
- Improving interdisciplinary interactions and collaborations.
- More professors and funding.
- Offering more agriculture related degree opportunities.
- Larger ecology community.
- If buying books and living on campus was more affordable.
- More marketing and recruiting for technical programs, such as industrial technology.
- Keeping up the good work.
- Having a bachelor's degree program.
- Increasing diversity in course opportunities.
- Hiring more teachers for the department.
- Fantastic faculty.
- The parking situations for commuter students such as myself.
- More meetings to go over matters of business.
- More students need to be informed about the opportunities available.
- More professors and advisors to help extracurricular learning such as lab group meetings to discuss scientific papers.
- Additional teaching staff! I love this program, but I feel I would get more out of it if the professors were able to devote more time to class/individual projects.
- Opening the option to an agro-ecology degree.
- The wonderful faculty in our agro-ecology program.
- There are several prestigious scientists who serve as mentors in the biology program and there are several research opportunities for graduate and undergraduate students.
- The program would benefit from a more structured graduate program. This is currently being addressed by the current administration. The current administration recently conducted graduate student reviews and interviews to identify the areas that the graduate program can be strengthened.
- Recruiting more U.S citizens.
- Better professors that are more in tune and readily available to help their students succeed.
- More equipment in the science lab so several students won't be sharing one instrument.
- More professors like [two of mine]. They go the extra mile to assure that we have all the resources necessary for a successful academic career.
- Lowering tuition and putting more cause and effect into local disparities
- Formality and work ethics.
- More community involvement.
- Substantial financial support of student programs and students.
- Offering more agricultural based engineering programs.

Exhibit 27: The college/university I attend could be strengthened by...

- Higher funding in engineering.
- Better mechanical engineer professors and more tutoring options.
- The school actually listening to bigger issues going on in the different departments.
- Having more programs like BGREEN in it to help interested students gain valuable experience.
- More grants for graduate students. More opportunity to work for the university; jobs are very limited and you have to search for your own internships. I have been fortunate but other students don't have any experience in the field. I believe if more funding was available to all students, we could be more marketable in this struggling economy.
- Offering a wider variety of courses that are directly related to the mission of the USDA.
- Offering a graduate program for geography.
- Having more majors and science courses.
- More funding for graduate students.
- A lab for physical geography studies.
- Offering more classes and expanding the faculty.
- Offering a wider variety of course.
- More courses in the sciences.
- Having more diverse classes.
- Nothing, I consider my university to have great challenging professors.
- Offering more equipment to the laboratories.
- The laboratory equipment and reactants.
- Have better materials for chemistry laboratories.
- Having laboratory courses with all science (graduate courses). Improving more outside and handwork jobs.
- Continued support from the USDA/NIFA for undergraduate training programs will continue to expose, train, and intrigue students about agricultural related careers and graduate programs.
- Smaller class sizes.
- Offer a variety of schedules for each class.
- Having more agricultural courses, perhaps courses of ecology (population densities etc.) and an animal science courses. All of these courses should be directed toward STEM students rather than a low-level course for all majors.
- Classes be more readily available. Some classes are only offered in one semester or the other.
- The combined knowledge and experience of the faculty, and willingness to help on an individual scale.
- By offering some of the upper-level classes required for graduation more frequently.
- Growing. That would mean classes can be offered more often. My program is rather small.
- A more hands on approach to learning.
- Better physics program.
- More variety of classes.
- More research opportunities for inexperienced students.
- Providing more of a diversity of master's programs in the area of biology.
- Nutrition and dietetics: more faculty members who can offer more classes per semester, more internship opportunities, more hands on experience and less lecturing.
- Agro-ecology: more staff to teach a wider selection of classes.
- It could be strengthened by having a bachelor's degree program in agriculture.
- Having more career fields open and help people get faster degree.

Exhibit 27: The college/university I attend could be strengthened by...

- If it received more financial assistance.
- In terms of the engineering department, I prefer personal advisors for each student but they need to be devoted to the student. That kind of personal attention means a lot to a young student especially. Also the graduation process seems to be more difficult than it should be. I do not know how to improve it. I understand these kind of things are naturally difficult but it could still use some improvement.
- More agriculture related courses.
- Adding more classes where more practical applications in particular in my degree but in any degree would be interesting.
- Offering more agricultural courses; e.g. agricultural economics, agricultural policy courses, etc. since now it is a Hispanic agricultural serving institution.
- More funds for research and lab materials.
- Offering more programs related to agriculture fields.
- More funding for research and other science related activities. More course variety.
- By increasing the availability of equipment for research purposes.
- Acquisition of new equipment and reinforce the education exposing the students to new technologies and systems.
- More opportunities given to students, for example, more internship offered, more grants, Co-Op's, etc.
- Could be strengthened if the administration could handle better its money.
- They could have more classes of my major.
- Allowing students to enter the class when students drop after the first week. I attend SAC for a genetics class that was closed here at Vista. Science classes should have a higher cap.
- Having immediate action and making science classes better.
- More agriculture professors, more science/agriculture related degrees.
- I'm really satisfied with my university. The idea of this program is excellent and would be good that programs like this expand further more to strengthen our workforce.
- More opportunities of research and more competitiveness with other universities.
- Maybe by giving us in-campus jobs. So we wouldn't have to lose time and sometimes even miss class to go to work.
- Better advertisement of agriculture related fields.
- The college I am currently enrolled does not offer my major in dietetics; therefore, I have to choose another major and follow that degree plan to graduate with an associate's in liberal arts, although I am able to follow some of the degree plan from Texas State and take some classes that are offered here if available. It can get a bit confusing when having to follow two degree plans.
- Maybe having more courses related to agriculture or environmental studies, more courses related to biology.
- Having better communication skills. Also having better knowledge of the school system and deadlines.
- Engaging more with students, and having services available and open for students who are in doubt of something or struggling.
- Better communication for registration.
- Increasing the amount of instrumental analysis.
- So far, so good.
- More graduate programs in the field of agriculture as well as post-graduate programs.

Exhibit 27: The college/university I attend could be strengthened by...

- It could be strengthened by having more classes directed toward the wildlife biology degree.
- Providing more research areas and other degrees related to science.
- Having agriculture areas.
- Attracting more students to the department.
- Allowing more room to grow and gain a higher degree.
- More funds being allocated to the agriculture department.
- More hand on the job activities in class.
- Having a better reputation with the agriculture industries.
- More funds to give students work experience during semesters as well as summer.

In addition, students were asked the following question: If you had a friend who was interested in a similar career, what would you tell them about your experience with this program? Exhibit 28 shows their responses. Students were very explicit about sharing their excellent experience in the program, which involved great classes, with great professors who cared about them. They pointed out the various opportunities offered by the program, including research and possible job offers. They would definitely advise anyone interested in the field to consider the program.

Exhibit 28: What Students Would Tell a Friend Interested in their Field

- The geology program here at CSUB is fantastic. Our department continues to grow academically and in size. The research opportunities here are also great with so many research involved professors. CSUB is an awesome place for great minds to collaborate and carry out cutting edge research.
- This program is flexible and has five concentrations. The program has great professors.
- The program has encouraged me to pursue opportunities that are intimidating, yet enriching.
- I would tell them is a great experience because you have great professors and small classes meaning that you have a closer interaction with the professor compared to other universities
- I would tell them about the opportunities you can obtain by working in this program.
- Excellent experience, many opportunities that will help fulfill his academic and professional goals.
- The best opportunity I had to reach my academic and professional goals while supporting a great foundation to become an engineer.
- The program is challenging, but interesting and the theory taught in the class will prepare one for real life experiences. This program will also allow you to expand your mind into thinking on how to keep improving lifestyle and maintaining sustainability.
- It is very rewarding and numerous opportunities exist that you might be unaware of.
- Experience was very rewarding and provided plenty of opportunities for networking and personal development.
- [I would advise] to get a good adviser first and have a degree plan on what he/she likes.
- It is a great program to learn if this is the career path for you. It helps see what kind of work you would be doing and explores a little bit of different possible areas you could get into.
- It is a wonderful opportunity to gain experience to compliment your degree and help prepare you for a career with the USDA.
- This program has opened the doors to new internship opportunities and has opened the doors to new career that I did not know existed. It is a great program and all the internships are paid and mentoring is available.

Exhibit 28: What Students Would Tell a Friend Interested in their Field

- It gives you skills that are applicable to any career and gives you an upper hand in obtaining a government job.
- This program provides many financial and career opportunities for students who want to pursue agricultural jobs. It provides much knowledge on many different areas of agricultural. Even agriculture politics and the most important factor is that your instructors and peers are not only friendly and helpful, but they really want you to strive for excellence.
- Yes! [It is] such a great opportunity to be in the program.
- It is an open check; plethora of opportunities to different area, jobs and further education. The program will sell you like a hot cake.
- The program gives skills and hands-on experience with high-technology equipment and techniques in molecular biology, which is what employers in this field are looking for.
- That it is one of the best opportunities I've ever gotten.
- I would tell my friend that this program is great and also the program was established in 1998 as part of the USDA-Hispanic Association of Colleges and Universities (HACU) Leadership Group's efforts to advance USDA's relationship with participating institutions. The program is designed to enhance fellows' professional growth while fostering workforce diversity and strengthening the nation's capacity to provide high quality education and increased opportunities for Hispanic Americans. [Note: The Collaboration Projects evaluated in this report are part of the Hispanic-serving Institutions Education Grants Program. The grant program is a result of a collaboration between USDA and the Hispanic Association of Colleges and Universities in a landmark event, a forum entitled "Forging New Partnerships to Attract Hispanic Talent to Careers in Agriscience and Agribusiness" that was held in Washington, DC on October 26, 1990. The event was produced by the Office of Higher Education Programs of the National Institute of Food and Agriculture (NIFA), formerly known as the Cooperative State Research Service (CSRS). In 1996, Congress authorized the Hispanic-Serving Institutions Education Grants Program and funding was appropriated for the first time in 1997 as part of USDA's NIFA. NIFA has been responsible for administering, and providing the vision and programmatic leadership to this grant program since its inception].
- The opportunity given by the USDA is like no other. Learning about agriculture, networking, and research has given me the stand out credentials for future endeavors. At the same time, I have been able to take a role in leadership while being guided by great mentors and faculty in the program.
- I would tell my friend that the program is a great opportunity to start a new career, that it help you a lot to get out there in the real world, and that it has a great influence linking students and their community.
- This is a well-rounded program that helps you to develop all around Agricultural skills.
- Absolutely! I already have. It was an excellent opportunity.
- I would tell my friend that this experience in this program has helped shape my knowledge and skills in the animal science department and that they will enjoy the experience as much as I did.
- The program teaches participants about many aspects of the USDA and American agriculture.
- The professors are good resources.
- They would enjoy and learn substantially from this program.
- I had a wonderful time and learned SO MUCH from this experience. This funding allowed me to access an aspect of my career options that I may not have been able to on my own.
- I will tell them to go for it! The agro-ecology program at FIU is the best. Thanks to the USDA we can experienced what our job could be one day. Also thanks to the internships we get extra

Exhibit 28: What Students Would Tell a Friend Interested in their Field

experience for our future careers.

- It is very helpful and opens up your eyes to new ideas and opportunities.
- Yes, this program is a great opportunity for anyone interested.
- [I would recommend] to apply and try it out, because it is an amazing opportunity. The whole program is like a family, it doesn't matter that we are from different schools, we work together.
- That it was wonderful opportunities for hands-on experience and trainings.
- Yes, that way they can learn all the same stuff I did.
- It made me gain more experience in a lot of different fields of work.
- I would tell them that it is a great experience that aids in bridging academic/class room learning to real work field skills. The program provides great mentors and training workshops.
- I highly recommend the program: Supportive staff, Emphasis on higher education, Research emphasis.
- Although it's my first year in the program, I can say what I have experienced so far will help me in the future because of the challenges I practice that are set through the program. The program is very good in applying real world problems through the course material.
- I would tell them that it is a great field to get into and the geology department at NMSU is a good program to be a part of. The interaction between student and professor is personal and I have learned so much about this topic.
- I would tell them that the program allows you to use the knowledge and techniques learned in the classroom and apply them to real-life situations. It is very rewarding and prepares you for life after graduation.
- It has been the best experience I've had at my university to date.
- I would highlight the benefits that the program has provided me in order to succeed.
- [It is] a very satisfying and rewarding experience with great people to guide you through your studies.
- Great educators, strong support structure within the department.
- I would tell them this program is absolutely great. You get research experience as well as an opportunity to get a job with USDA upon completion of the program. Also, you get to network with professors while in the program.
- It offers great hands on experience that will benefit you in preparing for a career.
- I would tell them that it is a great program and they should really consider this school because of the quality of the education offered.
- It's fun and very enlightening in regards to this specific area of study.
- It has been one of the best experiences I have gone through and all though it has been tough it is well worth it.
- I would tell them to join this program because it allows you to gain work experience and gets your work known by potential employers.
- The knowledge and skills gained in this program are imperative in the success of your future professional career.
- It is a great career that offers great opportunities that offers you the experience by internships in your study of work.
- The program is fine for undergraduate work, but you must transfer for graduate work. However, the program professors are excellent.
- There is a lot of opportunity for undergraduate experiences. Something you can't get in larger universities.
- I will strongly suggest them to take this opportunity because to me this is one of the best

Exhibit 28: What Students Would Tell a Friend Interested in their Field

programs that enable a student to be self-oriented in developing, managing and implementing a project.

- That it was/is a wonderful experience and very helpful to furthering ones experiences.
- This study of geology is challenging but also rewarding.
- I would give them tips on how to manage their time, and what to expect because it is a challenging program.
- It's great because you get to do research and get hands on experience.
- It really helps because it gives you the hands on experience you need to meet the requirements for a USDA job.
- I would tell them that the opportunities that have been presented to me through this program are great opportunities. I would also tell them that I think this program is really helping me prepare for my future.
- I really enjoyed this program, as it gave me real life experiences within a work environment. I was able to learn from excellent advisers and receive funding to continue with my schooling at the same time.
- The program was enriching and enjoyable.
- Yes, the program is practical and worthwhile.
- I really enjoyed that at my internship, my advisor there was so accommodating and gave me a chance to expand my knowledge about habitats and other environments.
- I absolutely love the program and would not change a thing. The experiences I will leave with are invaluable and I'm confident that it will lead to a good career.
- It is a good program, but only if you work very, very hard. No beers, just work.
- I would tell them that the program is challenging but well worth the time
- I would tell them that this program is one of the best in the county, and that the university I attend is their best option for this program.
- Awesome!!
- That is a great program and the professors are very qualified!
- I would tell them that the program is a great opportunity and that this brings them experiences for their future career.
- This program helps you to grow as a student and open doors to a professional future.
- This program has been nothing but a blessing since my first semester as a member. It has exposed me to the different post-undergraduate and graduate programs that the USDA as well as the federal government has to offer. It has also exposed me to a vast network of students and colleagues across the country who share many of the same interests as I do. Last and final, I would tell my friend to become a member of the program.
- This program is amazing; it provides knowledge and hands on activities that you would not learn in school. You get to meet new people and you get exposed to different careers in the scientific field.
- That science is beautiful, but it is a hard-working career.
- It's a lot of fun and there's a lot to be learned if you're willing to put in the effort.
- Do it, best thing I have ever done!
- The biotech program at Del Mar College is one of the best things to get involved in. You learn so many practical lab skills and techniques that you will carry with you no matter what area of research you go into.
- I would express to them how this program helped to expand my knowledge and how the professors at this college, and teaching this program helped me to better understand the

Exhibit 28: What Students Would Tell a Friend Interested in their Field

options I have while completing the program.

- This is an amazing opportunity that will gain knowledge and a strong background for your future career.
- It has opened many doors and has allowed me to go to many places. Definitely, it is worth being part of the program.
- It has made me feel like I can make a difference in the world.
- It helps build leadership and confidence in the science field.
- It opens many doors by providing real life experiences and networking opportunities.
- It has opened my eyes to other possible jobs and better opportunities for my major of choice. I get to do what I love doing and have a shot at interning and meeting new people and get a better idea of what I want to do and where I want to be.
- It is a good way to be introduced into research, especially if you never thought it a possibility. Additionally, the mentors do as much as they can so that you comprehend what it is you are doing. I have attended a workshop that completely opened up a different field of science to me. Attending conferences was a great way to learn about what other people in your situation are doing as well as allowing you to network.
- This program has opened opportunities for me that I probably would not have experienced otherwise. It is a good program for those interested in this field and study.
- This program has been a great way to get the details, gain experience, and network towards USDA jobs.
- Yes of course, I wasn't expecting this sort of research but I am glad I jumped into it. I learned a lot more than I thought I was.
- It was a great opportunity to have hands on learning experience and work with a professor and better understand the tasks in hand.
- It is definitely worth it. I learned a lot of new techniques in water quality testing and I feel more confident about my use of lab equipment. The program has made me a lot more knowledgeable about research and careers in research. Compared to my peers who have no experience in the lab, I feel more confident about applying to graduate schools. Therefore if any of my peers ask about research, I would highly recommend it.
- This program is actually exposing me to the diversities of my field, and helping me to determine my specific path for my future career.
- This program offers great opportunities to develop skills needed in agriculture related jobs or graduate programs.
- I think it is a great career choice, with many opportunities. I also think they should go to a small school.
- It's good, but there's room for improvement. Some classes only offered once a year and they reach capacity quickly.
- It is a great programs that exposes you to many opportunities both educational and career wise and I would encourage you to become part of it.
- The program is beneficial and it will help get a career with the U.S. Forest Service.
- It has been a great experience to me and it is a great learning environment being in this program.
- That I have learned so much from maneuvering a tractor to handling cattle and by doing hands on work projects. If it's something they really want to pursue then to never give up and go for their goal.
- Yes. It's a great program with a great facility and staff.

Exhibit 28: What Students Would Tell a Friend Interested in their Field

- It is a good program if that is what your interests are, but be sure that it is what you really want to do.
- It's a great program, which stimulates your interests and is challenging.
- It is an experience in life that would help you in the professional field. You will see the difference between theories that you do in school that actually doing the practice in the field.
- Internship opportunities with USDA are highly valuable.
- I would comment about the projects in which I am working right now and all the knowledge you can obtain after that.
- That I totally recommend it, the curricula is interdisciplinary, so every class is full of people with a variety of degrees, in which all of us learn from their experiences.
- The college is capable of preparing you for real world applications and the professors have the patience to explain and help you understand concepts.
- This program is a fantastic experience that will be making and molding your future as a professional in this career.
- It is an excellent opportunity to encourage studies in agriculture science related areas. It requires a lot of work and dedication, but at the same time it rewards the efforts with experience and knowledge in the areas of interest for future jobs opportunities.
- I would strongly recommend this program since it offers the opportunity of investigation, outreach activities and presentations that are of importance for professional career and development, as well as learn of possible job opportunities.
- Yes, everyone should get involved and this is a perfect way to do it.
- That the program is the best way to develop your skill in agriculture and a way to see if it is the career you like.
- It has been a great experience that has prepared me professionally and academically.
- This program helps you build your skills and gain experience as a student.
- The world is going through changes constantly, and it is important to maintain a good agricultural environment in society to survive. Think about it.
- It is a unique experience. The race in science is a comprehensive and exciting branch that opens the door to knowledge and a better future. I would say that they are taking a great decision.
- It's probably one of the best programs in the country for natural sciences oriented goals.
- I would tell them that this program is a great opportunity to gain experience and knowledge.
- This programs offer you the opportunity to know the importance of agriculture science in our life. Many people think that agriculture is for the poor but that's not true. Agriculture is a science and its products are our feed, the food that we need to do our jobs. Now, we have a food shortage worldwide and we need to enhance how we can produce more and good quality food in short time. The pests are more intense than before, and it is necessary to control of them. The program helps you to have the tools to research in different field of agriculture science, to find solutions to these problems. Besides, this program is interdisciplinary. Therefore, you do not need to be a student that belongs to an agriculture science program. You could be a chemical or engineer, and do research in this area with other students that belong to different science programs. You can share with persons that have different degrees, visions, goals and even some from different countries.
- I always talked about CETARS to my career peers because I considered it as a unique opportunity that makes me grow as professional, student and person.
- The agricultural science, beyond being vital for the survival of humanity, is a career with many job opportunities. There are programs as CETARS that help you and motivate you to go ahead

Exhibit 28: What Students Would Tell a Friend Interested in their Field

and finish your studies. They help you to make your goals coming true. I was enrolled in many activities related to my field of study and that made me feel productive.

- With the program that I chose, I have learned everything that I was expecting and much more.
- Actually, I did convince a friend to participate in the program for all the benefits that it has. The program helped me develop better research skills and make me wanted to pursue graduate studies.
- The agriculture faculty at Texas State has been very influential and will go out of their way in order to help you with anything you might need.
- It's a great and practical experience since is a small department and you have more possibilities to reach your professors in case you need to consult with them. You get more involved in engineering projects focused in agricultural machinery and the development of new ideas.
- Of course. In fact I've been trying to get some more students to become involved with the program CETARS in order to provide more students with opportunities once they graduate.
- I would highly suggest it and explain to him in full detail what I have gained. Show him/her different perspectives of the program. And let him/her know what I have gained.
- I would tell them how much I enjoy the courses I am taking, and how I see myself in the future.
- My experience with civil engineering program was very grateful and helped me to growth in personal and professional aspects. This field is very interesting and I like it very much. Especially at the University of Puerto Rico at Mayagüez, the professors are very prepared, the students associations are very good and opportunities that they offer help the students to learn about the profession and be successful. This career is not easy, but with effort, responsibility and dedication you can be successful. I would say that it was very encouraging and helpful. It was challenging but it would help me in my future career.
- It's a great experience for academic, networking and personal growth.
- It's a very good programs, it helps you develop research and academic skills.
- The program helps us to do independent research and provides opportunity to relate with diverse others investigations.
- I have always said positive things about this program to other interested students.
- The program can help you to see the different opportunities in the same field of study, which help you decide the field of your concentration. Also, gives you the opportunity of experiences, more knowledge and to development professionally.
- I'd tell them that this program is perfect for them. The possibilities are practically endless. From great networking to an even better job market, the opportunities are fantastic!
- Yes, I would explain to them how great the program is.
- I would tell them that if they truly are interested in this career and are willing to make the effort that there are many opportunities available to help them here at LCC.
- I would tell them that this is an excellent stepping stone that would help them greatly.
- There are many opportunities to farther your education and workforce.
- I would tell my friend of the great opportunities that she/he will be able to receive. There is also the chance of learning more about the USDA sections if she/he is unknown to them. Another great thing about this program is the internships opportunities with USDA.
- I would suggest them to greatly consider this program. The professors and advisors seem to have a great perspective with the program which makes it more enjoyable.
- I would tell him/her that it is a great opportunity with great careers.
- This program is really great, it has helped me better understand what careers are available through USDA and it has helped me to seriously maintain my GPA because the funding this

Exhibit 28: What Students Would Tell a Friend Interested in their Field

program provides is extremely helpful to me in my path to a career in Agriculture.

- USDA/FATE is very helpful in supporting students who are interested in becoming professionals especially in the government sector, more specifically with agriculture. Many of the topics learned during conferences include the basics of economics, advertising, scientific, and public related facets of a career in the USDA.
- I would let them know about this is a wonderful program and how much it has helped me with my schooling and figuring out what I want to do after graduation.
- That this is an opportunity to better know and relate to future jobs; that this program expands a lot future opportunities for students.
- That the program offered at my college is one that provides good opportunities and learning experiences.
- I'd tell them that it's a pretty good program and that it really helps you in your career choice. It's really exciting.
- I really enjoyed taking the courses and the instructors were really helpful and I felt like I mattered.
- Nutrition is a great major with great job opportunities, and the degree at Texas State is great.
- From what I have experienced so far, I would tell them it is a great opportunity and that upon completion; if they wanted to work for USDA they would have a good chance to get hired with them. I have not experienced that yet because I am not done with school but at least that's what we have been told.
- I would tell them I had a great experience with the professor and the courses offered.
- It was great, I recommend taking this program.
- It has opened so many doors for me, and made me enjoy my major even more!
- I would encourage them to consider the options in agriculture.
- This is wonderful opportunity to ensure a job after graduation.
- The program has quite a bit to offer and helps you through almost everything. It's extremely beneficial and allows you the necessary experience to continue on in a career of your choosing.
- They wouldn't feel like a number; that they would feel as if they are a part of something important.
- That it is a great program, with great potential life changing opportunities.
- That it is a good program to get into to get career experience.
- The program is an excellent opportunity for students interested in agricultural research.
- My experience in this program has been by far the best and I would recommend anyone to take part in it.
- It's really rounded off and you learn some pretty neat things.
- The TAMUK program offers an excellent agriculture program with low student to professor ratios and hands-on learning.
- It is a very good program with professors who are more than willing to go the extra mile to assist you in whatever you may need.
- I would tell them that my experience with this program was a positive experience. So far, the USDA has opened my eyes to the many career opportunities that they have in their department. Knowing that the USDA has a job for almost anybody is encouraging to know.
- I really liked the program and enjoyed it. It is challenging but professors are always willing to help.
- I would say that so far this program has done a great deal for me, and that they should look into themselves.

Exhibit 28: What Students Would Tell a Friend Interested in their Field

- It's a great program to be a part of. The classes are not too big and you get lots of hands on experience. All the professors are available, and willing to help all the time.
- It is one of the best programs if you want to be an agricultural science teacher.
- I have had a great experience and I am satisfied with the atmosphere here. The professors are always willing to take an extra step to make sure their students are successful and everyone is very friendly.
- It is challenging and will really push your determination.
- Faculty and staff are very helpful and willing to bend over backwards for each and every student.
- It's a great opportunity to leave the state to experience a different landscape and culture.
- This program has great professors that are very willing to help you with anything you have questions with.
- It is a very interesting program that can prepare you with the skill you would need for a future job in agriculture.

Recruitment of Under Represented Students

Students report their college or university is taking steps to recruit more students in agricultural-related fields. With an overall agreement of 77.9 percent, students thought that their college or university was taking proactive steps to recruit more students in the agriculture field and in particular under represented students, including Hispanics. In this sub-section of the survey, the highest agreement was with the statement, "The college/university I attend is taking pro-active steps to include diversity/multicultural perspectives in classes, presentations, assignments and discussions." Its level of agreement was 80.5 percent (see Exhibit 29).

Exhibit 29: The college/university I attend is taking pro-active steps to...

Statements		Agree		Neutral/NA		Disagree	
		Number	Percent	Number	Percent	Number	Percent
A.	Recruit more students for agriculture related programs of study.	210	78.4	46	17.2	12	4.5
B.	Recruit more under-represented students for agriculture related programs.	196	73.7	58	21.8	12	4.5
C.	Enroll Hispanic students in agriculture related programs of study.	210	78.9	48	18.0	8	3.0
D.	Include diversity/multicultural perspectives in classes, presentations, assignments and discussions.	215	80.5	40	15.0	12	4.5
Total		831	77.9	44	192	18.0	4.1

Students were asked to provide ideas to strengthen their college or university outreach or recruitment of under-represented students. Exhibit 30 lists their recommendations. Students provided a variety of strategies, including more proactively interacting with high schools to enthuse students about the fields and the possibilities the program offer to minorities, creating activities (seminars, agriculture weeks, and symposiums) to attract attention to the program, and advertise the program more through publicity, fliers and other means.

Exhibit 30: This is how outreach/recruitment to under-represented students could be strengthened

- Having more jobs fairs on campus from employers. Also more student email notifications of internships.
- Have seminars on how to simply apply for internship programs such as pathways, scholarship programs such as HACU.
- Making it more available and having better advertising for it.
- Make more awareness. Ask all professors to try to announce it before lectures begin.
- Advertise!
- Presentations at local high schools.
- Let students talk to prospective students.
- Go to their high schools and introduce this so when they go to college they will know to participate in this program.
- Community outreach.
- Post it on the college website and outreach to professor meetings.
- Funding of under-represented students and encouragement to join engineering and agricultural fields.
- Offer more incentives to such students.
- Reach out to the local community! More guest speakers; reach out to neighboring communities.
- Free workshops.
- Reach out to local multicultural and ethnic clubs/organizations inside and outside of the university.
- Increase the amount of multicultural assignments and projects.
- Start outreach at high schools with under-represented students.
- Make it better known. There is no real awareness of program on campus.
- Talk to other degrees, and relate the two programs.
- More recruitment regionally. Many programs do not have up to date brochures or websites.
- Go to high schools and speak about my personal experiences.
- More presentations to undergrads.
- Increase amount of scholarship or reduce the amount of weekly hours required to satisfy scholarship stipulations.
- Have more USDA speakers attend our school and actively recruit.
- Presenting the broad aspect of agricultural majors.
- Summer outreach programs.
- Give orientation by dynamic options.
- Presenting the variety of branches in agriculture.
- National Chemistry Weeks, USDA CETARS Symposium.
- Give better orientation to undergraduate students.

Exhibit 30: This is how outreach/recruitment to under-represented students could be strengthened

- To encourage students to take advantage of the scholarships and the programs that are available.
- More fliers to promote.
- Go to high school and start there.
- Keep doing future programs like this.
- Help more students to pursuit their dreams by providing more scholarships and opportunities.
- They could ask us if some of our friends were interested in a career with the USDA. I know some of my friends do.
- Take trips to high schools to tell about program.
- Offering more programs and one on one interaction.
- Advertise and promote more.
- It is something that is not pushed at Palo Alto enough.
- By offering more degree plans we can know which path to follow.
- Form groups who strongly agree and reach out for others to join.
- Rising awareness about the program.
- Have a fun event and invite kids.
- Recruit at the high school level. I feel that Texas State's agriculture program needs more publicity.
- They could hold more seminars or meetings to let the public know what they are doing to help the Hispanic population enroll in their college by showing them the benefits of obtaining a higher learning degree.
- Send out students to high schools to recruit graduating high school students.
- Post fliers around campus.
- Having a recruitment day where the professors and deans talk to prospective students.

Supports and Opportunities for Experiential Learning

The survey listed several support areas that could reasonably contribute to student enrollment and success. Students were asked to indicate their degree of agreement with these assumptions. Exhibit 31 shows their responses.

Exhibit 31: Support Areas contributing to Student Enrollment and Success							
Statements		Agree		Neutral/NA		Disagree	
		Number	Percent	Number	Percent	Number	Percent
A.	Career counseling	183	68.8	61	22.9	22	8.3
B.	Social and emotional counseling	122	46.0	109	41.1	34	12.8
C.	Academic support with course requirements	216	81.2	44	16.5	6	2.3
D.	Out-of-state internships	129	48.7	115	43.4	21	7.9
E.	In-state internships	192	72.2	62	23.3	12	4.5
F.	Partnering with faculty in research activities	211	80.2	43	16.3	9	3.4
G.	Opportunities to conduct independent research, analyze and interpret my data and present my work	208	79.1	42	16.0	13	4.9
H.	Faculty mentoring	224	84.2	32	12.0	10	3.8
I.	Tutoring services	180	67.7	68	25.6	18	6.8
J.	Professional meeting and conferences	223	84.2	35	13.2	7	2.6
K.	USDA agency visits	185	69.5	67	25.2	14	5.3
L.	Visits to non-USDA agencies	149	56.7	95	36.1	19	7.2
M.	Opportunities to get involved in helping my community	204	77.3	50	18.9	10	3.8
N.	Publishing opportunities	156	59.1	92	34.8	16	6.1
Total		2,582	69.6	211	915	24.7	5.7

Overall, students (69.6 percent) were supportive of the assertions, but had significant divergence. Areas with high convergence (more than 80 percent agreement) includes: Academic support with course requirements, Partnering with faculty in research activities, faculty mentoring, and professional meeting and conferences. Areas with the least convergence (less than 65 percent agreement) includes: Social and emotional counseling, out-of-state internships, visits to non-USDA agencies, and publishing opportunities. These are the areas the institutions should consider to improve on their offers for opportunities for experiential learning.

Additionally, students were asked for any further supports that would be helpful to them. Exhibit 32 lists their recommendations. For the most part students seemed satisfied with what was been offered. Some suggestions provided include visit other institutions to be able to compare, work more on the field, and offer students more opportunities to research, perhaps guided by tutors working in agriculture in the field.

Exhibit 32: Additional Support Students Identified as Helpful

- More partnerships with the local community.
- So far am good but it would be nice if somebody from USDA human resource came to the school and talk about the job opportunities.
- In need of more opportunities available for us.
- Research seminars.
- Better journal access.
- Service learning projects.
- Former professor who are great Hispanic motivators.
- Substantial financial support.
- More recruits based out of NMSU.
- Better tutoring.
- More support from faculty and available internships.
- Offer more courses in my program.
- Leadership organizations like FFA and 4H.
- Resume builder.
- Exploring facilities around the country, and at some point seeing agriculture facilities around the world.
- Having more companies or private industries/employers visiting the university.
- Developing more alternative fuel technologies.
- More networking.
- Visit other agricultural colleges to receive insight on how my institution can be strengthened and become a top Hispanic agricultural college.
- Individual orientations.
- It's already great.
- I would like to go out to the fields. I would find it more interesting to be working outside with a farmer, than to hear about agriculture from some guy who seats behind a desk in some office.
- Personal USDA mentor.
- More academic support with course requirements I feel is needed for me.
- Peers.
- I would like to pair up with mentor, perhaps research experience.
- More communication with agencies on a personal level.
- More scholarships.
- Research projects and additional extra-curricular judging teams.

To measure whether students feel part of their campus and are comfortable there, they were asked a set of pertinent questions as part of the survey. Exhibit 33 shows their responses. It was clear from their responses that students (92.1 percent) do feel contented in their campuses. They felt comfortable getting what they need to succeed academically (93.7 percent), understanding what they need to do to meet graduation requirements (93.7 percent), and getting their questions answered when they have doubts (91.8 percent). This is a solid indicator that students do feel part of the campus and their needs are generally being met. The comments they made supported this appreciation. For example, one student pointed out, “I love the faculty of my department, the strong relationship with professors of my department and other departments too.”

Exhibit 33: Student Characterization of Their Experience on Campus							
Statements		Agree		Neutral/NA		Disagree	
		Number	Percent	Number	Percent	Number	Percent
A.	I feel comfortable getting what I need to succeed academically in this college/university.	251	93.7	14	5.2	3	1.1
B.	It is clear what I need to do to meet graduation requirements at this college/university.	251	93.7	12	4.5	5	1.9
C.	If I have a question about my degree plan, I know whom to ask.	246	91.8	16	6.0	6	2.2
D.	It is easy to find my way around campus.	260	97.0	6	2.2	2	0.7
E.	I have participated in classes or other opportunities designed to help me feel part of the college/university culture.	233	86.9	21	7.8	14	5.2
F.	I feel like I belong in this college/university.	238	89.5	22	8.3	6	2.3
Total		1,479	92.1	36	91	5.7	2.2

When asked directly about challenges they faced from a list of choices, the students provided a variety of responses, as detailed in Exhibit 34. Notice that the second largest response, with 19.5 percent, was “None of the above, I have not experienced any challenges.” Outside of this, the four most frequently selected challenges were: Financial issues/problems (20.5 percent), classes (14.6 percent), accessing information about internships (10.8 percent), and accessing information about jobs (9.3 percent).

Exhibit 34: Challenges Students Experienced in Program		
Variables	Number	Percent
Financial issues/problems	101	20.5
Classes	72	14.6
Accessing information about internships	53	10.8
Accessing information about jobs	46	9.3
Housing	35	7.1
Problems with Internship	31	6.3
Getting coaching and mentoring	25	5.1
Getting counseling	13	2.6
Other	11	2.2
Knowing how to navigate the university	10	2.0
None of the above, I have not experienced any challenges	96	19.5

Students were given the opportunity to express the challenges they have faced in an open-ended format. Exhibit 35 shows the full list compiled from their answers. Reading the list we can conclude that as in any situation, students have some personal issues and misunderstanding, but none of them represented a systemic situation.

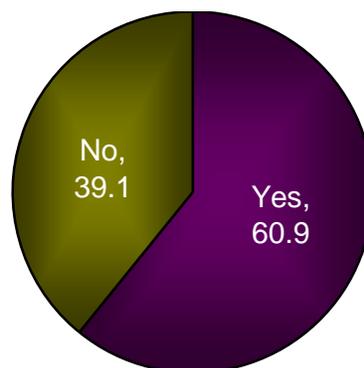
- Exhibit 35: Additional Challenges Students Experienced in Program**
- I'm having trouble transitioning into college life. I feel a little overwhelmed with work.
 - They are doing their best.
 - Getting clear guidance from my advisor.
 - I would love to get paid for my future internships (at list to cover gas expenses) if possible of course. For senior students, it would be nice to be trained in what is really needed out there (so we can be really prepared for real life).
 - Availability of certain classes depending on the semester.
 - Lack of fellow American colleagues.
 - Professors within the USDA grant are terrible and do not help or offer assistance to their students.
 - Because my roommate crashed, even though I was two miles away from him, my supervisor sent him and I home on July 26 when I usually (this was my third summer working) work until August. He said that he needed money to pay for the damages done to the ATV by the crash, however three other co-workers stayed working until the end of the season.
 - I have found all my internships on my own with no guidance from faculty.

Exhibit 35: Additional Challenges Students Experienced in Program

- Funding for thesis.
- Parking.
- I have had to take classes that do not count towards my degree just to satisfy the internship requirements, which I think is a little bit unsure because as a grad student I have to focus on my research. Time is very limited as it is to make it more challenging by adding fillers.
- Confusion about degree/certificate requirements.
- I commute, and have pets. I cannot move closer because the dorms do not allow the animals and there are not many places to be housed which allow them.
- Information about the program itself. It seems that sometimes I have been confused about this, probably because I was considered for the program later than the rest of my cohort, therefore missing the initial process of becoming part of the program.
- Problems getting an internship or co-op.
- Internet low connection.
- Crime. Lots of criminals around; I have been robbed.
- Commuting to Texas State from San Antonio and back on a daily basis is the only thing that has caused problems for me so far. That is something that is self-inflicted.
- My classes we're at the same time as my work schedule, but I quitted my job, so I could focus on school.
- Before I enrolled for this semester, fall 2012, I spoke to three different people here who were all very helpful, but they all advised me on different classes or courses that I needed at this time and I was very upset and felt very confused and did not feel confident or sure upon registering for the classes that I registered for and hoped that I chose the right courses.
- Overall involvement with the program, and more unity needed.
- I was not granted in-state tuition after being here for over three years while holding a job since Day 1.
- Time management.

Students were also asked if any of their challenges listed above had been resolved. As the pie chart below shows, more than 60 percent (60.9 percent) of them were resolved by the time students were asked the question (see Exhibit 36).

Exhibit 36: If you noted any challenges, above, have they been resolved?



Finally, students were asked how they solved the challenges. Exhibit 37 shows the list compiled from their answers. Students got some type of financial help (often scholarships) to solve their challenges or some other support that involved mentoring or some specialized guidance.

Exhibit 37: How Students Resolved the Challenges

- A staff member from the agro-ecology program helped me with time management.
- They are doing their best to improve and let us tap on those resources.
- It is an ongoing learning process.
- [A staff member] was able to help me by allowing me to be part of the CREST program which provides financial support in exchange for research participation and academic excellence.
- [I was granted a] scholarship.
- Obtaining scholarships.
- I got a job with USDA Wildlife Services.
- I try to reach out more and ask faculty about opportunities.
- Internship helped.
- With scholarships.
- I started doing better in my classes.
- I found a mentor and I am now his R.A.
- [I'm] doing my best to avoid getting out of focus while studying. The financial problem is a day to day thing, but I am surviving well. Finally, about the housing, I have adapted very fast to the new environment when I was freshmen.
- Housing.
- With mentoring.
- Through the USDA grant.
- The program helps us financially to [complete the studies] successful.
- I am currently waiting for my university to process the student loans so I can finish my semester.
- I have applied for scholarships that have helped ease my financial issues but as I hope to continue my education, I know more financial issues will arise.
- It will not be resolved until I graduate or move down here.
- My own effort.
- Getting informed and investigate about current options.
- Got scholarships.
- The person that was helping me switched positions and did not have anyone else to help me with what I needed. The new person is brand new and has no experience.
- The seminar in July helped me understand available jobs better.
- I have had some trouble on how to navigate the USDA site on obtaining an internship from them.
- To some extent.

How the Project Be Improved?

To get a sense of what else can the project do to help students, they were asked: How could the USDA/NIFA project at your college/university be improved? Many students entered "N/A" or "None" or "It's perfect," or other expressions indicating their complete satisfaction with the project as is. Exhibit 38 shows the responses of those who actually provided ideas for improvements. As can be verified by looking at the list, students provided a long list of possible improvements. However, three themes

seem to emerge: (1) More support to students, mostly through field-related activities involving some guidance (perhaps through mentoring) that provide both financial help and hands-on experience; (2) More communication between faculty, university staff and students, so the three groups would be on the same page and understand each other issues better; and (3) More awareness campus-wise or even community-wise of the project so a more collaborative work could be undertaken with local resources and organizations.

Exhibit 38: How Can the Project Be Improved?

- Requiring students to conduct field work would be beneficial to students.
- Meeting with actual USDA employees.
- More campaigns related to the company.
- Support towards tuition fees.
- Recruit more.
- By having more certified classes from the USDA and not just very limited and not related to my topic of interest.
- Having more internship opportunities with the local USDA research station and or watershed institute on campus for students. I feel that students interested in research could benefit from opportunities with these organizations.
- Provide internships that are more related to an individual's area of study.
- Opportunities to work with animals in agriculture such as equine, cattle, and livestock.
- More internship.
- Bi-weekly seminars. Providing some t-shirts with USDA logos to try sell the program to by passers.
- The project could be improved by offering more internship opportunities.
- More funding.
- Help us connect with internship opportunities.
- Offer a broader selection of career opportunities.
- It could improve by having more USDA jobs available and for it to be more organized because I really wanted to work with the USDA so that I could have a different experience; however, no one could find me a job. I also wish that they would provide internships in the surrounding areas.
- More communication about potential job opportunities/careers after graduation.
- Would love to have our own program at CSUMB! The partnership worked with CSUSB, but required some extra paperwork. Also, no face time with the program coordinators, which may have helped with job placement.
- I feel like we just do our hours at the USDA and that's it. There should be like a following step, where students and USDA, can keep in touch for future job openings.
- Set student mentors that have already gone through the process to give us an insight.
- Find better professors who will help their students.
- More awareness of opportunities available for students.
- Advertise their programs more openly.
- Outreach and community involvement.
- More funding directly to student participants.
- I think more funding would be helpful so more students can join but other than that everything is good.
- It could increase the number of participants not only from the college of engineering but also from the college of agriculture.

Exhibit 38: How Can the Project Be Improved?

- Could USDA economists come for a visit, or could we visit the economists? Perhaps collaborate on a project together?
- Offer more internship!!!!!!
- Have more involvement with someone from the USDA to talk about the careers we are considering
- More community partners.
- More internship in different areas of agricultural, especially with industrial technology.
- By having a program at CSU Bakersfield, it could tailor more to our local agricultural needs and problems.
- More advertisement on the project.
- More USDA career fairs on campus!
- I think it could improve by acknowledging that graduate students have a different workload than undergraduates, and sometimes that workload cannot be measured by the amount of units that the student is taking.
- To give more visibility and time on notifications.
- Getting students involved with each other.
- By letting know more about it to the students.
- To have more outside activities.
- In my opinion the project is still too young to pin point which specific area needs improvement. So far everything is running real well.
- More administrative organization.
- By offering opportunities to more students.
- Give a training seminar on what to expect, what to bring, how to behave, and make a goal of what you want to bring out of the experience. I already did this, but I think that it would be good for the new guys.
- Have representatives working directly with students, not just talk to them. Take other students on tours of the facilities or involve them in a small project.
- Having more mentoring from an advisor on exactly how the program will benefit them and helping them with the transition to internships.
- More emphasize on innovation.
- Getting more students involved or making the USDA known not to be only an agricultural journey but that they have the need for engineers and nutritionists and business majors as well.
- Engineering more workshops, where the students get to interact with one another and get hands on experience in different fields.
- Helping the students realize the bigger picture. I really had no idea what my research was about until I did lab work at the Moors Air Force Base.
- The project has been very helpful thus far; therefore I think they are doing a great job as it is.
- More recruitment.
- I think by doing independent work at the facility like going out to trap on our own, just to get the feel of what it's like.
- More involvement with the USDA.
- I feel like it needs more campus wide attention.
- Become more well-known.
- More places to study. Having an office so that people would have more information.

Exhibit 38: How Can the Project Be Improved?

- More agriculture related courses.
- I think that giving the opportunity of more internship will help not just the experience required by many agencies, but also the financial support that many people need in order to pursue and/or finish their degrees.
- Assisting us students in having a mentor that already works for USDA to guide us and be available when we have any questions would be great.
- More workshops.
- More out-of-state research internships opportunities for summer and semester terms. Job related experiences out-of- or in-state.
- Nutrition is an area that needs a lot help. It is one of the most important topics that need improvement. At the same time, agriculture is part of nutrition because we eat what we produce in our lands.
- Provide more opportunities for internships.
- By bringing conferences and activities to get other students involved.
- More communication from agencies of USDA with the students.
- Expand the number of the mentoring students.
- More flexible hours.
- Offer more internship for undergraduate students.
- Promoting it more.
- The project is excellent but always is necessary that all of us work to improve it every day.
- By developing different outreach activities.
- Enrolling classes related to environment.
- Professional seminars/symposiums/workshops.
- Better interaction between students and faculty.
- More guidance on choosing careers in agriculture and related sciences.
- By explaining with better detail how to acquire an internship.
- By giving the opportunity to student of different associations.
- Opportunity of in-state internship.
- State clear objectives for each year so we can get organized and focus our efforts on planning more great activities that meet different topics each year and make our activities each year different and attractive for those who are deciding to get enrolled in an agriculture related program.
- Spreading the word out more so more students can access this information.
- The program can be improved by having more direct contact with students.
- I would say to do more hands on activities.
- More visits and announcements.
- More hands on courses.
- Little was known about the program here at LCC because not many of the students were aware of the scholarship. Maybe if the program was advertised more, students would be able to take advantage of the scholarship.
- I would promote it more and try to have it become more involved and a bigger part of the school. If I was not a part of this project, I would not know that it existed at our school.
- I think more meetings should be held so as to keep us students whom are being funded in better contact with each other.
- More active faculty members who are not directly agriculture related to help support

Exhibit 38: How Can the Project Be Improved?

students with various degree plans.

- Get the program started sooner so we are not so stressed trying to find internships.
- More advertisement.
- Expand more programs like the one we are currently enrolled. It would be very useful to get into more internship; that way we can be more informed about the areas we are interested in.
- Have more meetings with the USDA group.
- At a two year college, we heard about USDA project only through scholarship center. We had no other knowledge of project.
- Get more students involved.
- More one on one mentoring.
- I would suggest a better mentoring program, where students can have more interaction with people according to each major.
- I wish that they would give us a list of agencies that are related with the USDA/NIFA in our local city and let us volunteer and get some actual hands on experience while were still in school, but in our related fields.
- It would help other students involved in agriculture expand their knowledge about the different opportunities and different career paths available with the USDA/NIFA.
- Maybe have more information regarding internships, also maybe more communication during semesters.
- Promote the USDA more so people know more about it.
- More Texas State reps visiting the college.
- All representatives should be aware of deadlines and procedure, which isn't typically the case.
- More could be done to promote the effort. Not many are even aware of the USDA. If more is done to reach out to students of others ethnicities, not only Hispanics, more people may be interested.
- More opportunities to meet with other applicants and socialize as well as more in depth classes and programs for the USDA.
- More interaction and hands on experience. I have only been told about the careers, but not been able to see it with my own eyes and experience it.
- More interaction within the group and the leaders of the group. It sometimes feels like this group is not as active as it could possibly be. I would like more meetings to check our progress or discuss struggles we could be facing.
- Get more students involved.
- More involvement of student with real world.
- More communication with employers and agencies on a personal level.
- By providing information to all students in a science or agricultural degree program not only students involved in research.
- Allow former participants to recruit to candidates.
- Guaranteeing USDA internships for all students.
- Help with the internship process and keep scholarship recipients updated on internships.
- Inform more students about the wonderful opportunities that they offer.
- More information should be given to the students about the internship process, so we are not confused.
- Helping students one-on-one to find the best possible place for an internship for them.

In addition, students were asked about the jobs in which they were most interested. More than three-fourth (76.1 percent) of the students responded to this question. Following is the list they provided (Exhibit 39).

Exhibit 39: Jobs of Interest to Students

- Research-based jobs.
- Any job relating to the operation of the National Forest.
- Hands-on jobs where I can apply my expertise, but that allow for personal growth.
- Research in a laboratory.
- Jobs about food prevention.
- Jobs related to safety and quality control of energy related systems.
- Structural and environmental.
- Engineering related.
- Laboratory and field work related to fate and transport of pollutants.
- The jobs that interest me are the ones that have to do with researching new innovative ways to maintain clean water and use the unwanted materials in the water for other purposes. Also, anything that has to do with sustainability.
- Environmental engineering, life cycle assessment.
- Field research.
- NRCS, soil conservationist.
- I am interested in jobs concerning water quality, watershed management, and hydrology.
- I am undecided but I like science technician jobs in agriculture science or microbiology. I also have an interest in watershed research.
- Government agency jobs revolving around diseases (epidemiology).
- Fisheries biology.
- Jobs that deal with soil and helping the lesser fortunate through agriculture, i.e. agronomy, food conservation.
- All fields related to agricultural law and the criminal justice system. Food Inspection, agro-terrorism, etc.
- Industrial technology and information technology.
- Field jobs. Like working in research laboratories.
- Related to the field of molecular biology.
- One that involves scientific research.
- Agricultural jobs.
- Hands-on jobs.
- Forest; ecology; restoration.
- Ag teaching, collegiate level teaching.
- Anything that would involve working in a lab or veterinarian office.
- Forester, agronomist, soil scientist.
- Anything related to wildlife conservation and field biology.
- As of now I am considering USDA related jobs.
- Sustainable agriculture industry, design of new technology.
- GIS positions and water-related projects.
- Non-point source pollution mitigation.
- BMP design/implementation.

Exhibit 39: Jobs of Interest to Students

- Environmental consulting.
- Hydrology/geomorphology.
- Technical jobs.
- Agriculture, horticulture, landscape design, policy and plant conservation.
- Work with the Forest Service, or field work in which I can work directly with the environment.
- Animal science/veterinary.
- Natural resources, pest control through IPM, conservation, agricultural research, forestry.
- Applied jobs, where I use my knowledge and skill to help solve real world problems.
- Jobs, where I get to have fun and go home at the end of the day instead of working until 9:00 pm or later.
- Engineering.
- Job regarding homeland security.
- Sustainability, renewable energy and nutrition.
- Jobs that require planting or thinning, but a job in a lab along with three days of field work on the same week wouldn't be bad.
- Technology and systems engineering-based jobs.
- Anything geology related.
- Service projects.
- Logistics, resource allocation.
- Field engineer, supervising engineer, design engineer, and civil engineering.
- Statistical research.
- Manufacturing jobs.
- Working as an engineer in a manufacturing facility,
- GIS analyst positions.
- Any kind of job where I can increase the efficiency of a process, evaluate their data, and participate in research.
- International development.
- Quality control and anything involving LEAN methodology.
- Transportation and Logistics.
- Operation Research.
- USDA Game and Fish as game warden.
- Outdoor mainly, National Forest, using geographic information systems.
- Any job that deals directly with the outdoors.
- Hydrology, engineering, modeling, research and teaching.
- Water resource development or water resource management.
- Water development for nations that need water systems.
- Industrial technology, technology management, and agricultural technology.
- Geologist-type work.
- Forestry, hydrology, and agricultural.
- I would love to work with the USDA doing ecological research/projects. I would also enjoy working with other agencies like FWS, DFG or the forest service.
- Jobs dealing with natural resources.
- Wildlife jobs.
- Forest service.

Exhibit 39: Jobs of Interest to Students

- Outdoors.
- Management of contaminated runoff from agricultural lands, aquifer recharge projects, and other projects related to agricultural use and reuse of water.
- Conservation, education, water quality.
- Professional research, professor.
- Research scientist.
- Plant research, nutrition, biotechnologist, medicine, etc.
- Laboratory and field work.
- Geneticist.
- Laboratory job.
- Microbiology.
- Jobs in the field of molecular biology, agricultural, biological, and pharmaceutical research.
- Research, teaching, or chemistry related.
- Forestry – agriculture.
- Jobs in microbiology or molecular biology.
- Chemistry and agriculture related projects.
- Research and development.
- I love to do research. But I want to be able to feel like my research is benefiting society as a whole. I do not want to do anything unethical or that can only benefit a certain demographic based on money.
- Jobs in molecular labs, I enjoy the lab work and find plant diseases interesting. As well as finding new ways to combat the diseases or damage causing insects.
- Outdoor jobs.
- Resource management.
- Science research related.
- Research relating to cancer and genetics.
- I want to be an entomologist so working outside to collect samples and then working in the lab would be great. Also maybe the ecology and environmental aspect of all of it, like the effects of the psyllids on our crops.
- Environmental positions in general.
- Teaching.
- Forestry, agricultural research, hydrology.
- Environmental health.
- I am leaning towards the fields of genetics and molecular biology.
- Plant science technician.
- Forest management position, as well as soil conservation, natural resources planning.
- Jobs with the U.S. Forest Service in recreation and GIS.
- Ranch management.
- USDA.
- Equine Division, working with horses.
- Ranch work and Farming.
- Something that can combine my civil engineering knowledge with public speaking of some sort. Either training large groups of people or giving speeches or possibly presenting technical knowledge to groups of people.
- Government research.

Exhibit 39: Jobs of Interest to Students

- Structural jobs.
- Hydraulic jobs.
- Agriculture and ecology. Field/research based.
- Biomass Feedstock logistics engineer.
- I am interested in any job that is related to my field of study as an industrial engineer or something about sustainability.
- The jobs that interest me more are the ones where I can build up experience in the fields of energy, sustainable energy, and agriculture.
- A mix of field work and grant related job.
- Academic teaching.
- I would like to be able to help people and solve crucial problems in this country since population is growing and necessary materials are finishing.
- Industry (food-agriculture related), research and development, academia.
- I am very interested in the food sciences field and I would like a lot to work as a food safety inspector or in research.
- Environmental science areas.
- Agricultural jobs.
- I'm interested in food processing, safety issues.
- Professor, USDA-APHIS among others.
- Efficient jobs that would make difference.
- Engineering.
- Chemical engineering or environmental engineering.
- I'm doing an internship and bachelors practice (both at same time) in the environment, health and safety department of General Electric in Vega Alta Plant; for that experience I'm very interested in industries field.
- Mechanical technician.
- Research works.
- Biomedical engineering, cardiovascular sciences.
- Professor, monitoring climate changes.
- Environmental.
- Academic/industry.
- Jobs on the field away from offices.
- The kind of work that interests me most is the one that is directly related to crops or those performed in laboratories.
- I have a high interest in natural resources conservation related jobs.
- Soil conservation and animal science careers.
- Research work.
- Related with chemistry and preservation of the environment.
- The jobs that are more attractive to me, by now, is to be a conservationist (NRCS) and later on be the owner of an aquaponics farm, and to be an educator for others (offer workshops on food production in a sustainable way).
- Chemical technician; agricultural chemistry tech.; food inspector; intellectual property; biosafety coordinator.
- Agricultural.
- Research, Independent projects, forestry.

Exhibit 39: Jobs of Interest to Students

- Veterinarian.
- Research.
- University professor and/or scientific researcher.
- Agriculture or medical science related field of work.
- Environmental jobs.
- In the PPQ area.
- Animal related jobs, working outdoors with animals interest me the most.
- I am currently looking into an agriculture based job where I could work outside and grow produce or try new methods of farming but I am also very interested in teaching and sports medicine.
- Working with USDA.
- Jobs relating to animal science and biology.
- I am most interested in jobs that have to deal with urban agriculture, organic agriculture, sustainable studies, community supported agriculture and U-Pick Operations.
- Wildlife biology, disease control, environmental sciences.
- Information technology.
- Botanic garden management, forestry, conservation, greenhouse management, plant research.
- Administration, public relations, international work.
- Internships and research in the laboratories.
- Works related with public health.
- Teaching.
- Research and integrated pest management.
- Jobs that include working with the animals or animal medicines, nutrition, the environment.
- Research related jobs, community service related jobs, and jobs involved in interpersonal situations.
- Medical field jobs.
- Any job with APHIS.
- I really don't see myself working for the USDA. I would much rather focus on being an FFA teacher. I would like to teach younger generations about the importance of agriculture in everyday life.
- Field research, nursery/greenhouse.
- Anthropology archaeology/forensics...
- Outdoor, forest, out of state.
- School lunch programs.
- Jobs that are related to my major in nutrition. I would like to work with schools.
- I am most inclined in learning about animals. I would like to work with game animals in the future as well as other farm/ranch animals.
- Mainly jobs having to do with the interest in animals, anything that has to do with their conservation and their wellness.
- Nutrition.
- Environmental, safety, research.
- Rural development.
- Biological research, animal research, natural resources and biochemistry.
- Anything associated with teaching, biology, or animals.

Exhibit 39: Jobs of Interest to Students

- Jobs that involve getting your hands dirty (farming, gardening, etc.).
- Registered dietician.
- Food inspector.
- Research food science.
- Public policy.
- Animal science jobs.
- Small and large animal veterinarian.
- Dog trainer.
- Dog groomer.
- Zoo keeper.
- Jobs related with chemistry.
- Animal working jobs, jobs conserving nature.
- USDA jobs pertaining to either range or animal science.
- Jobs that deal directly with wildlife, wildlife conservation and the conservation of their habitat.
- Anything related to biochemistry.
- Those in the meat industry.
- Veterinarian.
- Becoming a vet, maybe a researcher in animal science.
- Agriculture food inspector.
- Working in labs with doctors.
- Veterinarian jobs at zoos.
- Environmental, soils, and plant related jobs.
- Well anything that has to do with buying and selling any agricultural product.
- Agronomy research or agronomy consultant.
- Environmental sustainability projects oilfield activities and biofuel/soil research.

USDA related Internships, Jobs and Communications

The survey listed several assertions regarding USDA-related internships and jobs. Students were asked to indicate whether they applied to them or not. Exhibit 40 shows their responses, in order of most positive agreement.

Exhibit 40: Regarding USDA-related Internships and Jobs...

Statements	Yes		No		N/A	
	Number	Percent	Number	Percent	Number	Percent
A. I am aware of internships and experiential learning opportunities within a USDA agency.	222	82.8	38	14.2	8	3.0
B. The college/university I attend offers the courses I need for the job I seek.	214	80.1	24	9.0	29	10.9

Exhibit 40: Regarding USDA-related Internships and Jobs...

Statements		Yes		No		N/A	
		Number	Percent	Number	Percent	Number	Percent
C.	I am familiar with the requirements of the various USDA-related jobs.	206	76.9	52	19.4	10	3.7
D.	I know what courses are necessary for USDA-related jobs that interest me.	193	72.0	67	25.0	8	3.0
E.	I receive information about USDA job and internship opportunities on a regular basis.	182	67.9	76	28.4	10	3.7
F.	I applied for an internship or experiential learning opportunity within an USDA agency.	170	63.4	77	28.7	21	7.8
G.	I have selected a USDA-related job of interest.	162	61.1	82	30.9	21	7.9
H.	I was successful in acquiring an internship or experiential learning opportunity within a USDA agency.	125	46.8	96	36.0	46	17.2
I.	I applied for an internship or experiential learning opportunity in a non-USDA agency.	100	37.5	137	51.3	30	11.2
J.	I was successful in acquiring an internship or experiential learning opportunity in a non-USDA agency.	81	30.5	117	44.0	68	25.6
Total		1,655	61.9	766	28.7	251	9.4

Overall, students (61.9 percent) were supportive of the assertions, but had significant divergence. With more than 80 percent (82.8 percent) in the affirmative, students were aware of internships and experiential learning opportunities within their USDA agency. However, 63.4 percent applied for them and 46.8 percent were successful in acquiring an internship or experiential learning opportunity within their USDA agency. On the other hand, 37.5 percent had applied for an internship or

experiential learning opportunity in a non-USDA agency and about 30 percent (30.5 percent) were successful in acquiring an internship or experiential learning opportunity in a non-USDA agency.

Students were given an opportunity to indicate what aspects of USDA-related jobs they would like to learn more about. Exhibit 41 lists their responses in their entirety.

Exhibit 41: Aspects of USDA-Related Students Would Like to Learn More

- I would like to know more details about job listings, and duties.
- How to apply and meet requirements? The actual application process.
- Internships, career options, requirements for those careers, location of current internships of jobs that are within reasonable distance from me.
- Agronomy.
- Courses that can give incites towards those jobs.
- Ins and outs of pathways program.
- Hydrologist, soil conservationist, research ecologist.
- Homeland security, national parks, ARS, tropical fruit program, etc.
- Requirements.
- Anything with animal science.
- Forest Service range and wildlife, and agricultural research.
- Out of the country research. Especially in Central America.
- Sustainability.
- Payment, opportunities for funding to pursue PhD.
- Something that involves my career.
- I would like to learn about their food processing because I feel that as an industrial engineer that working in a place like that would be a better fit for me.
- Haven't heard of USDA jobs or requirements. I'm looking overseas.
- Forest Service and water conservation.
- Hiring process.
- Hydrology.
- Ecology, conservation.
- Research, graduate schools.
- What area of study is most important to USDA?
- How to transition from one job to another or across government agencies.
- How much do they pay/benefits?
- Genetic research.
- Health.
- I would love to do an out of state USDA summer internship.
- Agencies located internationally.
- Other departments of the USDA.
- Soil conservation.
- Hydraulic jobs related to pipeline designs that would benefit the agriculture of the country.
- Degree requirements or experience requirements for certain GS levels.
- Career opportunities.
- Water quality/quantity and groundwater.
- Requirements, open positions, future needs.
- Food regulations.

Exhibit 41: Aspects of USDA-Related Students Would Like to Learn More

- Research in agriculture.
- Engineering.
- Internships.
- Engineering, biology and chemistry.
- Animal science and agricultural.
- I need to know about USDA related jobs from a mobility impaired aspect.
- Animal veterinarian.
- Chemist part.
- Location of those and more information about the sub-agencies.
- Type of interns they will like to hire.
- Forest service, APHIS.
- The whole in general.
- USDA forest jobs in Puerto Rico.
- Anything that applies to my major nutrition/dietetics.
- I am open to any USDA-related job available. The more I can learn the better.
- Any jobs related to wildlife.
- Nutrition dietetics.
- Rural development.
- Rural development.
- More direct animal related or biology intense.
- Nutrition and food safety/inspection or public policy.
- Facilities.
- Animal and range science.
- The grading and verification division.
- Lab techs internships.
- Veterinary services.
- Environmental quality.

Students were asked about the kind of benefits they received from the conference they attended. Several choices were provided. Exhibit 42 lists their selections in order of frequency. Most students found the conferences useful for professional growth (81.7 percent), presentation experience (72.4 percent), and learning about jobs and internships (72.0 percent), among others. Only six students (2.2 percent) did not find any utility attending conferences, and 26 students (9.7 percent) appeared not to have attended any.

Exhibit 42: Conferences are Providing Me Opportunities for....

Statements	Number	Percent
A. Professional growth	219	81.7
B. Presentation experience	194	72.4
C. Learning about jobs	193	72.0
D. Learning about internships.	193	72.0
E. Networking opportunities	184	68.7

Exhibit 42: Conferences are Providing Me Opportunities for....

Statements		Number	Percent
F.	Knowing other cities	142	53.0
G.	N/A	26	9.7
H.	None of the above, attending conferences has not been valuable to me	6	2.2

Finally, students were asked about the factors that would keep them from relocating to take a USDA related job. Exhibit 43 lists their selections in order of frequency. Slightly more than half of the students (53.0 percent) did not have any problem relocating. The other half selected the following issues: Potential costs (38.1 percent), distance (19.4 percent), unfamiliarity with area (15.7 percent), and family (12.7 percent).

Exhibit 43: Factors that Keep Students from Relocating to Take a USDA Related Job

Statements		Number	Percent
A.	None of the above, I am willing to relocate wherever the job is (to another state, Washington D.C., etc.)	142	53.0
B.	Potential costs	102	38.1
C.	Distance - the job requires relocation to a new town/city	52	19.4
D.	Unfamiliar with the area/city where job is located	42	15.7
E.	My family would not want me to move	34	12.7
F.	Not knowing anyone there	25	9.3

Other factors that would keep student from relocating to take a USDA related job include the following (see Exhibit 44).

Exhibit 44: Other Factors that Would Affect Decision to Relocation for Job or Internship

- Out of state jobs.
- Other area/city factors (schools for children, crime, weather, etc.).
- An uncomfortable environment.
- My husband's job.
- Perceived challenges and rewards.
- I would have to find equilibrium between monthly expenses and salary. But always welcome to new opportunities.
- I don't want to work for USDA.
- I have been relocated four times in my forestry career, none of the above applies to me; in fact, I would love to travel out of the country.
- Pay. This is not a good time to take on big costs or to start at bottom of totem pole.
- I can relocate in Calif. within 100 miles of where I live.
- Job opportunities for spouse.
- If the town had a lot of bigots.
- Pregnancy/arrival of an infant.

Exhibit 44: Other Factors that Would Affect Decision to Relocation for Job or Internship

- I am willing to relocate only if the location is accessible for wheelchair use.
- I may accept another job from the USDA if this does not conflict with my master degrees plans.
- There is no job for chemical engineers.
- My disability/medical necessities might affect my decision for relocation.
- Knowing how permanent the job is.
- Distance is a factor to consider. I would like to know more information about it. For example, how long will the job in that place last, etc. Anyways, I'm open to know new places.
- Possibly not wanting to continue with USDA.
- The salary would be a big factor, because if I'm going to make the same pay as I would here in San Antonio, where I reside now I would just stay here.
- Money would be an issue at first. If I would get settled in, I would be fine to go on.
- Startup money moving to a new place.
- A factor would be whether the internship was unpaid.

Preparation for Field of Interest and Overall Goals

To assess how well-prepared student felt upon entering the program and their overall goals, the online survey asked them several pertinent questions. The survey listed several assertions in this regard and asked students to select the degree to which agreed with the statements. Exhibit 45 shows their responses, summarized by *Agree* and *Disagree* for simplicity.

Exhibit 45: Preparation for Student's Field of Interest and Overall Goals

Statements	Agree		Neutral/NA		Disagree	
	Number	Percent	Number	Percent	Number	Percent
A. I feel I was well prepared in high school to enroll in college.	196	73.7	29	10.9	41	15.4
B. My high school encouraged me to enroll in college.	225	84.0	24	9.0	19	7.1
C. My dream has always been to have a professional career.	253	95.1	6	2.3	7	2.6
D. A career in a USDA related area is my immediate goal.	186	69.4	65	24.3	17	6.3
E. Getting a college degree has always been my goal.	260	97.0	4	1.5	4	1.5
Total	1,120	83.8	88	128	9.6	6.6

Nearly two-third of the students (73.7 percent) felt that they were well prepared in high school. More than 80 percent (84.0 percent) indicated that their high school encouraged them to enroll in college. And virtually all of them pointed out that their dream has always been to have a professional career (95.1 percent) and getting a college degree (97.0 percent). Comparatively, fewer (69.4 percent) indicated that their immediate goal was a career in a USDA related area. However, few (6.3 percent) disagreed with this goal; mostly they (24.3 percent) were neutral or uncommitted.

Finally, students were given an opportunity to express any other comments they desired to share. Exhibit 46 lists them.

Exhibit 46: Student Additional Comments

- Thank You!
- Like I said; Bravo USDA for such an opportunity that I thought was only a dream. Keep up the good spirit.
- Being part of the FCCAgE program has allowed to be exposed to other opportunities that otherwise I would have not been able to see or experience.
- I had a great time in this internship; I would love to learn more about job opportunities for graduating students (I graduate in May 2013). Any direct connections I could get would be very beneficial - applying to positions on USA jobs makes me feel like a very small drop in the bucket!
- Sometimes I feel disappointed when I think that there are not many opportunities for new graduates. Also I heard people within the USDA always take the new positions as well as people with military backgrounds. I hope we all get a chance to work one day at the USDA.
- I really like the fact that our U.S. government is helping student in school and just finishing, especially minorities.
- I am really interested in working in Belize for the summer. Even if it's volunteering, the only trouble is getting help to get my visa or other needed documents to travel.
- Follow up after interview to see what could have been done better in interview with agency. Therefore will know what to work on and develop.
- Students need more funding. Funding should apply to permanent resident students, as many of the students of this legal status come from Hispanic, agricultural backgrounds.
- USDA is a wonderful agency and I have learned so much, not only from my summer internship but also from the faculty involved with the BGREEN project. I am looking forward to graduating a starting my career, hopefully in a USDA research lab.
- NMSU is the model University for seeking involvement focusing on career exploration.
- Thanks for allowing me to be part of this awesome opportunity!
- I have really benefited from the BGREEN program at NMSU because I have gained experience working with post graduate fellows working with algae to make biofuel, which is of high interest to me. If it was not for the BGREEN program I would not have gained this experience that I value so much. I have enjoyed being in the BGREEN program because it offers a lot of opportunities for underrepresented minorities to gain valuable experience and to learn what USDA is all about. I enjoyed my summer internship and my work on campus, and because of that I am very interested in working with USDA.
- I don't hear much about USDA even though I'm enrolled in a USDA program.
- This internship was a great experience and I would like more information about other internship opportunities.
- The USDA Watershed Experiential Learning Internship has been a great learning experience for me. It has allowed me to gain insight in USDA operations and also has taught me critical project skills.
- Thanks for this internship opportunity – I appreciate it! Though I'm not a minority, I am 50 years old, which has its own set of challenges when returning to college. However, my managing agency (MPWMD) doesn't treat me any differently and I'm learning a great deal.
- I have learned numerous skills through the WRI/USDA Internship. I am so grateful for this opportunity. It has allowed me to set up and conduct my own research project. I couldn't

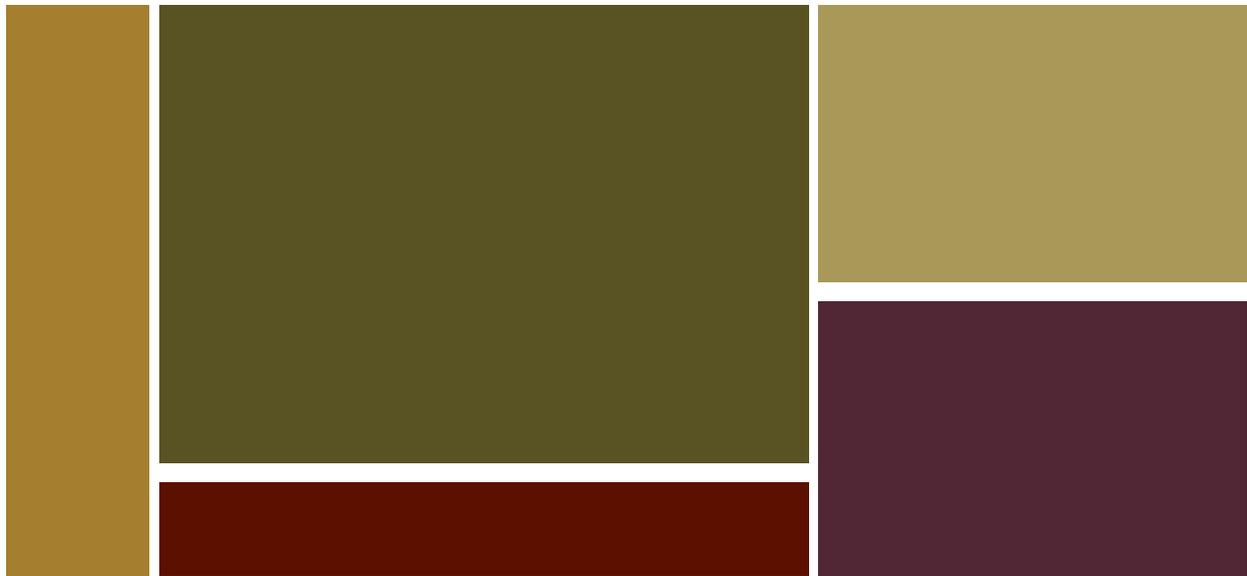
Exhibit 46: Student Additional Comments

be more thankful for this opportunity.

- Thanks for the money! It reduces stress and allows more time to be spent on doing research. It is nice that the money is divided into a stipend and research expenses. Also, it was really good that several of my classmates got the same internship so we were all on the same page. We had weekly meetings and updated each other and our professor on progress. I think all of our research greatly benefited because of this internship.
- I would love to work at USDA. Then later when I continue my studies I would love to be one of the scientists there.
- I think that through my internship experience I have learn a lot and I am happy I took that great opportunity. Thanks to my internship I know that I do not like insects but I would really love to get to conduct my own research at one point in my life.
- I would like to thank USDA for giving me this opportunity!
- The colleges and USDA need to reach out to the high school's more, in order to encourage and interest students to attend and work for their careers.
- Public education is crucial starting since the elementary level. Many students still have trouble with English and reading. The concepts that many of them are missing should have been learned in elementary school. This has caused many of them to end up behind in both middle school and high school. In many cases it is not the high school. These students would be more confident if they learned the basics since the very beginning.
- THANK YOU.
- This is a great program for minority students! It gives us the chance to be recognized as STEM majors and exposed to many things that we may not know about otherwise in regards to jobs, internships, etc. Overall, a GREAT opportunity for ANY student!
- This USDA internship has given me so much experience and has opened doors for me already. I've appreciated the opportunity to be a part of this program. I would definitely recommend students to try to apply.
- Thank you.
- It's a great opportunity to be in this program and I would recommend it to anyone who is interested.
- It was not until this year that I was fully aware of the amount of opportunities I can have as a civil engineer.
- Thanks you USDA/NIFA for my graduate studies sponsorship.
- Fortunately, I had an internship experience on summer 2012, working in the USDA-ARS at Beltsville, Maryland. I can say that it has been the best experience in my student life. I took advantage in every minute that I was there. It was a great experience and I am very grateful for it.
- Thanks for the experience! Go ahead with the program!
- Thanks for the opportunity USDA. Every day I am more confident that this is the right career for me.
- Keep doing good job with people interested in these areas of studies.
- So far, participation in CETARS has been a positive experience, and has increased my interest in continuing an agriculture related career.
- I believe this program is great!
- The FATE program has been great. I look forward to our future conferences and especially next fall. I should be at Texas State by then.
- It's a great program and they should continue for many years to come.

Exhibit 46: Student Additional Comments

- I am very appreciative of this opportunity that I have earned.
- I would love intern information about USDA jobs I can apply in Puerto Rico.
- I am grateful for the opportunities I have been given. Thank you.
- Thank you.
- Thank you for this amazing opportunity.
- This program is great overall; it gives an opportunity that I thought I would never get. I was always worried about something, but with this program I have been able to just focus on getting a higher education.
- Thanks for the wonderful opportunity. I am now surer of what I want in life.
- The FATE scholarship program has been an amazing help in furthering my education and the mentoring has been invaluable to the success I have had.
- USDA has broadened my view of further educational opportunities such as graduate programs or internships.
- The program has presented amazing opportunities. The directors are doing an amazing job!



Conclusions, Discussions and Next Steps

Implications from Archival Review and Meta-Analysis

- **Institutional Efficacy.** Based on a review of the information provided on the outcome indicators, the collaborative projects are recruiting and enrolling students at and above the targets set to increase the number of underrepresented students, particularly Hispanics, in agricultural-related careers. The participating sites have partnered with USDA agencies and other institutions to provide internships and experiential learning opportunities for students. Additionally, the project sites have created research projects and designed courses to strengthen the academic preparation and research capabilities of students. Student support systems are emerging including the provision of mentors, membership in agriculture-relation groups, websites, curriculum development, and outreach to K-12 institutions. Despite this early success, challenges still persist in creating internships for students in some USDA agencies due in part to requirements in the summer internship and employment program.
- **Collaborative Action.** During the first year of project implementation, the collaborative projects have established partnerships with an array of USDA agencies and program offices. The project sites have participated and made presentations in a number of national conferences, often providing participating students and faculty members to provide multi-media presentations on their project and research publications. The project directors/principal investigators have participated in frequent teleconferences and meetings with the USDA NIFA program manager. In these settings, project staff have had opportunities to problem-solve and share lessons learned from project implementation.
- **Collective Impact.** Each project has provided information on the required outcome measures though reporting formats and level of detail varies from site to site. Progress and annual reports were submitted with variance in reporting formats and level of detail. Few external evaluation reports were available for review suggesting that the role of the external evaluator and the meta-evaluator needs further clarification and role delineation. A second year work plan has been developed and submitted to the collaborative projects.

Implications from Online Student Survey

- **Participation Rate.** With an average response rate of 71 percent, most colleges and universities had a healthy participation. However, there are still some institutions that either did not participate at all or had very few students participating in the survey. Perhaps, it would be important to contact those institutions to find out the reasons behind their low participation rate.
- **Study Program Satisfaction.** Virtually all students (97.4 percent) were satisfied with the program of study in which they are enrolled. It is important to continue to support the students as each institution looks into the project sustainability. It is important to realize when an initiative is working to continue it and expand on its success.
- **Improving the Colleges or Universities.** When students were pressed for improvements, they suggested to increase: (a) the number of courses related to their areas of concentration, (b) the number of related degrees or programs, and (c) the availability of support (jobs, technology, labs, and materials) offered in their college or university to strengthen student chances of getting a worthwhile degree that would be valuable in the market place.
- **Recruitment of Underrepresented Students.** Students provided a variety of strategies, including more proactively interacting with high schools to entuse students about the agriculture fields and the possibilities the program offers to minorities; creating activities (seminars, agriculture weeks, and symposiums) to attract attention of potential students to the program; and advertise the program more through publicity, fliers and other means.
- **Improving Experiential Learning.** For the most part students seemed satisfied with what was been offered in this area. Some suggestions included visiting other institutions to be able to compare, working more on the field, and offering students more opportunities to do research, perhaps guided by tutors working in agriculture in the field.
- **Improving the USDA/NIFA Project.** Although students held the project in high regard, when asked about actions what should be done to improve it, they provided a list that expanded though five pages (Exhibit 38), from which three themes emerge: (1) More support to students, mostly through field-related activities involving some guidance (perhaps through mentoring) that provide both financial help and hands-on experience; (2) More communication between faculty, university staff and students, so the three groups would be on the same page and understand each other's issues better; and (3) More awareness campus-wise or even community-wise of the project so a more collaborative work could be undertaken with local resources and organizations.

Appendix A: Project Profiles

Exhibit A-1: Project Overview for California State University-San Bernardino (CSU-SB)

Item/Element	Brief Description
Project Title	Watershed Management Experiential Learning for USDA Careers
Project Start Date	September 1, 2011
Project Director/Principal Investigator	Julie Lappin, J.D., Program Manager Water Resources Institute (WRI), California State University-San Bernardino (CSU-SB)
Co-Project Director/Co-Principal Investigators	Dr. David Zoldoske, California Water Institute, California State University-Fresno
External Evaluator(s)	Dr. Rachel Weiss, Office of Research & Sponsored Programs, California State University-San Bernardino
Internal Evaluator(s)	
Collaborating Universities/Colleges	<p>California State University-Bakersfield; California State University-Channel Islands; California State University-Dominguez Hills; California State University-Fresno; California State University-Fullerton; California State University-Long Beach; California State University-Los Angeles; California State University-Monterey Bay; California State University-Northridge; California State Polytechnic Institute - Pomona; California State University-San Bernardino; California State University-San Marcos; California State University-Stanislaus; San Diego State University [n=14]</p> <p>California State University-San Bernardino is the lead academic institution collaborating with 13 other 4-year universities.</p>
USDA Agency Partners	<p>Agricultural Research Service (ARS); Forest Service (FS); Natural Resources Conservation Service (NRCS) [n = 3]</p> <p>The project served 50 interns, three of whom are working in USDA agencies, with an additional seventeen in other governmental entities and municipalities. As the project progresses, the project plans to maintain those relationships and continue to cultivate additional agency partnerships for internships and future employment opportunities for our students. Other partners include: California State Fish and Game, Elkhorn Slough National Estuarine Reserve, Santa Margarita Ecological Reserve, San Dieguito River Park, Resource Conservation District, various city and county departments, multiple water districts, and industry.</p>
Project Goal(s)	<ul style="list-style-type: none"> • Measurably increase the encouragement, retention,

Exhibit A-1: Project Overview for California State University-San Bernardino (CSU-SB)

Item/Element	Brief Description
	<p>graduation and USDA career attainment of underrepresented CSU students who are enrolled in undergraduate and graduate disciplines related to national resource protection.</p> <ul style="list-style-type: none"> • Measurably increase student research skills that ensure that national forests and private working lands are conserved, restored, and made more resilient to climate change, while enhancing water resources.
Project Objectives	<ul style="list-style-type: none"> • The primary objective of this 4-year collaborative project is to measurably increase the encouragement, retention, graduation and USDA career attainment of underrepresented California State University (CSU) students who are enrolled in undergraduate and graduate disciplines related to natural resource protection.
Project Outcome Objectives	<ul style="list-style-type: none"> • Provide 200 experiential learning internships (50 a year for four years) in water related and natural resource disciplines. • Support/encourage underrepresented students to complete their degree and possibly continue their education in disciplines related to natural resource protection through a master’s degree (or possibly higher). • Increase/improve student research skills, including collaboration and knowledge-sharing across a broad spectrum of domains. • Enhance the nation’s water resources and make watersheds more resilient to climate change. • Utilize paid watershed management internships to help prepare up to 80 percent of participants for USDA natural resource careers. • Develop new student skills, abilities, and knowledge that will favorably impact USDA employability of underrepresented graduates.
Project Activities	<ul style="list-style-type: none"> • Provide paid internships for 50 California State University (CSU) students enrolled in undergraduate and graduate disciplines annually, for a total of 200 students over four years. Underrepresented students will be recruited from 14 CSU campuses identified as Hispanic Serving Institutions (HSIs) listed in Section IV as Regional Collaboration Partners. • Every student will be individually mentored by an identified water-related faculty member, researcher or person from a participating USDA or local agency. • Each intern will be required to identify specific careers at USDA agencies that are best suited to their career aspirations. • Students will be required to identify any mandatory

Exhibit A-1: Project Overview for California State University-San Bernardino (CSU-SB)

Item/Element	Brief Description
	<p>courses required as a prerequisite to submitting a USDA application and whether the CSU campus they attend offers the necessary courses. Students attending a CSU campus that does not offer the courses needed on their home campus will be required to identify where those classes are available, whether that is another CSU or a nearby institution.</p> <ul style="list-style-type: none"> • Five students per year will be funded to travel to attend national NIFA meetings, annual WRPI Conferences, or other watershed management activities. • The program will make available a resume list of graduating students (optional for the students), updated twice each year (summer and winter). • Water-related faculty, researchers, and advisors will assist each chosen student in developing an individual scope of work for their paid, mentored watershed management. • Virtual and in-person meetings during Project Years 1-4 for mentors and students to discuss current internships underway and identify synergies. • Provide K-12 outreach and community engagement activities.
Project Evaluation	<ul style="list-style-type: none"> • Individual success will be tracked utilizing a scorecard for each student intern. • Exit Interview Questionnaire to be completed by students detailing the areas of the project that were most and least helpful to them, and how they could be better served by such an internship program. <p>A questionnaire to be completed by the internship advisor providing feedback about the interns they oversaw and the perceived affect of the internship on the student's future employability.</p>
Number of Students Served	The project served a total of 50 students.
Students' Majors of Interest	<p>Biology/Biological Sciences (10); Civil Engineering (2); Coastal and Watershed Science and Policy (15); Computer Science/Computer Engineering (1); Environmental Engineering (2); Environmental Science (3); Geography (7); Geology (5); German (1); Health Sciences (1); Industrial Technology (2); Mathematics (1); Photography (1);</p>

Exhibit A-1: Project Overview for California State University-San Bernardino (CSU-SB)

Item/Element	Brief Description
	Plant Science (1); Psychology (1) *Note: Some Interns are dual majors

Exhibit A-2: Project Overview for Florida International University (FIU)	
Item/Element	Brief Description
Project Title	Florida – Caribbean Consortium for Agriculture Education and Hispanic Workforce Development (FCCAgE)
Project Start Date	September 1, 2011
Project Director/Principal Investigator	Dr. Mahadev Bhat, (Lead Director) Professor and Co-Director, Agro ecology Program, Earth & Environment Dept. (E&E), bhatm@fiu.edu
Co-Project Director/Co-Principal Investigators	Dr. Krish Jayachandran, Associate Professor, E&E Dept., jayachan@fiu.edu Dr. Adriana Campa, Associate Professor, Dietetics and Nutrition, campaa@fiu.edu Dr. Suzanne Koptur, Professor, Biol. Sciences, kopturs@fiu.edu Dr. Eric von Wettberg, Assistant Professor, Biol. Sc. Dept., ebishopv@fiu.edu (FTBG liaison)
FIU Collaborators	Dr. Kateel G. Shetty, Research Scientist, E&E Dept., shettyk@fiu.edu Dr. Assefa Melesse, Associate Professor, E&E Dept., melessea@fiu.edu Dr. Jeff Onsted, Assistant Professor, Earth & Environment, jonsted@fiu.edu
Current Co-Project Director [Collaborating Universities/Colleges]	Prof. Loretta Adoghe, Miami Dade College Dr. Pilar Maul, St. Thomas University Dr. Arlin Toro, InterAmerican University
Miami Dade College-North Campus Collaborators	Prof. Loretta Adoghe, Professor and Chair, Department of Biological Sciences, ladoghe@mdc.edu; Dr. Steve Ritter, Associate Professor, sritter@mdc.edu; Dr. Clemente Fernandez, Assistant Professor, cfern3@mdc.edu; Department of Biology, Health and Wellness
St. Thomas University Collaborators	Dr. Pilar Maul, Assistant Professor (Biology), pmaul@stu.edu; Dr. Scott Malinconico, Associate Professor (Biology), smalinconio@stu.edu Wim Steelant, Dean of the School of Science, teelant@stu.edu School of Science Technology and Engineering Sciences
Universidad Interamericana de Puerto Rico, San Germán Collaborators	Dr. Arlin Toro, Associate Professor (Microbiology), arlin@sg.inter.edu
External Evaluator(s)	Dr. C. Lee Burras, Iowa State University
Internal Evaluator(s)	
Collaborating Universities/Colleges	Miami Dade College-North; St. Thomas University; Universidad Interamericana de Puerto Rico at San <i>Germán</i> (UIPR-SG) FIU is the lead academic institution collaborating with two other 4-year universities and one community college.

Exhibit A-2: Project Overview for Florida International University (FIU)

Item/Element	Brief Description
USDA Agency Partners	Mr. Vladimir Diaz, Regional Director, USDA/HSI National Program, vladimir.diaz@mdc.edu; Dr. Stewart Reed, Research Agronomist, USDA ARS Subtropical Horticultural Research Station, Miami, Stewart.Reed@ARS.USDA.GOV; USDA APHIS Office, Santurce, Puerto Rico; Tropical Agriculture Research Station at Mayagüez, Puerto Rico.
Other Partners	Earth Learning: Mr. Mario Yanez, Founding Director, Earth Learning, mario@earth-learning.org Dr. Carl Lewis, Director, Fairchild Tropical Botanical Garden, Miami, clewis@fairchildgarden.org Ms. Diana Collingwood, Science Coordinator, Miami-Dade Schools, DCollingwood@dadeschools.net
Project Goal(s)	<ul style="list-style-type: none"> • Aims at preparing 49 undergraduates, four masters, one doctoral, 20 High School students and more than 200 unintended students in multiple levels for preparation in USDA careers and degrees in areas of environmental, biological sciences, and food science programs.
Project Objectives	<ul style="list-style-type: none"> • Recruit and graduate 54 students, (49 Hispanic undergraduate students, four masters students, and one doctoral student) into biological, environmental, and food science degree programs • Train students in plant, natural resources, and food sciences through curricular enrichment and expansion, and scientifically rigorous, technologically appealing, socially interactive instructional delivery systems. • Establish a number of experiential, experimental and community outreach programs to provide students with USDA mission critical occupation skills, and • Help place Hispanic and other minority graduates of the FCCAgE in USDA and other federal agencies or advanced agricultural science education through rigorous professional advancement and career development programs • Support 20 high school interns and conducts annual high school teacher workshop benefiting more than 50 of them.
Project Outcome Objectives	In the long term, the project will directly contribute to the USDA educational and agriculture, food and natural resource protection goals by (a) increasing the number of Hispanic college graduates by more than 50, (b) building a strong consortium for a cost-effective alternative to the traditional land-grant agriculture education model at four Florida and Puerto Rico universities and colleges, and (c) unique educational programs and technical job-training ability in high national priority areas like biological and environmental

Exhibit A-2: Project Overview for Florida International University (FIU)

Item/Element	Brief Description
	sciences [also meeting STEM education goal].
Project Activities	<ul style="list-style-type: none"> • Through a variety of undergraduate research experience projects, community engagement projects and professional development activities (field trips, national conferences, and professional workshops), students stand to gain scientific and professional skills necessary to gain entry into USDA mission critical jobs. • Students in the program will have an opportunity to increase their analytical skill and hands-on field experience through participating in the campus organic garden program, school yard gardens and area farms. Students will also engage in a variety of student club activities and thus form a learning community on each of the four HSI campuses. • The FIU students will continue to maintain the local chapter of the Minority in Agriculture, Natural Resources and Related Sciences (MANRRS) and engage in agri-science educational, mentoring, professional, and social activities. • Each student in the program will also attend one or two national conferences during the four year program. • They will also present the internship experience at the annual Agroecology Symposium to be conducted in Miami. The symposium will also provide an opportunity for students to interact with USDA and other agricultural career professionals. • Each year, a number of career development activities will be conducted through the university career service offices, in order to help students develop job interview skills and the understanding of the various USDA careers. • An annual summer workshop in agroecology will be conducted for high school teachers. This program will include lectures, seminars, and field visits on issues related to agroecosystem principles. In the workshop, they will identify opportunities to connect high school students and teachers with USDA and other research institutions. • Throughout the grant program, project activities and results will be disseminated through promotional material, newsletters, articles, student presentations, and a website.
Project Evaluation	<ul style="list-style-type: none"> • The Project Director will be in charge of the evaluation process. The evaluation plan will adopt both formative and summative techniques and be based on both qualitative and quantitative indicators and targets.
Number of Students Served	54

Exhibit A-2: Project Overview for Florida International University (FIU)

Item/Element	Brief Description
Students' Majors of Interest	Agriculture (0); Biology/Biological Sciences (25); Biotechnology (7); Chemistry (6); Environmental Biology (1); Environmental Science (2); Environmental Studies (9); Environmental studies and International relations (1); Landscape & Horticulture (1); Microbiology (0); Nursing (0); and Nutrition and Dietetics (1). Criminal justice (1).
Products	<ul style="list-style-type: none"> • Infusing agri-science education with biological, agriculture, environmental, food and natural resource sciences • New courses in Integrated Pest Management, Plant Pathology, Agriculture Communication, Bioinformatics and Biosciences (1 time each) • FCCAgE Website Development and Updates • Students trained in Agri-Science Education • FCCAgE scholarships/internships • FCCAgE student graduate research assistantship • FCCAgE student USDA internships and Community Outreach Activities • USDA Job Placement • Students maintained Online FCCAgE Blog • FCCAgE students conference trips • Annual Agriculture Symposium • Field trips • Publications: papers, posters and presentations
Long Term Impact	The continuous focus on training students with the necessary skills to obtain a career that contributes to USDA's educational and agriculture, food and natural resource protection goals.
Four-pronged approach	<p>(1) An infusion of emerging agriculture issues into existing and new biological, environmental, and food sciences curricula [Educational Need Area (a)];</p> <p>(2) Integration of advanced instructional technology into curriculum [Educational Need Area (c)];</p> <p>(3) Experimental and experiential learning for the students via hands-on undergraduate research experience, community engagement, and USDA internships [Need Area (e)]; and</p> <p>(4) An aggressive science career development and placement program to funnel Hispanic graduates into USDA's mission critical occupations.</p>
Project Scope	<p>(1) The need for enhancing the nation's manpower capacity in new biology approaches to agricultural problem solving;</p> <p>(2) The need for maximizing the effectiveness of instructional delivery systems; and</p> <p>(3) The need for increasing workforce diversity within USDA and related employment sectors nation-wide.</p>

Exhibit A-3: Project Overview for New Mexico State University (NMSU)

Item/Element	Brief Description
Project Title:	Preparing Students for Career Paths with the USDA Forest Service by Linking Student Success with Experiential Learning Opportunities
Project Start Date	September 1, 2011
Project Director/Principal Investigator	Dr. Martha Desmond Dr. Jess K. Zimmerman Berlinda Baca Sanchez Dr. Skip VanBloem
Co-Project Director/Co-Principal Investigators	Amy Padilla Rick Tafoya
External Evaluator(s)	Dr. H. Prentice Baptiste, Department of Curriculum and Instruction, New Mexico State University Dr. William Leftingwell, Puerto Rico
Internal Evaluator(s)	
Collaborating Universities/Colleges	<p>New Mexico and Puerto Rico (New Mexico State University campuses in Las Cruces, Grants, Carlsbad and Alamogordo), New Mexico Highlands University and Luna Community College, University of Puerto Rico campuses in Rio Piedras, Cayey, Humacao, Bayamón, and Mayagüez and InterAmerican University in Bayamón).</p> <p>NMSU is the lead academic institution collaborating with seven other 4-year universities and four community colleges. NMSU also collaborated with UPR-M, a fellow collaborative project grantee.</p>
USDA Agency Partners	<p>Animal and Plant Health Inspection Service (APHIS); Forest Service (FS); Natural Resources Conservation Service (NRCS)</p> <p>The project placed 45 of 53 students on the summer Student Temporary Employment Program (STEP) and Student Career Experience Program (SCEP). The number of students placed in USDA agencies included 42 in the USDA Forest Service, one in USDA NRCS, and one in USDA APHIS. Two students graduated during the summer.</p>
National Partners	U.S. Geological Survey (USGS)
Target Audiences	The primary target audience is Latino students.
Project Goal(s)	<p>Mentor cohorts of students in New Mexico and Puerto Rico for careers in Natural Resource fields with the Forest Service</p> <ul style="list-style-type: none"> • Provide NM and PR student’s 2 local field courses annually (Cohort 1) to introduce them to natural resource management and career opportunities with 90 percent of students successfully completing course requirements (12 students/course yr. 1 and 10 for yr. 2-4).

Exhibit A-3: Project Overview for New Mexico State University (NMSU)

Item/Element	Brief Description
	<ul style="list-style-type: none"> • Conduct field trips for entry level natural resource classes and high school students to promote program and career opportunities in natural resources. We anticipate 90 percent of students will have an improved understanding of natural resource disciplines and careers, and will understand available opportunities through this program. • Provide student experiential learning in their chosen natural resource field through summer internships with the USDA Forest Service with 90 percent of students successfully completing the internship (minimum of 20 students annually, Cohort 2) • Retain 90 percent of students completing internship program (Cohort 2) to enroll in a SCEP or second internship in Cohort 3. • Establish a faculty and Forest Service mentorship program to provide students with academic and career advice. This program will increase overall GPAs, graduation rates and job placement by minimum of 10 percent. This program will impact 50 students annually. • Establish a faculty research mentorship program to guide students in research in natural resource fields (28 students annually). Students in the semester program will maintain 3.0 GPA and conduct independent research. 90 percent of students will successfully complete program. This program will identify students for a research track. • Provide NM and PR students with one shared international field courses to broaden student perspectives of natural resource management to an international scale. We target an enrollment of 12 students /yr., with 90 percent successfully completing course requirements. • Provide NM and PR students with an educational and cultural exchange that will include a summer internship, a fall semester exchange or both (4+ students annually). We anticipate that 90 percent of students will successfully complete this program. • Develop a Forest Service/graduate student mentorship program to recruit underrepresented students into graduate programs and USDA agency positions (up to 10 students annually yrs. 2-4). We anticipate a 90 percent completion rate for this program. • Develop an advising and tutoring center to improve the academic performance, retention rate and graduation rate of our students. This will impact >50 students annually. We anticipate this program will help us retain 90 percent of students each year in NRCT program and will increase

Exhibit A-3: Project Overview for New Mexico State University (NMSU)

Item/Element	Brief Description
	<p>GPA's by 10 percent and increase 4 & 6 year graduation rates by 10 percent.</p> <ul style="list-style-type: none"> • Each semester there will be a one-day meeting for all NRCT students that will include educational, informational and networking components (anticipate 90 percent participation). • Establish USDA Seminar Series, telecast to all institutions. Anticipate 90 percent participation. • Move 70 percent of students from SCEP (or pathways program; Cohort 3 & 4) into Forest Service (or other USDA Natural Resource) positions post-graduation.
Project Objectives	<ul style="list-style-type: none"> • Our main objectives are centered on identifying and mentoring cohorts of students (Cohort Program) according to academic level to prepare them for careers in Natural Resource Management with the FS.
Project Outcome Objectives	<ul style="list-style-type: none"> • Increase student knowledge and skills in natural resource fields by placing students on Forest Service internships and SCEPS (40 students/year), research experiences (16 students), and in introductory field courses (24 students). • Increase the academic performance and four-year graduation rates of students enrolled in the cohort program by 10 percent through our tutoring and advising programs. • Provide students with global experiences to broaden their perspectives of natural resource management fields and decision processes through an international field course and an exchange program between New Mexico State University and the University of Puerto Rico (16 students) • Develop critical thinking and communication skills through independent research projects (16 per year), faculty and professional mentoring (all cohort students), attendance to professional meetings (6/year) and research presentations (minimum of 2 per year). • Provide outreach to high school and entry level college students through classroom visits and field trips to excite students about careers and opportunities in natural resource management. • Develop a Forest Service/graduate student mentorship program to recruit students into graduate programs and USDA agency positions (4 students annually). We anticipate a 90 percent completion rate for this program. • NMSU, UPR and Forest Service have been meeting regularly to develop a long-term plan for this program, this has included meetings in Washington DC and Albuquerque with Forest Service Civil Rights personnel

Exhibit A-3: Project Overview for New Mexico State University (NMSU)

Item/Element	Brief Description
	and Human Resources; this activity is ongoing.
Measureable Outcomes	<ol style="list-style-type: none"> 1) Total number of students (& percent Hispanic) impacted by various project programs, 2) retention of students (percent Hispanic) in cohorts (anticipated 90 percent annually), 3) number of students (& percent Hispanic) that participate in USDA Forest Service (FS) internships and SCEPS (minimum of 24 students annually), 4) improved academic standing and graduation rates (minimum of 10 percent), 5) number of students (& percent Hispanic) attending and presenting at professional meetings (14 annually,) and 6) number of students (& percent Hispanic) recruited into careers with the USDA (70 percent of Cohort 3 & 4 annually), especially the FS.
Project Activities	<ul style="list-style-type: none"> • Initial Project Planning Session • Annual Key Personnel Meeting • Project Advertisement & Student Recruitment • Monthly Telecast Meeting (Key Personnel) • Cohort Identification • Graduate Student Recruitment • Advising & Tutoring Center • Monthly Cohort Meetings • Faculty Research Mentorship Program • Forest Service Internship & SCEP Program • Agency and Research Internships • Field Class-Cohort 1 • Field Class-Cohorts 2 & 3 • Semester Exchange Program • Field Trips – entry level classes & high schools • Mid-Year Evaluation (end of Fall Semester) • Annual Project Evaluation (end Spring Semester) • Field trips to local National Forests will be conducted for entry level natural resource classes at collaborating institutions and area high school students.
Project Evaluation	<ul style="list-style-type: none"> • This program will be evaluated annually. The evaluation will place an emphasis on our goals of: (1) reaching a minimum of 50 students/yr., (2) achieving the USDA goal of 90 percent retention annually, (3) having 100 percent of students being underrepresented minorities in the NRCT Program, and (4) 70 percent of students moving into Forest Service (or other USDA) careers post-graduation. • These 4 goals will account 15 percent each of weighted criteria for evaluation (60 percent). Additional evaluation

Exhibit A-3: Project Overview for New Mexico State University (NMSU)

Item/Element	Brief Description
	<p>criteria for students in core programs will include: (1) a 10 percent increase in GPA, (2) 10 percent increase in graduation rates, (3) 14 students annually attending professional meetings (5 percent ea.), and ranking of evaluations (1-5) by key personnel involved in the project (a) student evaluations, (b) faculty mentor evaluations, (c) Forest Service evaluations, (d) key project personnel evaluations, and (e) student tutor evaluations (5 percent ea.).</p> <ul style="list-style-type: none"> • Baseline data will consist of 4 & 6 yr. graduation rates and mean GPA's prior to project implementation for students in related departments. Baseline data will be compared with these departments post project implementation, and for program students. Exit interviews will be conducted with all program students completing a degree and an equal number of randomly chosen non-program students starting in year 2 to compare GPA, time to completion, program impression, and career plans.
Number of Students Served	53
Program Participants	Undergraduate Candidates (4-yr. institutions); Graduate Candidates; and Doctoral Candidates.
Students' Majors of Interest	Engineering; Environmental Science; Environmental Studies; Environmental studies and International relations; Environmental Technology; Fisheries; Forestry; Geology; Range Science; and Wildlife.
Use of Technology	<ul style="list-style-type: none"> • Website • SKYPE • Distance communication tools • Webinars • Facebook • Conference calls

Exhibit A-4: Project Overview for Texas A&M University-Kingsville (TAMUK)

Item/Element	Brief Description
Project Title:	Step Up to USDA Career Success: Science, Technology and Environmental Programs for Undergraduate Preparation to USDA Career Success
Project Start Date	September 1, 2011
Project Director/Principal Investigator	Dr. Shad David Nelson, Texas A&M University-Kingsville (TAMUK)
Co-Project Director/Co-Principal Investigators	<ul style="list-style-type: none"> • Randy L. Stanko, Texas A&M University-Kingsville (TAMUK); • Michael Persans, University of Texas-Pan American (UTPA), Edinburg, TX; • Debora Villalon, South Texas College (STC), Weslaco, TX; • Armando Duarte; Texas State Technical College (TSTC), Harlingen, TX; • Jonda Halcomb, Del Mar College (Del Mar), Corpus Christi, TX
External Evaluator(s)	<p>Dr. Stacey Clettenberg</p> <p>The evaluation of this project will be performed externally by Dr. Stacey Clettenberg, Independent Grant Program Evaluator and Director Research and Grants Management at DePelchin Children’s Center in Houston.</p>
Internal Evaluator(s)	
Collaborating Universities/Colleges	<p>Texas A&M University-Kingsville; University of Texas –Pan American; Del Mar College; South Texas College; and Texas State Technical College [n = 5].</p> <p>TAMUK is the lead academic institution collaborating with another 4-year university, UTPA, and three community colleges including Del Mar, STC and TSTC.</p>
USDA Agency Partners	<p>Agricultural marketing Service (AMS); Animal and Plant Health Inspection Service (APHIS); Agricultural Research Service (ARS); Forest Service (FS); Natural Resources Conservation Service (NRCS); and Natural Resources Conservation Service, Plant Material Center NRCS PMC).</p> <p>This is a ‘Regional Collaboration’ [ROCN] project involving five educational, primarily Hispanic Serving Institutions, and multiple USDA research or service centers and agencies (primarily USDA-NRCS (NRNR Track), but also preparing employees for the USDA AMS, USDA ARS, USDA APHIS, and USDA FS).</p>

Exhibit A-4: Project Overview for Texas A&M University-Kingsville (TAMUK)

Item/Element	Brief Description
Project Goal(s)	<ul style="list-style-type: none"> 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.
Project Objectives	<ul style="list-style-type: none"> The primary objective of this project is focused on undergraduate training and education for career preparation and employment with USDA agencies upon graduation with B.S. degrees.
Project Outcome Objectives	<ul style="list-style-type: none"> To form a collaborative effort to provide undergraduate education and hands-on training to a minimum of 50 underrepresented Hispanic south Texas students. To provide undergraduate students with intensive short-courses based in soils, biotechnology, livestock and meat grading, and environmental sciences that prepare them for soils, biological, animal agriculture, and natural resource science-related careers to a minimum of 50 underrepresented Hispanic students. To provide a minimum of 50 summer undergraduate internship experiences with agricultural-related USDA agencies as fast track preparation for USDA careers. The overall outcomes of the proposed project will increase Hispanic Americans prepared for USDA agricultural- and natural resource-related careers. The completion of this project will lead to the following: (1) a progressive internship program with a USDA agency and collaborative experiential learning work experience between 5 HSI institutions; (2) increase the recruitment and retention of students in the agricultural and natural resource sciences; (3) provide new skills to students through the implementation of practical summer training courses and in the use of up-to-date field and laboratory instrumentation and equipment; (4) develop student and faculty enrichment through collaborative efforts and beneficial partnerships with agricultural professionals; and (5) enhance student opportunities for public speaking, technical writing, and professional growth and development through attendance and participation at research symposiums and/or regional/national professional conferences.
Project Activities	<ul style="list-style-type: none"> USDA Tours Plan Camps Summer Camps Summer USDA Internship

Exhibit A-4: Project Overview for Texas A&M University-Kingsville (TAMUK)

Item/Element	Brief Description
Project Evaluation	<ul style="list-style-type: none"> The evaluation process will include advisement to the institutional PDs and Co-PDs regarding research and evaluative dimensions of the grant, examination and analysis of evaluation assessment measures, modification of evaluation processes as appropriate, and assist in timely AD-421 progress and termination reporting.
Number of Students Served	70
Students' Majors of Interest	Environmental Engineering (1); Ag Science –Certified (2); AgriBusiness-Ranch Man (1); Agriculture Business (2); Agriculture Science (2); AGSC-Soils minor (1); AGSC-WREN (1); Animal Science (6); Animal Science- Pre vet (3); and ANSC (2).
Disciplines Addressed	<ul style="list-style-type: none"> TAMUK disciplines addressed: Plant and Soil Sciences (7); Agricultural Science (4); Animal Sciences (n = 6); Animal Sciences: Pre Vet (n = 3); AgriBusiness (n = 2) UTPA disciplines addressed: Biology (n = 12) STC disciplines addressed: Biology (n = 5); Criminal Justice (n = 2); Chemistry (n = 2); Computer Science (n = 1) TSTC disciplines addressed: Agriculture Technology (n = 11) Del Mar College disciplines addressed: Biotechnology (n = 11); Biology (1); Chemistry (n = 1)

Exhibit A-5: Project Overview for Texas State University-San Marcos (TSU)	
Item/Element	Brief Description
Project Title:	Food Safety and Agroterrorism Training: Educating Our Future Workforce
Project Start Date	September 1, 2011
Project Director/Principal Investigator	Dr. Douglas G. Morrish, Texas State University-San Marcos (TSU)
Co-Project Director/Co-Principal Investigators	Dr. Ryan Saucier, Texas State University-San Marcos (TSU) Dr. Nora Garza, Laredo Community College (LCC)
External Evaluator(s)	Dr. Manuel Pina, Views Unlimited, Inc.
Internal Evaluator(s)	
Collaborating Universities/Colleges	Laredo Community College (LCC); Northwest Vista College (NWVC) Palo Alto College (PAC); Texas State University-San Marcos (TSU) TSU is the lead academic institution collaborating with three community colleges including LCC, NWVC, and PAC.
USDA Agency Partners	Food Safety and Inspection Service (FSIS); Animal and Plant Health Inspection Service (APHIS); Forest Service (FS); Food and Nutrition Service (FNS); and Natural Resources Conservation Service (NRCS).
Other Partners	Southwest Border Food Safety and Defense Center
Project Goal(s)	<ul style="list-style-type: none"> • Students funded through this innovative program will gain a valuable certification and an immense amount of experience with food safety and agroterrorism, thus increasing their chances of employment with USDA and helping narrow the gap of underrepresented Hispanic students in food and agricultural sciences and USDA agencies. • The goals of the project include creating a seamless transition for community college students from Laredo Community College, Palo Alto College, and Northwest Vista College to transfer to Texas State University, complete degrees in agriculture, nutrition, or related life sciences and be trained to accept jobs with the USDA , particularly in the food safety and inspection arena.
Project Objectives	<ul style="list-style-type: none"> • Objective # 1 – Encourage 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 and have a retention rate at or higher than that of the University. • Objective # 2 – Develop early linkages and a strong pipeline for K-12 students by visiting 10 schools a year

Exhibit A-5: Project Overview for Texas State University-San Marcos (TSU)

Item/Element	Brief Description
	<p>with a high representation of Hispanic students. Discussion and activities regarding USDA employment will be performed.</p> <ul style="list-style-type: none"> • Objective # 3 – Train 50 scholar Hispanic students in the course “Preparing Communities for Agroterrorism.” • Objective # 4 – Retain and place 90 percent of the student participants in job shadowing and internship opportunities within USDA agencies. • Objective # 5 – 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. • Objective # 6 – Provide funding for 12 graduate students to complete a thesis and a degree within the Department of Agriculture, thus allowing them to be competitive for USDA employment. • Objective #7 – Form “Academic Research Clusters” (directed by faculty and graduate students) to create a mentoring component and allow Hispanic students to collect data and present their findings at one research conference.
Project Outcome Objectives	<ul style="list-style-type: none"> • Create and implement a Joint Admissions Agreement with Texas State University and Laredo Community College / Palo Alto College / Northwest Vista College to increase the transfer rate of Hispanic students to a 4 year university. • Encourage 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 and have a retention rate at or higher than that of the University. • Develop early linkages and a strong pipeline for K-12 students by visiting 10 schools a year with a high representation of Hispanic students. Discussion and activities regarding USDA employment will be performed. • Train 50 scholar Hispanic students in the course "Preparing Communities for Agroterrorism." • Retain and place 90 percent of the student participants in job shadowing and internship opportunities within USDA agencies. • 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. • Provide funding for 6 graduate students to complete a thesis and a degree within the Department of Agriculture,

Exhibit A-5: Project Overview for Texas State University-San Marcos (TSU)

Item/Element	Brief Description
	<p>thus allowing them to be competitive for USDA employment.</p> <ul style="list-style-type: none"> • Form "Academic Research Clusters" (directed by faculty and graduate students) to create a mentoring component and allow Hispanic students to collect data and present their findings at one research conference.
<p>Project Activities</p>	<ul style="list-style-type: none"> • Participate in a 7 day summer workshop at Texas State University during summer 2012. • During Summer 2 of the project, students will attend a 7 day "travelling classroom" component of the project. • Students will attend summer workshops at Texas State University and participate in activities such as being trained and certified by the Department of Homeland Security and the National Center for Biomedical Research and Training Academy of Counter-Terrorist. • A one week "travelling classroom" will be taken to Las Cruces, NM to visit the Southwest Border Food Safety and Defense Center. • Training of the project director and Co-PI to become trainers in Preparedness and Response to Food and Agriculture Incidents. • Develop marketing materials and application for program. • Create the two University Transfer Centers at LCC and Palo Alto College. • Create MANRRS program for recruitment. • Proposed MANRRS and graduate student recruiting trips to community colleges and high schools. • Select students to participate in the program and fill vacant spots. • Issue selected students an IPAD for journal keeping and reflection. • Create mentoring website to monitor students and display contact information of each participant. • One Week Summer Workshop for participants. • One week travelling classroom to Southwest Border Food Safety and Defense Center. • Place students in an Academic Research Cluster. Conduct undergraduate research. • Immerse students into internships and job shadowing with USDA agencies, particularly APHIS and FSIS. • External Evaluations
<p>Project Evaluation</p>	<p>The performance of the FATE Program will be evaluated based on a plan of management by objectives (MBO). This plan includes an indicator, a proposed goal, the actual number obtained, and the percentage accomplished for each key</p>

Exhibit A-5: Project Overview for Texas State University-San Marcos (TSU)

Item/Element	Brief Description
	<p>activity area.</p> <p>The Project Director and Co-Directors will be conducting an ongoing evaluation by including the following three evaluation criteria in the overall evaluation design: (1) formative assessment whereby project activities and management procedures may be analyzed and 18 compared to the design intent expressed in this proposal; (2) summative assessment which provides an examination of project goals and objectives; and (3) a longitudinal study of participants to assess the possible extent of the impact that the project had on the participants.</p> <ul style="list-style-type: none"> • Track retention rate, transfer rate, GPA, student organizations, internships, and conference presentations. • Track participant enrollment and progress by semester. • Track the number of schools visited and compile evaluation results of the presentation. • Track the number of high school students transferring to Texas State • University and majoring in agriculture, nutrition, or related area. • Track student certified by the Department of Homeland Security. • Track students entering the USDA in food safety or nutrition. • Track participant employment with USDA. • Track conference presentations and publications.
Number of Students Served	50
Students' Majors of Interest	Agriculture (20); Biology/Biological Sciences (12); Chemistry (3); Environmental Science (6); Information Technology (8); and Nutrition Science (8).

Exhibit A-6: Project Overview for the University of Puerto Rico-Mayagüez (UPR-M)	
Item/Element	Brief Description
Project Title:	UPR-Mayagüez Center for Educational and Training In Agricultural and Related Sciences (CETARS)
Project Start Date	September 1, 2011
Project Director/Principal Investigator	Dr. Felix R. Roman
Co-Project Director/Co-Principal Investigators	Dr. Angela Gonzalez Dr. Oscar Perales Dr. Jorge Gardea Dr. Roland Tremont
External Evaluator(s)	Dr. Danny Reible, University of Texas-Austin
Internal Evaluator(s)	Dr. Catherine Mazak, University of Puerto Rico-Mayagüez
Collaborating Universities/Colleges	University of Puerto Rico at Aguadilla (UPRAG); University of Puerto Rico at Humacao (UPRH); Inter-American University of Puerto Rico at San Germán (IAUSG); and University of Texas El Paso (UTEP). UPR-M is the lead academic institution collaborating with four universities including one collaborative project grantee (UTEP).
USDA Agency Partners	Forest Service (FS); Agricultural Research Service (ARS); Animal and Plants Health Inspection Service (APHIS); and Natural Resources Conservation Service (NRCS).
Other Partners	US Geological Service (USGS) and National Institute of Environmental Health Sciences (NIEHS).
Project Collaborators	
Project Goal(s)	<ul style="list-style-type: none"> • CETARS will establish and consolidate a pipeline attracting, retaining and graduating talented individuals while supporting their actual placement in USDA 20 Mission Critical Occupations.
Approach	<ul style="list-style-type: none"> • Two undergraduate students will be selected to improve their research skills by getting involved in summer research projects at UPRM. Workshops for undergraduates and visits to high schools to bring seminars on environmental protection-related issues will be coordinated. CETARS activities at UPRH include outreach with K-12 students and science teachers. Students will be recruited from private and public schools in Eastern Puerto Rico to participate in summer workshops related to agriculture and environment with UPRH-STEM faculty and assistance of USDA agencies such as Forest Service and NRCS. Ten undergraduate students will also be recruited to perform research in environmental projects with UPRH faculty. Six

Exhibit A-6: Project Overview for the University of Puerto Rico-Mayagüez (UPR-M)

Item/Element	Brief Description
	<p>undergraduate students from UPRH will be involved in summer research projects at UPRM. Workshops for K-12 school, teachers and undergraduates and visits to high schools to bring seminars on agriculture and the environment will also be organized.</p> <ul style="list-style-type: none"> • IUAPR-SG proposed activities include the recruitment of four undergraduate students and one graduate student per year to do research in environmental projects.
Project Objectives	<ul style="list-style-type: none"> • The Center for Education and Training in Agricultural and Natural Resources, (CETARS), activities are focused on attracting talented and highly motivated high school, undergraduate and graduate students to pursue academic and professional careers in agricultural key areas. • CETARS will seek to: (1) strengthen the Food Science, Applied Chemistry and Crops and Environmental Sciences and Engineering Science and Materials curriculum through the involvement of students and faculty in meaningful research projects related to agriculture and by the sharing of educational and research resources; (2) develop outreach activities at participating institutions from K-12 to recruit talented students into agriculture or related sciences careers; (3) increase the participation of minority students in programs related to agricultural sciences and the protection of natural resources; (4) enhance the research skills of undergraduate and graduate students enrolled in food, soils and applied chemistry programs by exposing them to experiential learning, research experiences and community service; (5) fostering student-centered research projects that integrate specialists from diverse disciplines to solve real-life problems faced by communities, small developing agro-industries and government agencies; (6) develop a technical critical mass capable of supporting multi-institutional and multi-disciplinary collaborations and to provide support to solve technical problems in Puerto Rico; (7) promote faculty development and competitiveness in agriculture and related sciences.
Project Outcome Objectives	<ul style="list-style-type: none"> • Strengthen the Food Science, Applied Chemistry and Crops and Environmental Sciences and Engineering Science and Materials curriculum through the involvement of students and faculty in meaningful research projects related to agriculture and by the

Exhibit A-6: Project Overview for the University of Puerto Rico-Mayagüez (UPR-M)

Item/Element	Brief Description
	<p>sharing of educational and research resource.</p> <ul style="list-style-type: none"> • Develop outreach activities at participating institutions from K-12 to recruit talented students into agriculture or related sciences careers. • Increase the participation of minority students in programs related to agricultural sciences and the protection of natural resources. • Enhance the research skills of undergraduate and graduate students enrolled in food, soils and applied chemistry programs by exposing them to experiential learning, research experiences and community service. • Fostering student-centered research projects that integrate specialists from diverse disciplines to solve real-life problems faced by communities, small developing agro-industries and government agencies. • Develop a technical critical mass capable of supporting multi-institutional and multi-disciplinary collaborations and to provide support to solve technical problems in Puerto Rico. • Promote faculty development and competitiveness in agriculture and related sciences.
<p>Project Activities</p>	<ul style="list-style-type: none"> • Students will be transported to the UPRM Laboratory Farm to participate in a Crop Sciences Tour and workshops in seed preparation, seedling transplant, soil and nutrient management, among others. <p>CETARS proposed a series of K-12 and undergraduate activities:</p> <ul style="list-style-type: none"> • Constructions of home gardens at 10 participating public schools and weekly follow-up visits to provide educative lectures and workshops to students. • Globe program outreach activity for K-12 students and teachers to measure soil and water properties and quality. • Mentoring; Undergraduate and graduate students are actively participating of research and outreach activities under faculty mentorship. • Food Safety workshops: 1) Food safety from farm to the table; 2) Food defense, traceability and transportation; 3) Serve safe food for food handlers; 4) Prevention on Salmonella Enteritidis in shell eggs during production, storage and transportation. • Other activities that were not originally proposed but have been incorporated were: • Resume writing workshops; this activity aimed to

Exhibit A-6: Project Overview for the University of Puerto Rico-Mayagüez (UPR-M)

Item/Element	Brief Description
	<p>improve CETARS students’ resumes in order for them to become more competitive in the internships applications.</p> <ul style="list-style-type: none"> • Internships webinars/workshops; this activity was introduced in order to introduce CETARS students to internships opportunities at USDA and to teach them how to apply. • CETARS lecture series: Five scientific lectures were offered to CETARS participants, including one from a CETARS invited speaker from the UPR-Rio Piedras Campus. Over • 100 students participated of these CETARS lectures series. • Moodle workshop. This an open source platform to offer courses online which is available to all institutions. • Science on wheels chemistry show. Over 500 students were impacted in two visits to schools and one to an ACS sponsored meeting. • Agricultural tour. Five CETARS students for the Crops and Agro-environmental Department constructed a home garden on the Alzamora Farm on Campus and organized a field trip. Around 100 students from the ten CETARS-schools participated. • Community outreach seminars at the Aguada Credit Union Facility (TBA).
Project Evaluation	A survey conducted by the internal evaluator was sent to 55 students.
Number of Students Served	55
Students’ Majors of Interest	Biotechnology (2); Chemical Engineering (4); Chemistry (17); Civil Engineering (3); Crops and agro-environmental sciences (17); Environmental Technology (8); Industrial Chemistry (3); and Mechanical Engineering (1).

Exhibit A-7: Project Overview for the University of Texas-El Paso (UTEP)

Item/Element	Brief Description
Project Title:	BGREEN – Building a Regional Energy and Educational Network
Project Start Date	September 1, 2011
Project Director/Principal Investigator	Dr. Heidi Taboada Jimenez
Co-Project Director/Co-Principal Investigators	Shad Nelson (TAMUK) Tongdan Jin (TSU) Delia Valles (NMSU)
External Evaluator(s)	Dr. Manuel Pina, Texas A&M University-College Station
Internal Evaluator(s)	
Collaborating Universities/Colleges	Texas A&M University- Kingsville (TAMUK); Texas State University San Marcos (TSU); and New Mexico State University (NMSU). UTEP is the lead academic institution collaborating with three other collaborative project grantees including NMSU, TAMUK, and TSU.
USDA Agency Partners	<ul style="list-style-type: none"> • Dan R. Upchurch, ARS Southern Plains Area Director • Jeffrey Steiner, National Program Leader for Biomass Production Systems • M. Lee Norfleet, Natural Resources Conservation Service (NRCS) – USDA Resources Inventory and Assessment Division (RIAD) • Francisco Valentin Jr., Texas State Director for Rural Development (RD)
Other Partners	Ari M. Michelsen, Texas AgriLife Research Center at El Paso Director
Project Collaborators	
Project Goal(s)	<ul style="list-style-type: none"> • To create a collaborative network of researchers, educators, USDA agencies, and non-profit organizations to coordinate efforts, share resources, and increase educational, training and post-graduation opportunities for Hispanic students pursuing careers in the Sustainable Energy area.
Project Summary	<ul style="list-style-type: none"> • A consortium comprised of the University of Texas at El Paso (UTEP), Texas A&M University-Kingsville (TAMUK), Texas State University-San Marcos (TSU), 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.

Exhibit A-7: Project Overview for the University of Texas-EI Paso (UTEP)

Item/Element	Brief Description
Project Objectives	<ul style="list-style-type: none"> The objective is to provide our students with the required skills to satisfy current and future USDA workforce needs related to sustainable energy. Therefore, one of the main goals of BGREEN will focus on reshaping curricula to respond to current demands in the sustainable energy sector. BGREEN is composed of four key components: 1) Outreach & Recruitment, 2) Education, 3) Experiences, and 4) Dissemination.
Project Outcome Objectives	<ul style="list-style-type: none"> Twelve new courses in the Sustainable Energy area will be developed. Examples of new courses/modules include Feedstock Logistics, Sustainable Agriculture, Water-Energy Nexus, Green Chemistry, Renewable Energy Policy and Economics, and Biofuels and Sustainable Energy, among others. Curricula to better satisfy current and future NIFA needs will be developed and implemented. Existing courses/modules related to sustainable energy will be shared among partner institutions such as sustainability engineering and renewable energy systems. One PhD track in Sustainable Science and Engineering under the Environmental Science and Engineering PhD program at UTEP will be developed. The BGREEN project's webpage will be developed to serve as a virtual resource library to showcase all of the materials developed. Videoconferencing capabilities will be utilized to broadcast USDA's seminar presentations from College Station to all consortium universities. At least 8 student internships per year will be conducted at USDA research centers. At least 16 students per year will participate in research experiences conducted at the partner institutions. At least 10 presentations per year will be presented at regional/national conferences. Twelve lesson plans and case studies in Sustainable Energy (bio-energy) will be developed for use in K-12 outreach programs to attract students to careers in sustainable energy Two times at each partner institution, the "Imagine the 2050: Green City Design Exposition," will be organized and hosted for local middle and high school students and teachers to discover sustainable energy solutions. On average 42 undergraduate and graduate students will be supported per year, and their progress towards achievement of their Bachelor of Science, Master of

Exhibit A-7: Project Overview for the University of Texas-EI Paso (UTEP)	
Item/Element	Brief Description
	Science, or PhD degrees will be tracked using a database created for this purpose.
Project Activities	<ul style="list-style-type: none"> • Speaker seminar series. • Scientific method workshop. • Career activities. • Field trips, picnic day at end of semester.
Project Evaluation	<ul style="list-style-type: none"> • The primary intent of the evaluation is to contribute to the achievements and success of the project as it unfolds and evolves. To do this, the plan is composed of two strands of work. The first strand is qualitative, formative, and continual. It is intended to gain insight into the successes and concerns about the project as perceived by all stakeholders and to allow making informed necessary mid-course adjustments. The second strand is quantitative and summative.
Number of Students Served	53
Students' Majors of Interest	Environmental Science & Engineering (Energy Track), Industrial & Systems Engineering, Civil Engineering, Wildlife Biology, Biochemistry, Animal Science, Chemistry, AgriBusiness-Ranch Management, Agriculture Science , Agribusiness, Animal Science-Pre Vet, Agricultural Economics and Agricultural Business
USDA Strategic Goals	Goal 1 (Assist rural communities to create prosperity so they are self-sustaining, re-populating, and economically thriving) and Goal 2 (Ensure Our National Forests and Private Working Lands Are Conserved, Restored, and Made More Resilient to Climate Change, While Enhancing Our Water Resources)

Exhibit A-8: Collaborating Colleges and Universities, 2011-12

Collaborating Colleges/ Universities	Type of Institution	USDA Land Grant University (1862, 1890, and 1994)¹	Hispanic- Serving Institution (HSI) in 2011-12	Hispanic- Serving Agricultural College and University (HSACU) in 2011-12	Number of Participants in 2011-12
California State University- San Bernardino (CSU-SB)	University	No	Yes	Yes	50
California State University-Bakersfield	University	No	Yes	Yes	5
California State University-Channel Islands	University	No	Yes	No	0
California State University-Dominguez Hills	University	No	Yes	No	0
California State University-Fresno	University	No	Yes	Yes	4
California State University-Fullerton	University	No	Yes	Yes	0
California State University-Long Beach	University	No	Yes	Yes	0
California State University-Los Angeles	University	No	Yes	No	2
California State University-Monterey Bay	University	No	Yes	Yes	21
California State University-Northridge	University	No	Yes	No	2
California State Polytechnic Institute – Pomona	University	No	Yes	Yes	0
California State University-San Bernardino	University	No	Yes	Yes	3
California State University-San Marcos	University	No	Yes	No	4
California State University-Stanislaus	University	No	Yes	No	4
San Diego State University	University	No	Yes	No	5

Exhibit A-8: Collaborating Colleges and Universities, 2011-12

Collaborating Colleges/ Universities	Type of Institution	USDA Land Grant University (1862, 1890, and 1994)¹	Hispanic- Serving Institution (HSI) in 2011-12	Hispanic- Serving Agricultural College and University (HSACU) in 2011-12	Number of Participants in 2011-12
Florida International University (FIU)	University	No	Yes	Yes	42
Florida International University (FIU)	University	Yes	Yes	Yes	12
InterAmerican University of Puerto Rico – San Germán (IAU-SG) [Universidad Interamericana de Puerto Rico at San Germán]	University	No	Yes	Yes	10
Miami Dade College	College	No	Yes	Yes	13
St. Thomas University (STU)	University	No	Yes	Yes	7
New Mexico State University (NMSU)	University	Yes	Yes	No	57
Luna Community College	College	No	Yes	No	1
InterAmerican University of Puerto- Bayamón	University	No	Yes	No	0
New Mexico Highlands University	University	No	Yes	Yes	13
New Mexico State University-Alamogordo	College	No	Yes	No	1
New Mexico State University-Carlsbad	College	No	Yes	No	1
New Mexico State University-Grants	College	No	Yes	No	0
New Mexico State University (Las Cruces)	University	Yes	Yes	No	18
University of Puerto Rico- Bayamón (UPR-B)	University	No	Yes	No	6
University of Puerto Rico- Cayey (UPR-C)	University	No	Yes	No	1
University of Puerto Rico- Humacao (UPR-H)	University	No		No	4
University of Puerto Rico- Mayagüez (UPR-M)	University	No	Yes	No	6

Exhibit A-8: Collaborating Colleges and Universities, 2011-12

Collaborating Colleges/ Universities	Type of Institution	USDA Land Grant University (1862, 1890, and 1994)¹	Hispanic- Serving Institution (HSI) in 2011-12	Hispanic- Serving Agricultural College and University (HSACU) in 2011-12	Number of Participants in 2011-12
University of Puerto Rico- Rio Piedras (UPR-RP)	University	No	Yes	No	5
Texas A&M University- Kingsville	University	No	Yes	Yes	70
Del Mar College	College	No	Yes	No	11
South Texas College (STC)	College	No	Yes	No	8
Texas A&M University- Kingsville (TAMUK)	University	No	Yes	Yes	28
Texas State Technical College -Harlingen (TSTC)	College	No	Yes	Yes	11
University of Texas-Pan American (UTPA)	University	No	Yes	Yes	12
Texas State University-San Marcos (TSU)	University	No	Yes	No	51
Laredo Community College (LCC)	College	No	Yes	No	13
Northwest Vista College (NWVC)	College	No	Yes	No	13
Palo Alto College (PAC)	College	No	Yes	Yes	10
Texas State University- San Marcos (TSU)	University	No	Yes	No	15
University of Puerto Rico- Mayagüez	University	No	Yes	No	55
InterAmerican University of Puerto Rico – San Germán (IAU-SM) [Universidad Interamericana de Puerto Rico at San Germán	University	No	Yes	No	5
University of Puerto Rico- Aguadilla (UPR-A)	University	No	Yes	Yes	8
University of Puerto Rico- Humacao (UPR-H)	University	No	Yes	No	3
University of Puerto Rico- Mayagüez (UPR-M)	University	No	Yes	No	37
University of Texas-EI	University	No	Yes	Yes	2

Exhibit A-8: Collaborating Colleges and Universities, 2011-12

Collaborating Colleges/ Universities	Type of Institution	USDA Land Grant University (1862, 1890, and 1994)¹	Hispanic- Serving Institution (HSI) in 2011-12	Hispanic- Serving Agricultural College and University (HSACU) in 2011-12	Number of Participants in 2011-12
Paso (UTEP)					
University of Texas-El Paso (UTEP)	University	No	Yes	Yes	53
New Mexico State University (NMSU)	University	Yes	Yes	No	18
Texas A&M University- Kingsville (TAMUK)	University	No	Yes	Yes	9
Texas State University- San Marcos (TSU)	University	No	Yes	No	17
University of Texas-El Paso (UTEP)	University	No	Yes	Yes	9

Exhibit A-9: List of Proposed Lead and Collaborating Colleges and Universities, 2011-12

College/University	Role	Institution Type
California State Polytechnic Institute – Pomona	Collaborating Institution	University
California State University-Bakersfield	Collaborating Institution	University
California State University-Channel Islands	Collaborating Institution	University
California State University-Dominguez Hills	Collaborating Institution	University
California State University-Fresno	Collaborating Institution	University
California State University-Fullerton	Collaborating Institution	University
California State University-Long Beach	Collaborating Institution	University
California State University-Los Angeles	Collaborating Institution	University
California State University-Monterey Bay	Collaborating Institution	University
California State University-Northridge	Collaborating Institution	University
California State University-San Bernardino	Lead Institution	University
California State University-San Marcos	Collaborating Institution	University
California State University-Stanislaus	Collaborating Institution	University
Del Mar College	Collaborating Institution	College
Florida International University (FIU)	Lead Institution	University
InterAmerican University of Puerto Rico – San Germán (IAU-SM) [Universidad Interamericana de Puerto Rico at San Germán]	Collaborating Institution	University
Anti-American University of Puerto-Bayamón	Collaborating Institution	University
Laredo Community College (LCC)	Collaborating Institution	College
Luna Community College	Collaborating Institution	College
Miami Dade College	Collaborating Institution	College
New Mexico Highlands University	Collaborating Institution	University
New Mexico State University (NMSU)	Lead Institution	University
New Mexico State University-Alamogordo	Collaborating Institution	College
New Mexico State University-Carlsbad	Collaborating Institution	College
New Mexico State University-Grants	Collaborating Institution	College
Northwest Vista College (NWVC)	Collaborating Institution	College
Palo Alto College (PAC)	Collaborating Institution	College
San Diego State University	Collaborating Institution	University
South Texas College (STC)	Collaborating Institution	College
St. Thomas University (STU)	Collaborating Institution	University
Texas A&M University-Kingsville (TAMUK)	Lead Institution	University
Texas State Technical College -Harlingen (TSTC)	Collaborating Institution	College

Exhibit A-9: List of Proposed Lead and Collaborating Colleges and Universities, 2011-12

College/University	Role	Institution Type
Texas State University-San Marcos (TSU)	Lead Institution	University
University of Puerto Rico-Aguadilla (UPR-A)	Collaborating Institution	University
University of Puerto Rico-Bayamón (UPR-B)	Collaborating Institution	University
University of Puerto Rico-Cayey (UPR-C)	Collaborating Institution	University
University of Puerto Rico-Humacao (UPR-H)	Collaborating Institution	University
University of Puerto Rico-Mayagüez (UPR-M)	Lead Institution	University
University of Puerto Rico-Rio Piedras (UPR-RP)	Collaborating Institution	University
University of Texas-El Paso (UTEP)	Lead Institution	University
University of Texas-Pan American (UTPA)	Collaborating Institution	University

Exhibit A-10: List of Actual Lead and Collaborating Colleges and Universities, 2011-12

College/University	Role	Institution Type
California State University-Bakersfield	Collaborating Institution	University
California State University-Fresno	Collaborating Institution	University
California State University-Los Angeles	Collaborating Institution	University
California State University-Monterey Bay	Collaborating Institution	University
California State University-Northridge	Collaborating Institution	University
California State University-San Bernardino	Lead Institution	University
California State University-San Marcos	Collaborating Institution	University
California State University-Stanislaus	Collaborating Institution	University
Del Mar College	Collaborating Institution	College
Florida International University (FIU)	Lead Institution	University
InterAmerican University of Puerto Rico – San Germán (IAU-SM) [Universidad Interamericana de Puerto Rico at San Germán	Collaborating Institution	University
Laredo Community College (LCC)	Collaborating Institution	College
Luna Community College	Collaborating Institution	College
Miami Dade College	Collaborating Institution	College
New Mexico Highlands University	Collaborating Institution	University
New Mexico State University (NMSU)	Lead Institution	University
New Mexico State University-Alamogordo	Collaborating Institution	College
New Mexico State University-Carlsbad	Collaborating Institution	College
New Mexico State University-Grants	Collaborating Institution	College
Northwest Vista College (NWVC)	Collaborating Institution	College
Palo Alto College (PAC)	Collaborating Institution	College
San Diego State University	Collaborating Institution	University
South Texas College (STC)	Collaborating Institution	College
St. Thomas University (STU)	Collaborating Institution	University
Texas A&M University-Kingsville (TAMUK)	Lead Institution	University
Texas State Technical College -Harlingen (TSTC)	Collaborating Institution	College
Texas State University-San Marcos (TSU)	Lead Institution	University
University of Puerto Rico-Aguadilla (UPR-A)	Collaborating Institution	University
University of Puerto Rico-Bayamón (UPR-B)	Collaborating Institution	University
University of Puerto Rico-Cayey (UPR-C)	Collaborating Institution	University
University of Puerto Rico-Humacao (UPR-H)	Collaborating Institution	University
University of Puerto Rico-Mayagüez (UPR-M)	Lead Institution	University

Exhibit A-10: List of Actual Lead and Collaborating Colleges and Universities, 2011-12

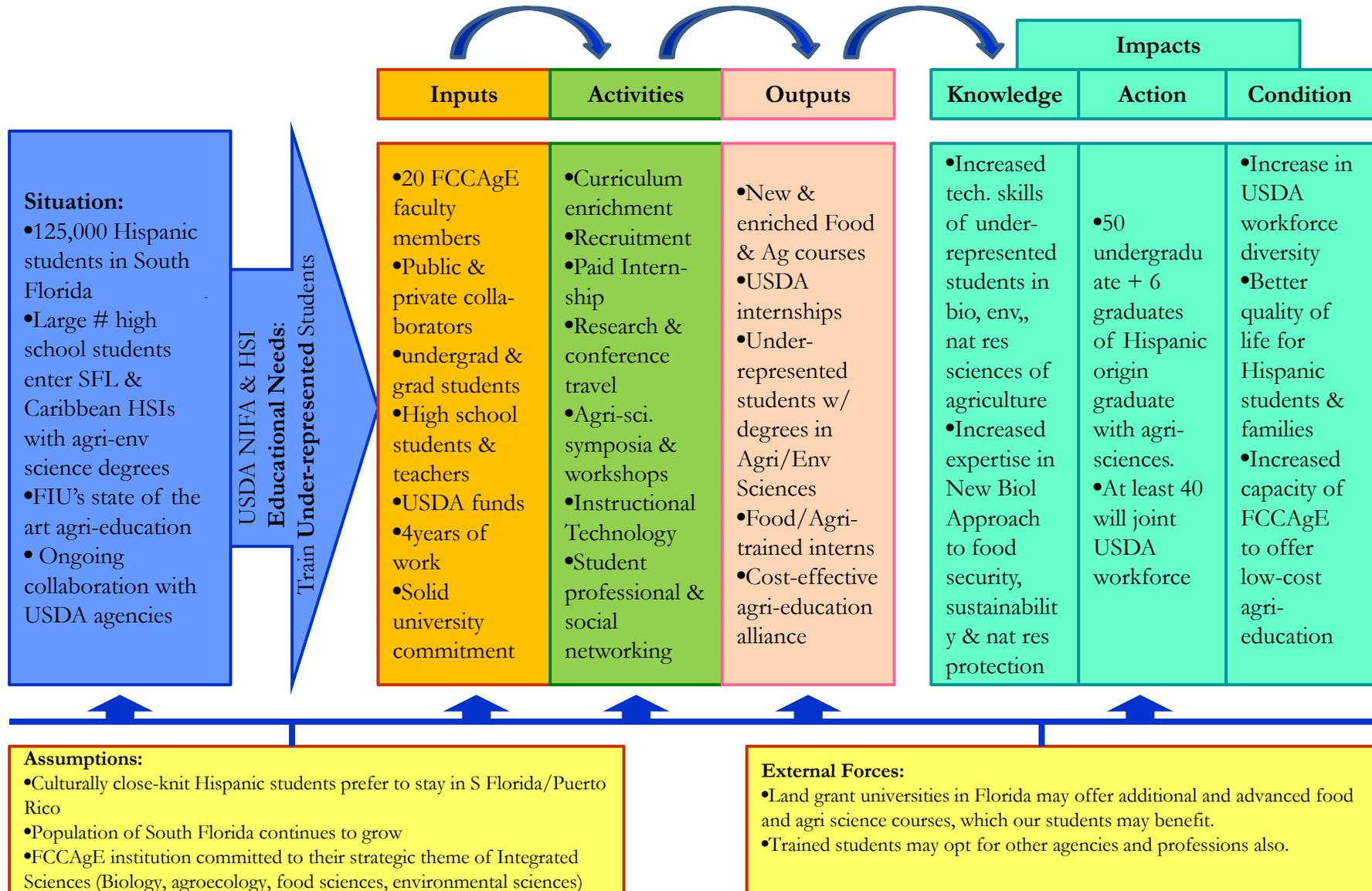
College/University	Role	Institution Type
University of Puerto Rico-Rio Piedras (UPR-RP)	Collaborating Institution	University
University of Texas-El Paso (UTEP)	Lead Institution	University
University of Texas-Pan American (UTPA)	Collaborating Institution	University

Appendix B: Project Logic Models

SITUATION	IMPUTS What we Invest	ACTIVITIES What we Do	OUTPUTS Who We Reach	OUTCOMES		
				Knowledge	Actions	Conditions
				The short-term results	The mid-term results	The long-term results
<p>Many underrepresented students at Hispanic-Serving Institutions (HSI's) in the California State University (CSU) system lack access to experiential learning and mentoring programs that help increase retention and graduation rates.</p> <p>A regional collaboration proposed by 14 HSI's in the CSU system provides access to a successful experiential learning and mentoring program in Watershed Management developed by CSU-San Bernardino with USDA HSI Education Grant Awards in 2007 and 2009.</p> <p>The USDA's natural resource agencies are seeking underrepresented graduates to replace an aging workforce.</p>	<ul style="list-style-type: none"> •Individual teaching •Individual training •Individual mentoring •Supervision •Materials-Supplies •Equipment •Technology •Partnerships 	<ul style="list-style-type: none"> •Faculty and research staff at the 14 HSI's will identify opportunities and select under-represented students for paid internships. •Faculty and research staff will develop a scope or work for each student and determine what materials, supplies and equipment may be needed. •Faculty and research staff will facilitate interaction between the student and the local watershed partners. 	<ul style="list-style-type: none"> •Under-represented students •CSU faculty and research staff lacking access to experiential learning and mentoring programs •Community partnerships that provide experiential learning 	<ul style="list-style-type: none"> •Science-based learning •New work skills •Watershed knowledge •Increase in retention 	<ul style="list-style-type: none"> •Productive behaviors •Career Goals •Experiential knowledge •Confidence between students and employers 	<ul style="list-style-type: none"> •Social and economic benefits of educated and diverse workforce •Natural resource benefits of watershed management •Greater representation of underrepresented college graduates in USDA Natural Resource Careers

Appendix II

The Logic Model for the Proposed Florida-Caribbean Consortium for Agricultural Education and Hispanic Workforce Development (FCCAgE)



Logic Model: Preparing Students for Career Paths with the USDA Forest Service by Linking Student Success with Experiential Learning Opportunities in Forest Management and Climate Change Ecology

Situation	Inputs	Activities	Outputs	Outcomes		
				Knowledge	Activities	Conditions
<p><i>Opportunities & Challenges</i></p> <p>Increase enrollment in Natural Resource Fields</p> <p>Improved academic performance</p> <p>Improved graduation rates</p> <p>Development of a diverse workforce</p> <p>Forest Service workforce</p> <p>Internationalize curriculum</p>	<p><i>Investments</i></p> <p>Students</p> <p>Forest Service personnel</p> <p>Faculty</p> <p>Staff</p> <p>High School teachers</p> <p>International partners</p>	<p><i>What Occurs</i></p> <p>Partnerships among HSI's, FS, & other agencies</p> <p>Increased workforce diversity & quality</p> <p>Increased student preparedness</p> <p>Increased student recruitment</p> <p>Increased graduation rates and GPA</p> <p>Develop international courses</p> <p>Institutionalize NM/PR exchange through MOU</p>	<p><i>What Happens</i></p> <p>FS Internships & SCEPS</p> <p>Increased retention and GPA</p> <p>Undergraduate research</p> <p>FS & faculty mentoring</p> <p>Professional meetings</p> <p>Student semester exchange</p> <p>Field courses</p> <p>Advising & Tutoring</p> <p>Graduate student mentoring</p> <p>High School outreach</p>	<p>Improved student skills</p> <p>Apply knowledge in climate change and forest management</p> <p>Improved decision making skills</p> <p>Improved communication skills</p> <p>Improved faculty leadership skills</p> <p>Improved connection for students between future career and academic performance</p>	<p>Increased graduation rates of underserved students</p> <p>Increased workforce diversity</p> <p>Application of knowledge from internships, research experiences & international field courses</p> <p>Application of newly acquired resource management skills</p> <p>Enhanced communication among natural resource disciplines</p>	<p>Prepared and diverse workforce</p> <p>Partnerships among institutions, agencies & high schools</p> <p>Graduates who can apply adaptive management & think critically to solve complex problems</p> <p>Enhanced institutional capacity for teaching diverse student body</p> <p>Healthier natural ecosystems</p>

Logic Model Narrative

This ROCN proposal is a collaboration among 12 Hispanic-Serving Institutions in New Mexico and Puerto Rico focusing on Climate Change and Forest Service (FS) Labor Force Track. This proposal addresses the declining enrollment of students in natural resource fields and the need to diversify our natural resources workforce. The goal is to identify students across institutions seriously interested in Forest Service careers (NRCT – Natural Resource Career Track) and provide them with mentoring and guidance and a series of innovative experiential learning opportunities. Student experiences were carefully chosen to provide students with (1) workforce training, (2) improved retention and academic performance, (3) research experience, (4) academic and career mentoring so that students graduate on time, with good GPAs and have a career vision, (4) experience in networking and presenting though attendance at professional meetings, (5) global experiences that will shape their perspectives of natural resource management and collaborations, and (6) experience mentoring and teaching younger future biologists (high school students). More broadly, these opportunities are intended to train students to address management needs of the 21st century and to be able to think critically and globally. This project invests heavily in opportunities for students but also in faculty, staff and agency personnel to work with students to achieve the goals of increased knowledge and skill sets. Targeted skill sets include technical skills in the student's area of concentration as well as leadership, communication and critical thinking. The preparation of a competent and diverse workforce will help achieve the USDA goal: "to ensure our national forests and private working lands are conserved, restored, and made more resilient to climate change while enhancing our water resources." This project will develop permanent connections among collaborating institutions and the Forest Service that will influence student experiences and learning long after the completion of this grant and create a permanent pipeline for recruiting a diverse workforce. The actions addressed in this proposal will enhance the institutional capacity at all 12 Hispanic-Servicing Institutions for teaching and mentoring a diverse student body.

Table 7

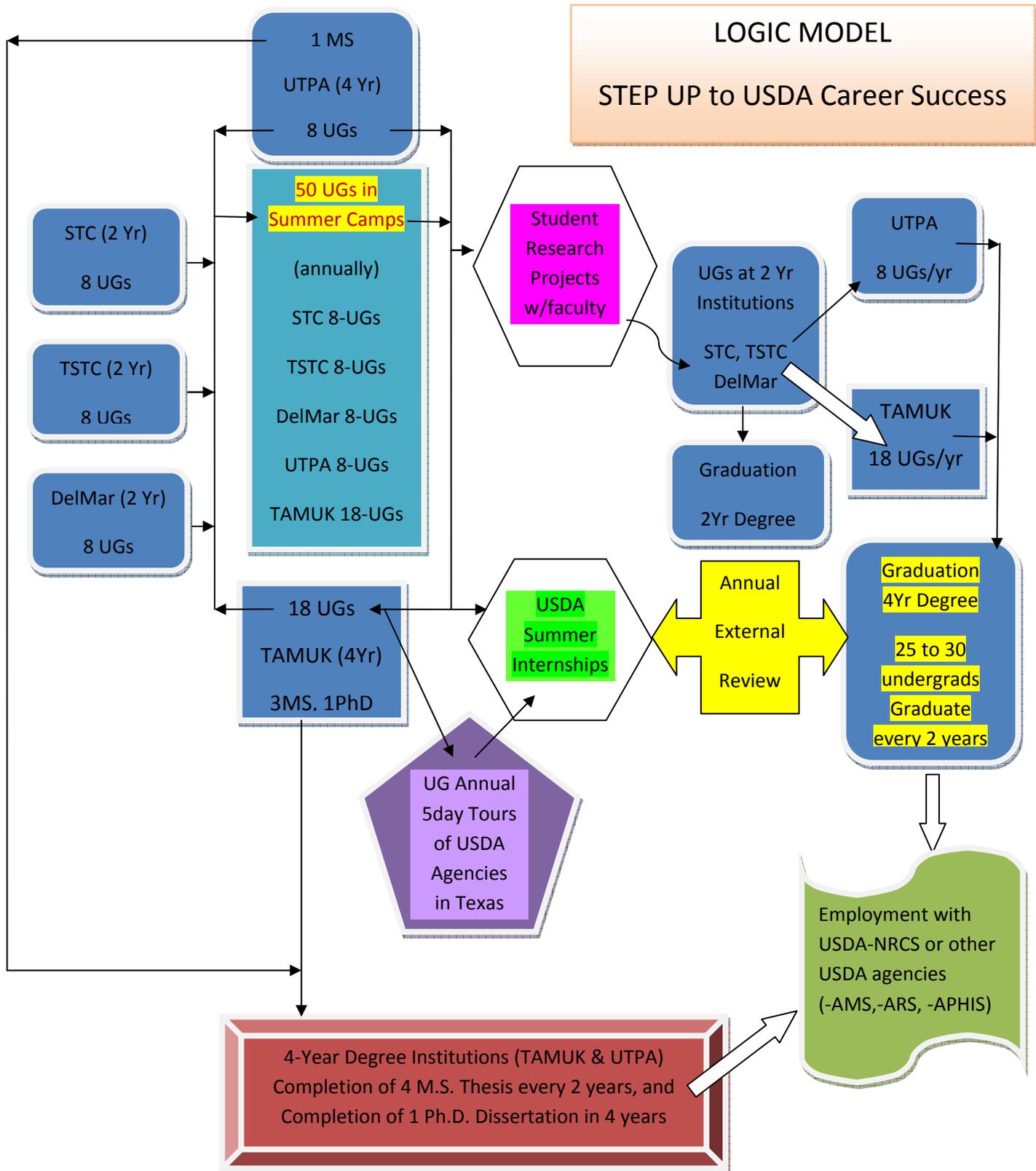
CETARS: Logic Model

Situation	Inputs	Activities	Outputs	Outcomes-Impact		
				Knowledge	Actions	Conditions
<p>Description of challenge or opportunity _Develop outreach activities to attract talented students from k-12 into careers related to agriculture or related sciences. -Establish a pipeline of talented students from K-to PhD in agriculture and environmental sciences -Increase the number or undergraduate Hispanic students into agricultural and environmental sciences programs -Place 80% of program graduates in USDA critical areas. - Improve science teachers research experiences in the areas of agricultural and environmental sciences - Improve faculty competence in research</p>	<p>What we invest: -High school students - Sciences high school teachers -4H Clubs - College faculty - College undergraduate and graduate students -college placement office -Underprivileged rural communities - Government agencies such NRCS , Forest Service, Food Safety and Inspection Service, USGS, Animals and Plants Health Inspection Service, USEPA</p>	<p>What we do (Activities): -Outreach activities to recruit talented students -4H Clubs students participate in agricultural growing cultivating and growing plants - Summer research experiential learning for talented high school students and science teachers - Summer workshops and short courses for high school students and science high school teachers -Research experiences for undergraduate and graduate students -Short courses for graduate students and UPRM faculty -Internships for undergraduate and graduate students -Water and soil analysis for rural communities</p>	<p>Products, services and events that are intended to lead to the program's outcomes: - Scientific publications and presentations -Increase recruitment of talented high school students in agricultural, food and environmental sciences -Increase research experiences for undergraduate students in agricultural, food and environmental sciences -Improve publication and proposal writing skills of faculty and graduate students -Increase faculty collaboration between Hispanics serving institutions - Increase collaboration between faculty and government agencies related to agriculture or the protection of natural resources -Increase number of Hispanic graduates in careers related to agriculture and related sciences -Highly competent Hispanic high school teachers -Highly competitive Hispanic professionals in careers related to agriculture and environmental sciences.</p>	<p>Occurs when there is a change in Knowledge -Research methodologies learned by students. -Laboratory safety -Awareness of career opportunities in agricultural and environmental sciences -Effective proposal writing skills -Effective publication in scientific journals skills</p>	<p>Occur when there is a change in behavior or the participant's act upon what they've learned and: - Modify interest and participation in careers related to agricultural and environmental sciences -Apply research skills to solve problems related agricultural and environmental sciences - Apply lab skill to solve rural communities water and soil quality problems</p>	<p>Occur when a societal condition is improved due to a participant's action taken in the previous column. For example, specific Contributions to: - Better water quality in underprivileged rural communities - Better prepared professionals in the areas of agricultural and environmental sciences - Increase participation of talented minority students in fields of agricultural and environmental sciences -More Hispanic working in USDA MCO's. -More competitive professionals working in agriculture and related careers.</p>

Table 8

CETARS: Logic Model, evaluation questions

Inputs	Activities	Outputs	Outcomes-Impact		
			Knowledge	Actions	Conditions
<p>Where sufficient outreach activities developed in order to attract talented students from k-12 into careers related to agriculture or related sciences? Was the goal of establishing a pipeline of talented students from K-to PhD in agriculture and environmental sciences achieved? - Was the goal of increasing the number or undergraduate Hispanic students into agricultural and environmental sciences programs achieved? - Was the goal to place 80% of program graduates in USDA critical areas archived? - Was the goal to improve science teachers' research experiences in the areas of agricultural and environmental sciences achieved? -Was the goal to improve faculty competence in research by increasing publications and external funding achieved?</p>	<p>-Did all activities occur as intended? -Was the quality of interventions appropriate? -Was the content of the workshops and short courses appropriate to reach the intended goals? -What was the evaluation satisfaction of the participants? -Where high school students motivated to pursue a career in agriculture and related sciences by the career workshops or summer research experiences? -Were the federal and local agencies involved in the career workshops? -Did the internships helped in placing students in careers related to agriculture and related sciences?</p>	<p>- Did it increase the recruitment of talented high school students in agriculture food and environmental sciences? - Did it increase the number of students participating of research experiences in agricultural, food and environmental sciences? - Did it improve publication and proposal writing skills of faculty and graduate students? -Did it increase scientific presentations at national or international meetings - Did it increase faculty collaboration between Hispanics serving institutions? - Did it increase faculty collaboration between the governmental agencies or other Hispanic serving Institutions? - Did it increase the number of Hispanic graduates in careers related to agriculture and related sciences? - Did it increase the number of highly competent Hispanic high school teachers? - Did it increase the number of highly trained Hispanic professionals in careers related to agriculture and environmental sciences?</p>	<p>- Did the high school students; teachers and undergraduates learned the research methodologies? - Did the high school students, teachers and undergraduate students leaned about laboratory safety? -Did the high school and undergraduate students learned about career opportunities in the field of agricultural and environmental sciences? -Did faculty and graduate students improved their scientific writing skills by increasing their publications in peer review publications? -Did faculty and graduate students improved their proposal writing skills?</p>	<p>- Did outreach students expressed a modified interest for their participation in careers related to agricultural and environmental sciences? - Did students used their leaned research skills to work of solve a problems related agro-business? - Did students apply laboratory skill learned in research activities to solve rural communities problems related with water quality or soil analysis data needed by local farmers?</p>	<p>Did the participation of undergraduate and graduate student in community service resulted in better water quality in underprivileged rural communities ? Did the assistance of participating students to small farmers and agro-industries resulted in benefits the them? - Did the participation of undergraduate and graduate students in meaningful research projects resulted in better-prepared professionals in the areas of agricultural and environmental sciences? - Did the participation of talented students in outreach activities increase the participation of talented minority students in fields of agricultural and environmental sciences? Did the participation of students in internships at federal agencies related to agriculture result in an increase of Hispanic working in USDA critical need areas.</p>

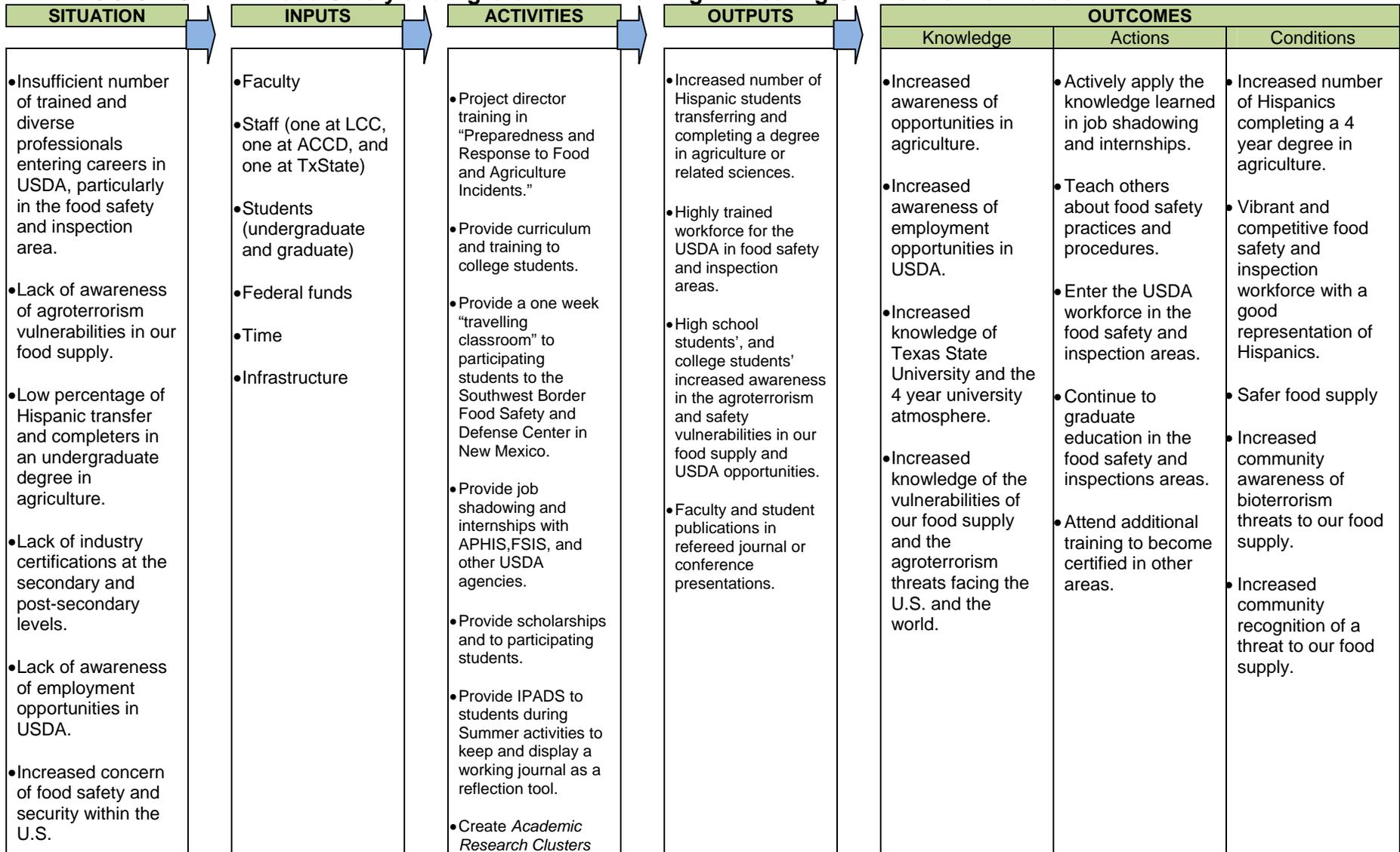


Project Objective: 5 South Texas Hispanic Serving Institutions Collaborating Together to Serve as a Regional Model of how to partner with several USDA agencies to prepare Hispanic Americans for Federal USDA careers

Outcomes: At the end of 4 years there will be 50 to 60 undergraduates who have had internships with a USDA agency (USDA-NRCS, USDA-AMS, USDA-ARS or USDA-APHIS) and graduated with B.S. degrees ready for employment in USDA

Outcomes: 8 M.S. degree and 1 Ph.D. degree graduates in 4 years prepared for research-oriented careers specifically targeted to increase the number of Hispanic Americans employed in Agricultural research-based USDA careers

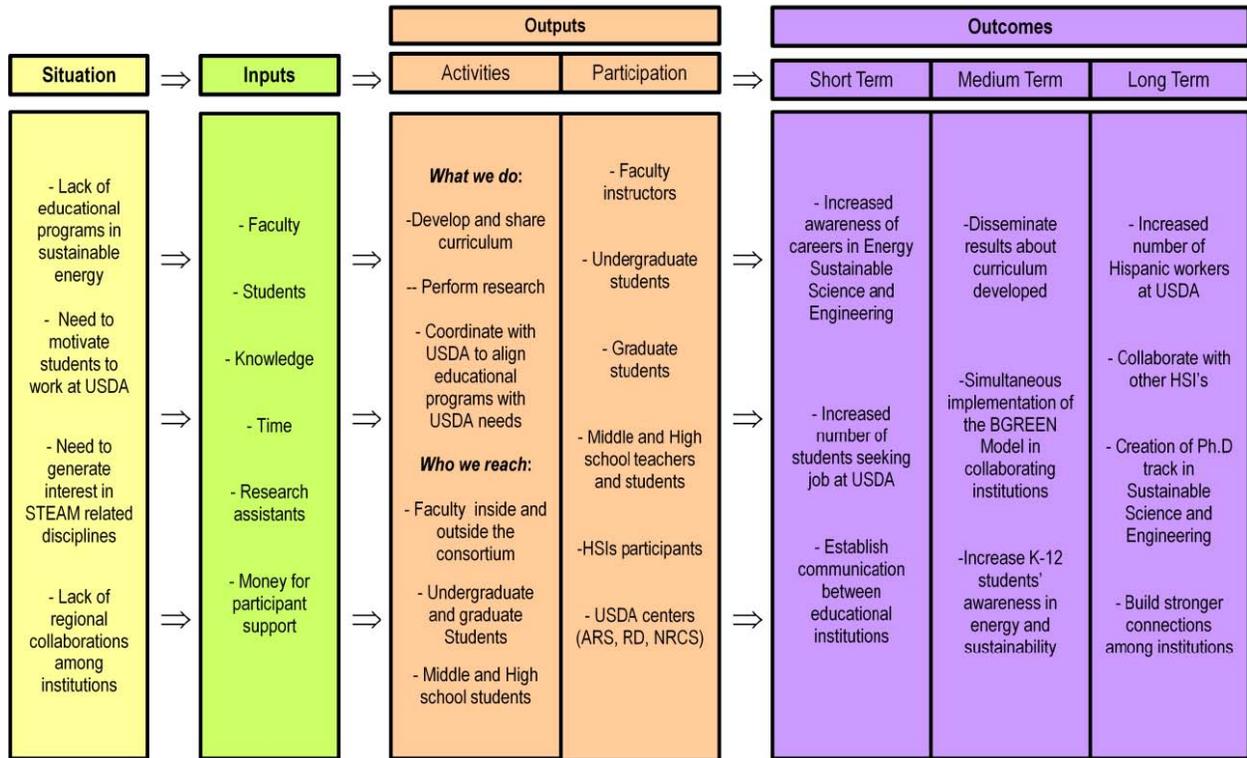
NIFA LOGIC MODEL – Food Safety and Agroterrorism Training: Educating Our Future Workforce



ASSUMPTIONS – Student participants will increase their competencies in dealing with food safety vulnerabilities and incidents in agroterrorism, graduate with a degree in agriculture and be able to enter the workforce in USDA or other governmental agency related to food safety and inspection.

EXTERNAL FACTORS – the success of this project will greatly depend on the effectiveness of recruiting students from community colleges, their attitude on leaving their community for higher education at Texas State University-San Marcos.

Overarching Logic Model: BGREEN - BuildinG a Regional Energy and Educational Network: A Partnership to Integrate Efforts and Collaboration to Shape Tomorrow's Hispanic Sustainable Energy Leaders



Appendix C: Project Baseline and Outcome Data

Exhibit C-1: Outcome Indicators for California State University-San Bernardino (CSU-SB)

Outcome Indicator	Results and Comments
Total Number of USDA Agencies and Partners	<p>Used State equivalent Agencies along with USDA's NRCS [Natural Resources Conversation Service], ARS [Agricultural Research Service], and FS [Forest Service].</p> <p>[Number USDA Agency: 3; Other USDA Affiliates: 4; Local and Regional: 10; Private Industry: 3; Total: 20]</p> <p>For Year 1 all 50 interns have been selected and hired for their internship experience. While some are conducting supervised research with faculty, others are working directly in the following USDA and affiliate agencies: USDA - ARS, USDA-NRCS, California Fish & Game, Elkhorn Slough National Estuarine Research Reserve, and Santa Margarita Ecological Reserve.</p> <p>Others have secured positions with local municipal departments and government entities: City of Monterey, City of Pacific Grove, City of Watsonville, County of Monterey, Marina Coast Water District, Monterey County Health Department, Monterey County Water Resources Agency, Monterey Peninsula Water Management District, Resource Conservation District of Santa Cruz County, and San Dieguito River Park.</p> <p>Finally, three interns are working with industry: AgBiotech, Applied Marine Sciences, and Denise Duffy and Associates.</p>
Total Number of Internships (USDA vs. Others):	All 50 interns have been placed for Year 1.
Total Number of students served/including gender and ethnicity	<p>We have placed 50 interns for Year 1:</p> <p>Asian: 6 (12 percent) Hispanic: 23 (46 percent) Native American: 2 (4 percent) Pacific Islander: 0 (0 percent) White: 17 (34 percent) Other: 2 (4 percent)</p> <p>Male: 23 (46 percent) Female: 27 (54 percent)</p>
Total Percent of retention (undergraduate/grad/Ph. Ds):	<p>Metric in place; not stated.</p> <p>Calculation of student retention is premature at this point. As designed, our program recruits students to participate in internship experiences, but this is the first year of the Program.</p>

Exhibit C-1: Outcome Indicators for California State University-San Bernardino (CSU-SB)

Outcome Indicator	Results and Comments
	We have identified and selected 50 interns to date, and have secured informed consent for participation in data collection necessary to assess future retention and graduation (as well as other academic indicators of success).
Total Number of students in experiential learning (research) mentoring	<p>We have 50 interns in mentored experiential learning positions. The Hispanic Serving Institutions where they are pursuing their education and current degree programs are described below.</p> <p>Institution</p> <p>CSU-Bakersfield: 5 (10 percent)</p> <p>CSU-Fresno: 4 (8 percent)</p> <p>CSU-Los Angeles: 2 (4 percent)</p> <p>CSU-Monterey Bay: 21 (42 percent)</p> <p>CSU-Northridge: 2 (4 percent)</p> <p>CSU-San Bernardino: 3 (6 percent)</p> <p>CSU-San Diego State: 5 (10 percent)</p> <p>CSU-San Marcos: 4 (8 percent)</p> <p>CSU-Stanislaus: 4 (8 percent)</p> <p>Degree Program</p> <p>B.A. /B.S.: 27 (54 percent)</p> <p>M.S.: 23 (46 percent)</p>
Total Number of participants presenting	<p>Although the final calculation of number of student presentations is premature at this point as many students are still completing their internships, the work completed by three of the interns at CSU Bakersfield in addition to other CSU Bakersfield students have been presented at the 2012 Geological Society of America Annual Meeting. Additionally at least 1 other intern has submitted their work for possible inclusion at the 2013 CalGIS Student Competition.</p> <p>Students will be encouraged to present their internship research in subsequent months, and professional conference opportunities will be disseminated via email and the WRI-USDA Watershed website.</p>
Total Number of students enrolled in disciplines applicable to USDA jobs	<p>Metric in place.</p> <p>The major fields of study of the 50 interns are described below. The vast majority are in disciplines applicable to the USDA. All students, regardless of major, are doing watershed and natural resource relevant experiential projects for their internship and will be required to prepare a USDA career plan.</p> <p>Biology/Biological Sciences (10);</p> <p>Civil Engineering (2);</p> <p>Coastal and Watershed Science and Policy (15);</p> <p>Computer Science/Computer Engineering (1);</p>

Exhibit C-1: Outcome Indicators for California State University-San Bernardino (CSU-SB)

Outcome Indicator	Results and Comments
	Environmental Engineering (2); Environmental Science (3); Geography (7); Geology (5); German (1); Health Sciences (1); Industrial Technology (2); Mathematics (1); Photography (1); Plant Science (1); Psychology (1) *Note: Some Interns are dual majors
Total Number of degrees awarded with USDA qualifications	Metric in place. Calculation of degrees awarded is premature at this point. Many interns are still completing their internships for Year 1. Mechanisms are in place to encourage undergraduate students to pursue graduate-level training and for Masters students to pursue doctoral education in disciplines relevant to the USDA. The current degree sought and expected graduation dates of our cohort 1 interns are summarized below. Degree Program B.A. /B.S.: 27 (54percent) M.S.: 23 (46 percent) Expected Graduation by Degree to be Confirmed: B.A. /B.S. Fall 2012: 4 Spring 2013: 14 Summer 2013: 1 Fall 2013: 3 Spring 2014: 4 Spring 2015: 1 Spring 2016: 1 Expected Graduation by Degree to be Confirmed: M.S. Summer 2012: 2 Fall 2012: 3 Spring 2013: 10 Fall 2013: 2 Spring 2014: 5
Total Number of students publishing	<i>Interim Assessment</i> Metric in place. Calculation of number of student publications is premature at this point. Many interns are still completing their

Exhibit C-1: Outcome Indicators for California State University-San Bernardino (CSU-SB)

Outcome Indicator	Results and Comments
	<p>internships for Year 1. Students will be encouraged to coauthor/author their research and submit it to scholarly journals for publication in subsequent months.</p> <p><i>End of Year Assessment</i> Four students produced two publications in the first year.</p>
<p>Comparison of GPA's before and after</p>	<p><i>Interim Assessment</i> The average student GPA pre-internship is 3.41, with a range of 2.58 to 4.0. Students will be provided support to attain and maintain GPA's of at least 3.0 though this project.</p> <p>We have secured informed consent from each student for participation in data collection necessary to assess future academic outcomes.</p> <p><i>End of Year Assessment</i> The average pre-internship GPA is 3.41. Since many internships are still on-going, the post-internship average will continue to be assessed.</p> <p>Fifty-six (56) percent of the interns are females with an average pre-internship GPA of 3.</p>
<p>Developing curriculum and faculty for required USD</p>	<p>Not Applicable. Curriculum development and/or new faculty hire was not an objective of the CSU Collaborative proposal, as funded. Furthermore, it was not a requirement named in the original NIFA RFA (NIFA Funding Opportunity Number USDA-NIFA-HSI-003398, Fiscal Year 2011). It was one among a number of eligible activities. If the USDA would like to add curriculum development and/or new faculty hires to this collaborative project, additional support for such activities will be necessary.</p>
<p>Comparison of female success (before and after); gender and ethnicity</p>	<p>One indicator of female student success is academic achievement. The average female student GPA pre-internship is 3.43, with a range of 2.7 to 4.0. Students will be provided support to attain and maintain GPA's of at least 3.0 though this project.</p> <p>Average Female GPA: Asian Female GPA: 3.16 Hispanic Female GPA: 3.24 Native American Female GPA: 2.74 White Female GPA: 3.75</p> <p>Additional future indicators of student success that we will track include retention, degree attainment, and employment. We have secured informed consent from each student for participation in data collection necessary to assess future academic and other success outcomes.</p>

Exhibit C-1: Outcome Indicators for California State University-San Bernardino (CSU-SB)

Outcome Indicator	Results and Comments
Total Number of students hours advising and tutoring	<p>We have recruited our first cohort of student interns who have begun or already completed their experiential learning projects. Formative data collection and evaluation plans are being developed and will include development of techniques for collecting academic indicators such as quality of advising, access to tutorial services when appropriate, and the like.</p>
Tracking students placement into jobs or Ph.Ds/student mobility	<p>Calculation of student job placement or enrollment in doctoral programs is premature at this point. We have collected the necessary pre-internship academic data to provide baseline assessment, and have secured informed consent for participation in data collection necessary to assess future employment and academic indicators.</p> <p>To date, six students have been jobs or additional paid internships.</p>
Track research activities/English skills	<p>We have 50 interns for Year 1 selected and hired for their internship experience, and have secured their informed consent to collect academic and other performance indicators, as well as providing us with contact information for their academic and internship supervisors. We are currently developing formative evaluation plans and data collection tools to track and assess the effectiveness of their research activity and skill development.</p> <p>Since many internships are in progress, we continue to assess the effectiveness of research activity and skill development.</p>
K-12 activities (and freshman)	<p>All the CSU Hispanic Serving Institutions collaborating on this project conduct large numbers of outreach activities within local K-12 and other community educational agencies. However, outreach and engagement with K-12 institutions was not an objective stated in the original CSU Collaborative proposal.</p> <p>During final budget negotiations that occurred in Washington, DC, the USDA asked that we add an outreach consultant to our contractual obligations on this project. Originally we intended to use that contract to engage the Alliance for Education to develop, implement, and track K-12 outreach activities specifically for this project. The Alliance for Education is San Bernardino County's premier partnership between businesses and education communities, fostering STEM learning both in and out of the classroom. The Alliance for Education is dedicated to preparing today's local youth for successful STEM careers with the end goal of having local businesses hire San Bernardino County graduates. From tutoring, mentorship and family involvement programs — the Alliance for Education is here to help students and families prepare for the future. The Alliance has a state-wide network of outreach contacts that will be used to provide K-12 outreach efforts for this project. More can be learned about the Alliance at http://www.sbcalliance.org/.</p>

Exhibit C-1: Outcome Indicators for California State University-San Bernardino (CSU-SB)

Outcome Indicator	Results and Comments
	<p>We still will utilize the Alliance as appropriate, but our K-12 Outreach has expanded and will include two parts - one at CSU Fresno and one at CSU San Bernardino. CSU Fresno is working with Mathematics, Engineering, and Science Achievement (MESA) on their campus to introduce water-related topics to MESA high school students.</p> <p>CSU San Bernardino is working initially with Upward Bound students (but will be expanded to others) and offering an internship program for underrepresented, STEM-focused high school students that teaches them advanced Geographic Information Systems (GIS), Global Positioning Systems (GPS), and mobile technologies (tablets, pads and mobile applications) skill sets in settings that are tailored to USDA-relevant topics. The first cohort is comprised of 8 students from 5 local schools. The applications are designed to be used with, and are compatible with, the Education and Environment Initiative (EEI) Curriculum, the first environment based curriculum approved by the California State Board of Education, so the use of these applications will not be extra-curricular, but rather take place inside the classroom. These applications will continue to be available to the teachers and students even after our grant is over for long-lasting impacts to K-12 STEM curriculum in California.</p>
<p>Community engagement activities</p>	<p>All the CSU Hispanic Serving Institutions collaborating on this project conduct large numbers of outreach and engagement activities within our local communities. However, community engagement was not an objective of the CSU Collaborative proposal.</p> <p>During final budget negotiations that occurred in Washington, DC, the USDA asked that we add an outreach consultant to our contractual obligations on this project as discussed above.</p> <p>California State University-Fresno participated in the national Professional Science Master’s Association Regional Workshop where there was discussion of water-related careers, promotion of degrees and internships. CSU-SB exhibited at Stemapalooza 2012 with over 750 middle school students were in attendance.</p>
<p>Budget implementation</p>	<p>CSUSB Sponsored Programs Administration has set up our budgetary accounts and the employment contracts for each of the student interns. The first cohort of students have been and will continue to be billing CSUSB for the time they log in their Watershed Internships. We were very close to our annual spending cap for our 2011-2012 award by the end of the performance period, with the remainder to be spent shortly thereafter.</p> <p>Budget obligations and expenditures are on track.</p>

Exhibit C-1: Outcome Indicators for California State University-San Bernardino (CSU-SB)

Outcome Indicator	Results and Comments
Agency/Participant Survey	Formative evaluation data collection procedures are currently being developed. We have secured our first cohort of interns and identified the agencies with whom they will be working. Intern performance and other evaluative data will be collected at the appropriate time in the future.
Project's Outreach at K-12	<p>All the CSU Hispanic Serving Institutions collaborating on this project conduct large numbers of outreach activities within local K-12 and other community educational agencies. However, outreach and engagement with K-12 institutions was not an objective stated in the original CSU Collaborative proposal.</p> <p>During final budget negotiations that occurred in Washington, DC, the USDA asked that we add an outreach consultant to our contractual obligations on this project. Originally we intended to use that contract to engage the Alliance for Education to develop, implement, and track K-12 outreach activities specifically for this project. The Alliance for Education is San Bernardino County's premier partnership between businesses and education communities, fostering STEM learning both in and out of the classroom. The Alliance for Education is dedicated to preparing today's local youth for successful STEM careers with the end goal of having local businesses hire San Bernardino County graduates. From tutoring, mentorship and family involvement programs — the Alliance for Education is here to help students and families prepare for the future. The Alliance has a state-wide network of outreach contacts that will be used to provide K-12 outreach efforts for this project. More can be learned about the Alliance at http://www.sbcalliance.org/.</p> <p>We still will utilize the Alliance as appropriate, but our K-12 Outreach has expanded and will include two parts - one at CSU Fresno and one at CSU San Bernardino.</p>

Source: California State University, USDA First-Year Progress Report, May 2012

Exhibit C-2: Outcome Indicators for Florida International University (FIU)

Outcome Indicator	Results and Comments
Total Number of USDA Agencies and Partners	<p>Seven (7): USDA Agencies: 5; State/Territory: 1; Local/Regional: 1</p> <p>USDA Agency Partners: USDA Agricultural Research Service (ARS); USDA Natural Resources Conservation Service (NRCS); USDA Forest Service (FS); USDA Hispanic-Serving Institutions National Program (HSINP); USDA Animal and Plant Health Inspection Service (APHIS)</p> <p>State/Territory Partners: Tropical Agriculture Research Station at Mayagüez, PR</p> <p>Local/Regional Partners: Fairchild Tropical Botanical Garden</p>
Total Number of Internships (USDA vs. Others):	Thirty-six (36)
Total Number of students served/including gender and ethnicity	<p>Fifty-four (54).</p> <p>Hispanic: 89 percent [48] Black/African American: 7 percent [4] White: 4 percent [2]</p> <p>Male: 48 percent [26] Female: 52 percent [28]</p> <p>As a consortium, we have recruited 52 undergraduate students and two master students (89 percent of whom Hispanic), meeting 100 percent of our goal.</p>
Total Percent of retention (undergraduate/grad/Ph.Ds):	92 percent
Total Number of students in experiential learning (research) mentoring	<p>Fifty-four (54).</p> <p>FIU's Organic Garden serves as a model for experiential learning, with students dedicating a minimum of 4 hours per week of hands-on activities. STU is beginning lab training and research methods for each of their students, while MDC students are in the process of building a garden to expand curricular enrichment and experiential learning. IUA students are in the process of completing an average of 70 hours in online continuing education in modules related to food safety, agriculture, soil science, bioterrorism and agro-terrorism and environmental sciences.</p> <p>In addition, FIU hosted a colloquium on the fundamentals of soils, with online and in-class interactive discussions. IAU students participated of an Agroecology and urban orchard Workshop at Alborada Mission</p>

Exhibit C-2: Outcome Indicators for Florida International University (FIU)

Outcome Indicator	Results and Comments
	<p>Farm at Morovis, P.R. A Facebook group (called FCCAgE) was created and is a media for students to post various discussions, articles, and pictures, and communicate with one another. IClickers, video cameras, wikis, blogs, smart phone application, learning programs and program website are other instructional delivery tools under development.</p> <p>MDC Garden is established. IAU students visited Miami for a one-week Agroecology workshop where they participated in lectures and field activities, as well as hands on workshops and engagement with the other institution.</p> <p>FIU also developed a colloquium on Integrated Pest Management, where local guest speakers from USDA were invited for guest lectures, and field visits were conducted. In addition, FIU's Agroecology class is also providing experiential learning through field activities at a high biologically diverse farm called Possum Trot. Moreover, STU developed a course on Plant Physiology where bioinformatics software was implemented.</p>
Total Number of participants presenting	<p>Students: 32</p> <p>Faculty: 25</p> <p>Presentations/Publications (n = 75):</p> <ul style="list-style-type: none"> • Bhat, M. and Jayachandran, K., Maul, P., Adoghe, L., and Toro, A., 2012. Florida-Caribbean Consortium for Agriculture Education and Hispanic Workforce Development. Oral Presentation at the Meeting of the USDA Agencies of Florida and Puerto Rico, Miami, Florida. • Bhat, M., 2012. Agroecology and sustainable food production. Oral presentation in the World Food class. Florida International University. April, 2012. • Bhat, M., 2012. Ingredients. Discussant for the SEAS Environmental Movie Screening Program, Florida International University, January 2012. • Bhat, M. Jayachandran, K., Maul, P., Belmont, H., and Toro, 2011. A. Collaborations in Grants Development--Insights from the Florida-Caribbean Consortium for Agricultural Education. National Federal Grants Conference, Miami Dade College, October 2011. • Bhat, M. 2011. Agroecology--its relevance for the new decade and the future. Miami Dietetic Association, 2011 Food Day Meeting, October 2011.

Exhibit C-2: Outcome Indicators for Florida International University (FIU)

Outcome Indicator	Results and Comments
	<ul style="list-style-type: none"> • Burras, L. 2012. Best Practices in Sustainable Agriculture, Carbon Farming to Local Food Production. FIU Agroecology Symposium. April 2012 • Jayachandran, K. 2011. Agroecology: Significance of Plant Sciences in Research and Education. Fairchild Tropical Botanical Garden, Miami, FL, November 05, 2011. • Jayachandran, K. 2011. Interdisciplinary Training in Agriculture and Environment. Environmental Emersion Day for Miami Springs High school Students, Florida International University, Miami, FL, November 08, 2011. • Jayachandran, K and M. Bhat. 2011. Agroecology Program: Community Engagement. FIU Task Force Engagement Meeting, FIU, Miami, FL, November 29, 2011. • Jayachandran, K. and Bhat, M. 2012. Agroecology and STEAM education program at FIU. Miami-Dade Regional Science and Engineering Fair. Miami, FL, January 21, 2012. • Jayachandran, K. 2012. Interdisciplinary Training in Agriculture and Environment. Agriculture and Environment Day--Host for TERRA High school students, Florida International University, Miami, FL, January 27, 2012. • Jayachandran, K. 2012. Agroecology Program at FIU--Research, Education, and Outreach. University of Florida-IFAS-Tropical Research and Education Center, Homestead, Florida, February, 2012 • Jayachandran, K and M. Bhat. 2012. Agroecology Program at FIU— Research Collaborations and Student Internships. A Research Symposium. USDA-ARS Sub-Tropical Horticulture Research Station, Miami, FL, March 14, 2012. • Jayachandran, K. 2012. Meet the Scientist: Research and Education in Agriculture Sciences. TERRA Environmental Research Institute, Miami, Florida, March, 2012. • Jayachandran, K. 2012. Agroecology and STEAM education program at FIU. NASA Space Applications Challenge. Engineering College, Florida International University, Miami, Florida, April, 2012. • Jayachandran, K, and M. Bhat. 2012. Agroecology: Cultivating New Minds. Florida International University Monograph Series. Florida

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Outcome Indicator	Results and Comments
	<p>International University, Miami, Florida, 2012.</p> <ul style="list-style-type: none"> • Bhat, M., Jayachandran, K., Pilar Maul, Loreta Adoghe, Arlin Toro. 2011. Florida-Caribbean Consortium for Agriculture Education and Hispanic Workforce Development. Oral and Poster Presentation at the USDA National Hispanic Serving Institutions National PDs Conference, November 2011. • Betancourt E. 2012. Comparing Control agents for Carrot Root-Knot Nematode. FIU Agroecology Symposium. April 2012. • Ayman, E. 2012. Determining consumers' willingness to buy locally grown produce. FIU Agroecology Symposium. April 2012 • Moonilall, N. 2012. Composted Cardboard Mixed with Insect Colony Waste as a Potting Substrate for Plants. FIU Agroecology Symposium. April 2012 • Bianca B. 2012. Tropical Fruit Diversity: Evaluation of Sapodilla Cultivars. FIU Agroecology Symposium. April 2012 • Borrero, H. 2012. Crop Pollen Diversity Carried by South Florida Native Bees. FIU Agroecology Symposium. April 2012 • Matos, K. 2012. Determining the Invasive Capacity of Horticultural Species Grown and/or Sold in South Florida. FIU Agroecology Symposium. April 2012 • Luna, C. 2012. Common Pesticides Relating to Health Effects in Humans. FIU Agroecology Symposium. April 2012 • Alvarez, J. 2012. Impact of Agricultural Cropland on Climate. FIU Agroecology Symposium. April 2012 • De La Rosa, N. 2012. Exploring the Benefits of Clay-pot Irrigation as a Water Conservation Tool in Small Scale Agricultural Systems FIU Agroecology Symposium. April 2012. • Jiron, K. 2012. Investigating the influence of water pH on soil pH and growth in Raphanus sativus. FIU Agroecology Symposium. April 2012 • Tome, B. 2012. Foraging Patterns of Bees In and Around Mountain Lake Biological Station. FIU Agroecology Symposium. April 2012.

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Outcome Indicator	Results and Comments
	<ul style="list-style-type: none"> • Vazquez, C. 2012. Micro propagation and development of an in Vitro long term storage method for Florida rare plant <i>Justicia cooleyi</i>. FIU Agroecology Symposium. April 2012. • Amedee, G. 2012. Pilot Study: Trapping Caribbean Fruit Flies with Plants Essential Oils and Fruit Odors. FIU Agroecology Symposium. April 2012. • Arevalo, C. 2012. In vitro Callus Induction in important Cacao Cultivars, FIU Agroecology Symposium. April 2012. • Perez, Emily. 2012. Inoculation of Susceptible and Resistant Tobacco with Tobacco Mosaic Virus. FIU Agroecology Symposium. April 2012. • Bostick, J. 2012. Fruit Power. FIU Agroecology Symposium. April 2012. • Amedee, G. 2012. Pilot Study: Trapping Caribbean Fruit Flies with Plants Essential Oils and Fruit Odors. STU Cell Biology Symposium. April 2012. • Maul, P. Jaramillo, M. 2011. USDA Summer Internships and Introduction to FCCAgE Program. St. Thomas University. December 2011. • Vasquez, C. 2012. Winner essay to participate on the USDA's Outlook Forum. USDA News Release. January 27, 2012. • Vasquez, C. 2012. Conservation of Florida's Endanger Plants: Developing a Long Term Storage Method for <i>Justicia cooleyi</i>. STU Earth Day. April 12, 2012. • Vazquez, C. 2012. Micro propagation and development of an in Vitro long term storage method for Florida rare plant <i>Justicia cooleyi</i>. STU Cell Biology Symposium. April 2012 • Maul, P.; Steelant, W. and Vazquez, C. USDA Careers and job opportunities in Plant Sciences. Ferguson Senior High School. March 22, 2012. • Petasne M, Campa A, Johnson P, Baum MK, Himgurg S. Comprehensive Nutrition and Lifestyle Education Improves Weight Loss and Physical Activity in Hispanic-Americans Following Roux-en-Y Gastric Bypass: a Randomized-Controlled Trial. Journal of the

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Outcome Indicator	Results and Comments
	<p>Academy of Nutrition and Dietetics, 2012, 112.3.382.390.</p> <ul style="list-style-type: none"> • Hatsu I, Campa A, Huffman F, Johnson P, Thomlison B, Barr S, Williams S, Baum MK. Participation in the food stamp program, food insecurity and HIV-disease among low income HIV adults in Miami. FASEB. Experimental Biology 2012, San Diego, CA, Abstract 5779, Poster C105, Section 631.9, April 21, 2012. • Campa A. Hernandez G, Martinez-Sales S, Li Y, Lai S, Page JB, Baum MK. Alternative Healthy Eating Index and its association with adequate intake and nutritional status in HIV adults. FASEB. Experimental Biology 2012, San Diego, CA, Abstract 6378, Poster C8, Section 1004.8, April 21-25, 2012. • Babatunde O, Campa A, Himburg S. Lessons learned in conducting health-related research among a minority older adult population. FASEB. Experimental Biology 2012, San Diego, CA, Abstract in section 1010.2, Poster C29, April 21-25, 2012. • Perez, E. 2011. Agroecology Program to award more than \$330,000 in scholarships. FIU News. 11/08/2011. http://news.fiu.edu/2011/11/agroecology-program-to-award-morethan-330000-in-scholarships/33317. • Perez, E. 2011. Environmental Immersion Day. FIU News. 11/14/2011 http://news.fiu.edu/2011/11/fiu-hosts-high-school-students-for-environmentalimmersion-day/33368. • Adkins, J. 2012. FIU receives federal designation from USDA. FIU News. 05/10/2012 http://news.fiu.edu/tag/agroecology-program. • Alvarez, Adisbelkis and Valido, Ricky. 2012. Biological control for South Florida Invasive plants. Oral Presentation at FIU Summer Ag-Internships Symposium. August 2012. • Alvarez, J. 2012. Impact of Agricultural Cropland on Climate. Oral Presentation at the FIU Agroecology Symposium. April 2012 • Amedee, G. 2012. Pilot Study: Trapping Caribbean Fruit Flies with Plants Essential Oils and Fruit Odors. Poster presentation at the FIU Agroecology Symposium. April 2012. • Amedee, G. 2012. Pilot Study: Trapping Caribbean Fruit Flies with Plants Essential Oils and Fruit Odors. Poster Presentation at the STU Cell Biology Symposium. April 2012.

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Outcome Indicator	Results and Comments
	<ul style="list-style-type: none"> • Amedee, Garrick. 2012. Timber Management at the National Forests in Fairplay, Colorado: My experience as a forestry technician. Poster Presentation at STU Summer Internship Symposium. September 2012. • Arevalo, C. 2012. In vitro Callus Induction in important Cacao Cultivars, FIU Agroecology Symposium. April 2012. • Ayman, E. 2012. Determining consumers' willingness to buy locally grown produce. Oral Presentation at the FIU Agroecology Symposium. April 2012 • Babatunde O, Campa A, Himburg S. Lessons learned in conducting health-related research among a minority older adult population. FASEB. Experimental Biology 2012, San Diego, CA, Abstract in section 1010.2, Poster C29, April 21-25, 2012. • Beacharnais, Sofia. 2012. The Cultivating Effectives of USDA Agricultural Ambassador Program on High School Students, HSI. Oral Presentation at FIU Summer Ag- Internships Symposium. August 2012. • Betancourt E. 2012. Comparing Control agents for Carrot Root-Knot Nematode. FIU Agroecology Symposium. April 2012. • Bhat, M. and Jayachandran, K., Maul, P., Adoghe, L., and Toro, A., 2012. Florida-Caribbean Consortium for Agriculture Education and Hispanic Workforce Development. Oral Presentation at the Meeting of the USDA Agencies of Florida and Puerto Rico, Miami, Florida. • Bhat, M., 2012. Agroecology and sustainable food production. Oral presentation in the World Food class. Florida International University. April, 2012. • Bhat, M., 2012. Ingredients. Discussant for the SEAS Environmental Movie Screening Program, Florida International University, January 2012. • Bhat, M. Jayachandran, K., Maul, P., Belmont, H., and Toro, 2011. A. Collaborations in Grants Development--Insights from the Florida-Caribbean Consortium for Agricultural Education. National Federal Grants Conference, Miami Dade College, October 2011.

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Outcome Indicator	Results and Comments
	<ul style="list-style-type: none"> • Bhat, M. 2011. Agroecology--its relevance for the new decade and the future. Miami Dietetic Association, 2011 Food Day Meeting, October 2011. • Bhat, M., Jayachandran, K., Pilar Maul, Loreta Adoghe, Arlin Toro. 2011. Florida-Caribbean Consortium for Agriculture Education and Hispanic Workforce Development. Oral and Poster Presentation at the USDA National Hispanic Serving Institutions National PDs Conference, November 2011. • Bhat, M., Jayachandran, K., Pilar Maul, Loreta Adoghe, Arlin Toro. 2012. Florida-Caribbean Consortium for Agriculture Education and Hispanic Workforce Development. Oral and Poster Presentation at the USDA National Hispanic Serving Institutions National PDs Conference, October 2012. • Bonilla, Bianca. 2012. Tropical Fruit Diversity: Evaluation of Sapodilla Cultivars. Oral presentation at the FIU Agroecology Symposium. April 2012 • Borrero, H. 2012. Crop Pollen Diversity Carried by South Florida Native Bees. Oral presentation at the FIU Agroecology Symposium. April 2012 • Bostick, J. 2012. Fruit Power. Poster presentation at the FIU Agroecology Symposium. April 2012. • Bruceta, Melanio. 2012. Phylogenetics of the <i>Zamia pumila</i> complex. Oral presentation at FIU Summer Ag-Internships symposium. August 2012. • Bruceta, Melanio. 2012. Phylogenetics of the <i>Zamia pumila</i> complex. Poster Presentation at STU Summer Internships Symposium. September 2012. • Burras, L. 2012. Best Practices in Sustainable Agriculture, Carbon Farming to Local Food Production. FIU Agroecology Symposium. April 2012 • Campa A. Hernandez G, Martinez-Sales S, Li Y, Lai S, Page JB, Baum MK. 2012. Alternative Healthy Eating Index and its association with adequate intake and nutritional status in HIV adults. FASEB. Experimental Biology 2012, San Diego, CA, Abstract 6378, Poster C8, Section 1004.8, April 21-25, 2012.

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Outcome Indicator	Results and Comments
	<ul style="list-style-type: none"> • Castellon, Arturo. 2012. Identification of Nematodes and Fungi at the APHIS-PPQ Plant Inspection Station. Oral Presentation at FIU Summer Ag- Internships Symposium. August 2012. • Cordoba, Eliana. 2012. Developing a scientific approach of caloptilia triadicae. Oral Presentation at FIU Summer Ag- Internships Symposium. August 2012. • De La Rosa, N. 2012. Exploring the Benefits of Clay-pot Irrigation as a Water Conservation Tool in Small Scale Agricultural Systems. Poster Presentation at the FIU Agroecology Symposium. April 2012. • Galvanes, Claudia. 2012. Finding a Biocontrol Agent for the Cactus Mealybug. Oral Presentation at FIU Summer Ag-Internships Symposium. August 2012 • Galvanes, Claudia. 2012. Finding a Biocontrol Agent for the Cactus Mealybug. Poster Presentation at STU Summer Internship Symposium. September 2012 • Gonzalez, Claudia. 2012. Sampling flies. No way! Oral Presentation at FIU Summer Ag- Internships Symposium. August 2012. • Gonzalez-Abreu, Patricia. 2012. The Hidden World of Diaspididae MDC, APHIS. Oral Presentation at FIU Summer Ag- Internships Symposium. August 2012. • Hatsu I, Campa A, Huffman F, Johnson P, Thomlison B, Barr S, Williams S, Baum MK. 2012. Participation in the food stamp program, food insecurity and HIV-disease among low income HIV adults in Miami. FASEB. Experimental Biology 2012, San Diego, CA, Abstract 5779, Poster C105, Section 631.9, April 21, 2012. • Herdocia, Karenyn. 2012. The invasive plant Rhodomyrtus tomentosa and its natural enemies: Carea varipes and Neostauropus alternus. Oral Presentation at FIU Summer Ag- Internships Symposium August 2012. • Herdocia, Karenyn. 2012. The invasive plant Rhodomyrtus tomentosa and its natural enemies: Carea varipes and Neostauropus alternus. Poster Presentation at STU Summer Internship Symposium (recognition award winner). September 2012.

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Outcome Indicator	Results and Comments
	<ul style="list-style-type: none"> • Jayachandran, K. 2011. Agroecology: Significance of Plant Sciences in Research and Education. Fairchild Tropical Botanical Garden, Miami, FL, November 05, 2011. • Jayachandran, K. 2011. Interdisciplinary Training in Agriculture and Environment. Environmental Emersion Day for Miami Springs High school Students, Florida International University, Miami, FL, November 08, 2011. • Jayachandran, K and M. Bhat. 2011. Agroecology Program: Community Engagement. FIU Task Force Engagement Meeting, FIU, Miami, FL, November 29, 2011. • Jayachandran, K. and Bhat, M. 2012. Agroecology and STEAM education program at FIU. Miami-Dade Regional Science and Engineering Fair. Miami, FL, January 21, 2012. • Jayachandran, K. 2012. Interdisciplinary Training in Agriculture and Environment. Agriculture and Environment Day--Host for TERRA High school students, Florida International University, Miami, FL, January 27, 2012. • Jayachandran, K. 2012. Agroecology Program at FIU--Research, Education, and Outreach. University of Florida-IFAS-Tropical Research and Education Center, Homestead, Florida, February, 2012 • Jayachandra, K and M. Bhat. 2012. Agroecology Program at FIU-- Research Collaborations and Student Internships. A Research Symposium. USDA-ARS-SubTropical Horticulture Research Station, Miami, FL, March 14, 2012. • Jayachandran, K. 2012. Meet the Scientist: Research and Education in Agriculture Sciences. TERRA Environmental Research Institute, Miami, Florida, March, 2012. • Jayachandran, K. 2012. Agroecology and STEAM education program at FIU. NASA Space Applications Challenge. Engineering College, Florida International University, Miami, Florida, April, 2012. • Jayachandran, K, and M. Bhat. 2012. Agreocology: Cultivating New Minds. Florida International University Monograph Series. Florida International University, Miami, Floria, 2012.

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Outcome Indicator	Results and Comments
	<ul style="list-style-type: none"> • Jiron, K. 2012. Investigating the influence of water pH on soil pH and growth in <i>Raphanus sativus</i>. Poster presentation at the FIU Agroecology Symposium. April 2012. • Juste, Randy. 2012. Analysis of Chemical variation among avocado trees. Oral Presentation at FIU Summer Ag- Internships Symposium. August 2012. • Luna, C. 2012. Common Pesticides Relating to Health Effects in Humans. Poster Presentation at the FIU Agroecology Symposium. April 2012. • Matos, K. 2012. Determining the Invasive Capacity of Horticultural Species Grown and/or Sold in South Florida. Poster presentation at the FIU Agroecology Symposium. April 2012. • Maul, P. Jaramillo, M. 2011. USDA Summer Internships and Introduction to FCCAgE Program. St. Thomas University. December 2011. • Mendez, Manuel. 2012. Biological Control with Insect Colonies. Oral Presentation at FIU Summer Ag- Internships Symposium. August 2012. • Misdraji, Jeni. 2012. Summer Training at the USDA Food Safety Inspection Services: Providing the Consumer with Safe Meat, Poultry, and Egg Products Everyday. Oral Presentation at FIU Summer Ag- Internships Symposium. August 2012. • Misdraji, Jeni. 2012. Summer Training at the USDA Food Safety Inspection Services: Providing the Consumer with Safe Meat, Poultry, and Egg Products Everyday. Poster Presentation at STU Summer Internships Symposium. September 2012. • Moonilall, N. 2012. Composted Cardboard Mixed with Insect Colony Waste as a Potting Substrate for Plants. Poster presentation at the FIU Agroecology Symposium. April 2012 • Otero Ramos, Jonathan, Alvarez Torres, Beverly, Millan Hernandez, Christian, Rodriguez Valentin, Jose, Acosta Gonzalez, Anthony, Santiago Feliciano, Jiomar Toro Silva, Isamar Vazquez, and Ocasio, Jorge. 2012. Internship Experience at Puerto Rico. Video presentation at FIU Summer Ag- Internships Symposium. August 2012.

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Outcome Indicator	Results and Comments
	<ul style="list-style-type: none"> • Perez, Emily. 2012. Inoculation of Susceptible and Resistant Tobacco with Tobacco Mosaic Virus. FIU Agroecology Symposium. April 2012. • Perez, E. 2011. Agroecology Program to award more than \$330,000 in scholarships. FIU News. 11/08/2011. news.fiu.edu/2011/11/agroecology-program-to-award-more-than-330000-in-scholarships/33317. • Perez, E. 2011. Environmental Immersion Day. FIU News. 11/14/2011 news.fiu.edu/2011/11/fiu-hosts-high-school-students-for-environmental-immersion-day/33368. • Adkins, J. 2012. FIU receives federal designation from USDA. FIU News. 05/10/2012 news.fiu.edu/tag/agroecology-program. • Petasne M, Campa A, Johnson P, Baum MK, Himburg S. 2012. Comprehensive Nutrition and Lifestyle Education Improves Weight Loss and Physical Activity in Hispanic-Americans Following Roux-en-Y Gastric Bypass: a Randomized-Controlled Trial. Journal of the Academy of Nutrition and Dietetics, 2012, 112.3.382.390. • Ramos, Siffredi. 2012. C002 Gene Detection in two Hemipteran Species: Brown Citrus Aphid (Toxoptera citricidus) and Whitefly (Bemisia argentifolii). Oral presentation at FIU Summer Ag-Internships symposium. August 2012. • Ramos, Siffredi. 2012. C002 Gene Detection in two Hemipteran Species: Brown Citrus Aphid (Toxoptera citricidus) and Whitefly (Bemisia argentifolii). Poster presentation at STU Summer Internships Symposium. September 2012. • Ramos, Siffredi. 2012. The Impact FCCAgE has had in my Professional Development. Oral presentation at FIU Summer Ag-Internships symposium. August 2012. • Sanchez, Roberto and Saa, Eduardo. 2012. The displacement of Native Plants by Brazilian pepper trees: USDA Internship at ARS. Oral Presentation at FIU Summer Ag- Internships Symposium. August 2012. • Salomon, Joseph. 2012. Protection of Native Plants ARS. Oral Presentation at FIU Summer Ag- Internships Symposium. August 2012.

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Outcome Indicator	Results and Comments
	<ul style="list-style-type: none"> • Santiago Feliciano, Jiomar. Murugesan, G. Raj and Persia, Michael E. Interactions of exogenous enzymes and direct-fed microbials on energy metabolism in broiler chickens. Oral and Poster Presentation for Iowa State University Internship. August 2012. • Tome, B. 2012. Foraging Patterns of Bees In and Around Mountain Lake Biological Station. FIU Agroecology Symposium. April 2012. • Urbina, Cristina. 2012. Measuring the effectiveness of fungicide in avocado trees for the redbay ambrosia beetle. Oral Presentation at FIU Summer Ag- Internships Symposium. August 2012. • Vazquez, C. 2012. Micro propagation and development of an in Vitro long term storage method for Florida rare plant <i>Justicia cooleyi</i>. FIU Agroecology Symposium. April 2012. • Vasquez, C. 2012. Winner essay to participate on the USDA's Outlook Forum. USDA News Release. January 27, 2012. • Vasquez, C. 2012. Conservation of Florida Endanger Plants: Developing a Long Term Storage Method for <i>Justicia cooleyi</i>. STU Earth Day. April 12, 2012. • Vazquez, C. 2012. Micro propagation and development of an in Vitro long term storage method for Florida rare plant <i>Justicia cooleyi</i>. STU Cell Biology Symposium. April 2012. • Maul, P.; Steelant, W. and Vazquez, C. USDA Careers and job opportunities in Plant Sciences. Ferguson Senior High School. March 22, 2012. • Vazquez, Carlos. 2012. Methodology Development for the Extraction of Anthocyanins in <i>Griffinia espiritensis</i>. Poster Presentation at STU Summer Internships Symposium. September 2012. • Valentin, Vanessa. 2012. The invasive plant <i>Rhodomyrtus tomentosa</i> and its natural enemies: <i>Carea varipes</i> and <i>Neostauropus alternus</i>. Oral Presentation at FIU Summer Ag- Internships Symposium. August 2012. • Valentin, Vanessa. 2012. The invasive plant <i>Rhodomyrtus tomentosa</i> and its natural enemies: <i>Carea varipes</i> and <i>Neostauropus alternus</i>. Poster Presentation at STU Summer Internship Symposium (recognition award). September 2012.

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Outcome Indicator	Results and Comments
	<ul style="list-style-type: none"> • Vergara, Karen. 2012. USDA, APHIS, Animal Care Smithsonian National Zoo, Washington D.C. A Work Experience Internship. Oral Presentation at STU Summer Internships Symposium (recognition award winner). September 2012. • Vidales, Rosario. 2012. Identifying Differences within the Rhopalotria Genus. Oral Presentation at FIU Summer Ag-Internships Symposium. August 2012.
Total Number of students enrolled in disciplines applicable to USDA jobs	<p>Fifty-four (54).</p> <p>The Program involves four Hispanic Serving Institutions, namely, Florida International University (as lead institution), Miami Dade College North, St. Thomas University and Interamerican University. Other collaborators include seven USDA Agencies, including National Hispanic Program Regional Office of Florida and Puerto Rico and Agricultural Research Service in Miami, and Fairchild Tropical Botanical Garden, Earth Learning</p> <p>Foundation, Miami Dade Public School District and area farmers. During the first year, the FCCAgE program funded 54 students, one full-time program coordinator, three part time program coordinators at partner HSI institutions, seven faculty members and two representatives from Earth Learning. At the annual Agroecology Conference, seventeen students, including two high school students, made oral and/or poster presentations.</p> <p>More than 120 students, staff, faculty members, farmers and agency representatives participated at the symposium. Through high school outreach, we have communicated with over 500 high school students and recruited 10 students for high school internships this summer. Similarly, we have recruited 22 K-12 teachers for this summer teacher workshop. A social networking group called FCCAgE was created through Facebook and currently has 62 members. FIU created a MANRRS chapter in January</p> <p>2012, and already has over 43 members. Thirty-five FCCAgE students have had the opportunity to attend a national conference.</p>
Total Number of degrees awarded with USDA qualifications	Too early to report.
Total Number of students publishing	Three (3) – too early to report
Comparison of GPA's before and after	Current average GPA: 3.32.

Exhibit C-2: Outcome Indicators for Florida International University (FIU)

Outcome Indicator	Results and Comments
Developing curriculum and faculty for required USD	Four (4) – 1 colloquium at FIU, 2 undergraduate research mentoring class (St. Thomas University and InterAmerican University of Puerto Rico), 1 supervised horticulture training program at Miami Dade College.
Comparison of female success (before and after); gender and ethnicity	Too early to measure.
Total Number of students hours advising and tutoring	1280 hours year to date.
Tracking students placement into jobs or Ph. Ds/student mobility	Too early to measure.
Track research activities/English skills	85 percent fully proficient in English.
K-12 activities (and freshman)	Seventeen (17).
Community engagement activities	<p>Twenty-six (26) activities, total hours (collectively) 7,500.</p> <p>Each of the 54 students admitted so far already has or will soon have a faculty mentor to guide his or her research project. Thirty-Eight students are actively engaged in research projects. Consortium-wide, students have spent over 7,500 hours (collectively) in community engagement activities at Fairchild Tropical Botanic Gardens, Earth Learning, Farmers Markets, Possum Trot, ECHO Farms, and garden building/maintenance, among other activities. Consortium-wide, 75 students applied to the USDA internship portal. As a result of networks made through Vladimir Diaz, USDA Regional Director for FL and PR, MANRRS attendance, campus visit by NRCS, and personal communication, 36 FCCAgE students (85 percent) and an additional five students were accepted at seven USDA agencies and partners for summer 2012 internships. We have outreached to five local high schools and participated in three local fair expositions. In addition, we had 22 K-12 teachers participate in this summer week-long teacher workshop, and 10 high school students accepted into FIU Agroecology Summer Internships. OBJECTIVE 4 (Place Hispanic and other minority graduates of the FCCAgE in USDA)--The program has an extensive agenda for career development programs already in place. Consortium-wide, 21 students attended the MANRRS conference from March 29-31st. The Agroecology Symposium held at FIU in April had an attendance of about 120 people, giving students opportunity to learn about research ideas and network with others. Professional development training included the USDA Career Development Workshop where students covered many topics - USDA mission,</p>

Exhibit C-2: Outcome Indicators for Florida International University (FIU)

Outcome Indicator	Results and Comments
	<p>personality test, career panels, resume workshop, career strategy, introductions, etc. Collectively, consortium students have spent over 4000 hours in professional development training, Agroecology workshops, and field visits since the program’s inception. Five students joined project director, Mahadev Bhat, and co-directors, Krish Jayachandran and Loretta Adoghe, at the upcoming USDA HSI Grantees Conference in Texas. In October 2012, nine FCCAgE Students attended the HACU Conference in Washington, D.C.</p>
Budget implementation	70 percent of \$800,000 of the first year budget spent or committed.
Agency/Participant Survey	In progress
Project’s Outreach at K-12	100 percent recruitment, 70 percent curriculum innovation and instructional delivery, 100 percent experiential and experimental training, and 100 percent internship and career development activities.
Outcome Statement	<p>The USDA-NIFA HSI program has enabled each institution to use individual strengths to collectively develop a program that focuses on USDA need areas, by engaging underrepresented students in biological, environmental, and food sciences at the university and in the community. Forty-eight percent of scholars in this program are first generation students and 96 percent are of minority background. Twenty-one students attended the MANRRS conference, four of whom were selected for USDA FS internships. About 36 students participated in unpaid USDA summer internships.</p> <p>They returned with energy and excitement about being part of this program. More than 400 students (both grant-funded and unfunded), 60 percent of which are Hispanic, took advantage of the agroecology courses, internships, workshops, and travel opportunities offered by the FCCAgE. At least 100 more, including some high school students and teachers, attended the annual agroecology symposium. These scholarly activities, along with teaching resources such as the Campus Organic Garden, student Garden Club, and collaborations with area government and non-governmental agricultural institutions, including area organic farmers, have expanded each university’s faculty expertise in offering training and advice to college and high students and teachers on issues related to local and national agriculture and environmental management. The professional development and social events organized during the Agroecology Symposium and USDA Career Workshop at FIU brought consortium-wide students together and helped create a sense of learning community among students. Area high school students, who we are targeting as potential future Agroecology students at our university, are increasingly showing interest in consortium-wide programs and taking advantage of the summer high-school student internships. This networking has increased our ability to offer a cost-effective agricultural science</p>

Exhibit C-2: Outcome Indicators for Florida International University (FIU)

Outcome Indicator	Results and Comments
	education at non-land grant universities and colleges with large number of under-served Hispanic and other minority students.
Impact Statement	<p>The FCCAgE Program is becoming increasingly popular among students, area high schools and community colleges, farmers and community organizations. Collectively, scholars in the program have spent over 4,000 hours in professional development training and Agroecology Workshops.</p> <p>Additionally, other students participation in these activities accounted for an additional 3,000 hours collectively. The continuous focus on training students with necessary skills to obtain a career with USDA is proving a valuable impact on student professional growth. Further, other students have benefited through activities conducted through FCCAgE activities. Students organized the club MANRRS, and as a result of attending the conference, four students were selected for USDA internships on site. In total 36 FCCAgE students and five non-FCCAgE students were able to acquire USDA internships as part of consortium efforts. MDC has created a garden where students can obtain experiential learning through hands-on activities. High school visits to the FIU Organic Garden has resulted in the development of one school garden, with five more such garden in discussions of being built this year.</p>

Source: Florida International University, USDA First-Year Progress Report, October 2012

Exhibit C-3: Outcome Indicators for New Mexico State University (NMSU)

Outcome Indicator	Results and Comments
Total Number of USDA Agencies and Partners	<p>Potential USDA Agency Partnerships: 4</p> <p>USDA Agency Partners: USDA Forest Service (FS); USDA Natural Resources Conservation Service (NRCS); USDA Animal and Plant Health Inspection Service (APHIS)</p> <p>Other USDA Partners: U.S. Geological Survey (USGS)</p>
Total Number of Internships (USDA vs. Others):	<p>The USDA Forest Service is our main partner, but we are also working with the USDA NRCS, USDA APHIS and USGS. Forest Service personnel and other project personnel made 17 visits to our 12 program institutions between September and February 2011 and interviewed 174 students.</p> <p>45 of 50 students have been placed on summer STEP or SCEP positions with the Forest Service (42), USDA NRCS (1), and USDA APHIS (1). Two students are graduating this summer and we are working with the Forest Service to seek permanent placement for them. We are still working to place 3 students on summer positions.</p>
Total Number of students served/including gender and ethnicity	<p>Sixty-one students were originally selected for the program, and 53 of these students were enrolled. Student selection was completed in spring 2012. The 53 program students consist of 42 undergraduate students (ranging from freshmen to seniors), 9 Masters of Science students and 2 Ph.D. students. We have 30 females and 23 males enrolled in the program. Fifty-two of the 53 students are Hispanic and one student is African American.</p> <p>53 students are currently enrolled in our NM_PR Career Tracks Program.</p> <p>Degree Program: BS: 42 (79 percent) MS: 9 (17 percent) Ph.D.: 2 (4 percent)</p> <p>Gender: Females: 30 (57 percent) Males: 23 (43 percent)</p> <p>Of the 53 students 53 percent are first generation college students.</p> <p>Our primary target audience is Latino students at our 12 collaborating institutions in New Mexico and Puerto Rico (New Mexico State University campuses in Las Cruces, Grants, Carlsbad and Alamogordo, New Mexico Highlands University and Luna Community College, University of Puerto Rico campuses in Rio Piedras, Cayey, Humacao,</p>

Exhibit C-3: Outcome Indicators for New Mexico State University (NMSU)

Outcome Indicator	Results and Comments
	Bayamón, and Mayagüez and InterAmerican University in Bayamón). We also provide outreach to high school students.
Total Percent of retention (undergraduate/grad/Ph. Ds):	Have not yet gathered this information yet for all 13 participating institutions.
Total Number of students in experiential learning (research) mentoring	<p>Majors of Interest:</p> <ul style="list-style-type: none"> • Environmental Science • Forestry • Wildlife Science • Fisheries Science • Range Science • Geology • Computer Science • Engineering <ol style="list-style-type: none"> 1. Agency visits <ol style="list-style-type: none"> a. 17 visits were made to participating institutions by the USDA Forest Service. Each institution was visited a minimum of one time. 2. Workshops <ol style="list-style-type: none"> a. We have held 3 introductory workshops to introduce this program to our students. 3. Special Speakers <ol style="list-style-type: none"> a. We have had 3 Forest Service Speakers to date. b. Starting fall 2012 we plan a minimum of one speaker a month. 4. Student Ambassadors <ol style="list-style-type: none"> a. 1 student ambassador 5. Applied Research Opportunities <ol style="list-style-type: none"> a. 19 students have participated in applied research opportunities b. 45 of 50 students have been placed on summer STEP or SCEP positions with the Forest Service (42), USDA NRCS (1), and USDA APHIS (1). Two students are graduating this summer and we are working with the Forest Service to seek permanent placement for them. We are still working to place 3 students on summer positions. <p>Nineteen students have participated in applied research opportunities. Sixteen tutors were hired across our 12 institutions during this first year, the tutors are available to our program students as well as other students that seek assistance. Of the 53 students selected for the program, 45 had summer internships, 43 with USDA Forest Service, one with NRCS and one with APHIS. Four graduate students focused on</p>

Exhibit C-3: Outcome Indicators for New Mexico State University (NMSU)

Outcome Indicator	Results and Comments
	<p>their field research over the summer and four other students, for various reasons, did not participate in internships. Fourteen of our 53 program students have been selected for career-track (SCEP) positions, 12 with the USDA Forest Service, one with USDA Natural Resources Conservation Service and one with USDA APHIS. We conducted three field courses during spring 2012 including one upper division international field course in Belize and two local field courses for entry level students, one in New Mexico and one in Puerto Rico. We enrolled 30 of our program students in these 3 classes for a total of 90 credit hours. We developed a student exchange through the National Student Exchange Program between New Mexico State University and the University of Puerto Rico and have enrolled three students in the program for Fall 2012. We have developed a program website http://nrct.nmsu.edu/ (English and Spanish), Facebook pages for our New Mexico and Puerto Rio programs, a brochure (English and Spanish), a PATHWAYS brochure, and are using distance communication technology (Canvas) to communicate with students at remote locations and connecting via webinars, Facebook and Skype.</p>
Total Number of participants presenting	<p>Due to the lengthy recruitment process students began mentorship positions in Spring 2012, therefore we had just three students presenting in year one for a total of five presentations.</p>
Total Number of students enrolled in disciplines applicable to USDA jobs	<p>Jobs Targeted:</p> <ol style="list-style-type: none"> 1. Primarily Natural Resource Related positions with the USDA Forest Service 2. 47 program students are either on a SCEP or a STEP with a USDA Agency 3. 15 of our 50 students are already on USDA career track positions – i.e. SCEPS (13 with USDA FS/1 USDA NRCS/1 USDA APHIS) <p>Student disciplines include forestry, environmental science, wildlife science, fisheries science, range science, geology and engineering. Orientations were held for all program students in New Mexico and Puerto Rico for a total of 3 introductory workshops.</p>
Total Number of degrees awarded with USDA qualifications	<p>Four students (1 MS and 3 BS) graduated from our program in 2012. All four students have been placed in permanent positions with the USDA Forest Service.</p> <ul style="list-style-type: none"> • Rene Galindo (MS, NMSU) Current Position: Fish Biologist, Siuslaw National Forest, Central Coast Ranger District/ODNRA , P.O. Box 400, Waldport, Oregon. • Hugo Cobos (BS, NMSU) Current Position: Fisheries Biologist, USDA FS, Okanogan-Wenatchee National Forest, Entiat Ranger district, Washington. • Errin Trujillo (BS, NMSU) Current Position: Biologist, USDA FS, Deschutes National Forest, Prineville, Oregon.

Exhibit C-3: Outcome Indicators for New Mexico State University (NMSU)

Outcome Indicator	Results and Comments
	<ul style="list-style-type: none"> Alba Navarro (BS, UPR) Current Position: Biologist, USDA FS, Region 8, Montgomery, Alabama
Total Number of students publishing	Three.
Comparison of GPA's before and after	This is year one of our project so we have not yet initiated a before and after comparison of GPA's.
Developing curriculum and faculty for required USDA courses	We enrolled 30 of our program students in these 3 classes for a total of 90 credit hours. We developed a student exchange through the National Student Exchange Program between New Mexico State University and the University of Puerto Rico and have enrolled 3 students in the program for Fall 2012. We have developed a program website http://nrct.nmsu.edu/ (English and Spanish), a brochure (English and Spanish), are using distance communication technology (Canvas) to communicate with students at remote locations and are connecting via webinars, Facebook and Skype.
Comparison of female success (before and after); gender and ethnicity	As this is year one of the project we have not yet initiated any before and after comparisons.
Total Number of students hours advising and tutoring	All students have faculty advisors and see their advisors regularly to make sure they are on track academically. Students also communicate with Forest Service mentors to make sure they are on track professionally. Students with GPA's below 3.0 are steered toward our tutoring centers. We supported 16 tutors across all institutions in year one of the project.
Tracking students placement into jobs or Ph.Ds/student mobility	<ol style="list-style-type: none"> Use of Technology <ol style="list-style-type: none"> Website: http://aces.nmsu.edu/nrct/index.html SKYPE Distance communication tools Webinars Facebook Conference calls Identifying Requirements <ol style="list-style-type: none"> Field of interest and academic major GPA Credit Hours completed Past experience Communication skills
Track research activities/English skills	Student Placement and Tracking <ol style="list-style-type: none"> Survey job/agency or preference <ol style="list-style-type: none"> We have established a direct collaboration with USDA FS on student recruitment and placement Determine Requirements <ol style="list-style-type: none"> GPA

Exhibit C-3: Outcome Indicators for New Mexico State University (NMSU)

Outcome Indicator	Results and Comments
	<ul style="list-style-type: none"> b. Major field c. Credit hours completed d. Communication Skills 3. Orientation to ensure student understands expectations <ul style="list-style-type: none"> a. 3 workshops have been held to introduce students to program b. All students will be signing a contract starting fall 2012 4. Understanding public service Institution retention rates 5. Exceed Institutional Retention Rate
K-12 activities (and freshman)	We provide outreach to high school students.
Community engagement activities	
Budget implementation	
Agency/Participant Survey	Survey job/agency or preference: We have established a direct collaboration with USDA FS on student recruitment and placement
Project's Outreach at K-12	Three USDA Forest Service employees have presented seminars to our group, we conducted a spring field trip, have provided outreach to high school students at 7 high schools in New Mexico and Puerto Rico and have hired a high school student ambassador.

Source: New Mexico State University, USDA AD-421 Report and First-Year Progress Report, May 2012

Exhibit C-4: Outcome Indicators for Texas A&M University-Kingsville (TAMUK)

Outcome Indicator	Results and Comments
Total Number of USDA Agencies and Partners	Five (5) USDA agencies: USDA NRCS, USDA AMS, USDA ARS, USDA APHIS, USDA FS; two USDA agency program offices: USDA NRCS PMC and USDA NASS CPS; and nine (9) other partner institutions: Texas AgriLife Research, Cargill, Citrus Center, Nursery and Seed Industry, Golden Acre Seed, Devereux Gardens, research at STC, Del Mar and UTPA, and TAMUK Farm.
Total Number of Internships (USDA vs. Others):	58 undergraduate students were placed in either USDA internship opportunities (n = 24) or in mentored faculty research projects (n = 34).
Total Number of students served/including gender and ethnicity	70 total students served, 50 Hispanic and 20 other ethnicities; 30 females and 40 males.
Total Percent of Retention (undergraduate/graduate/ Ph. Ds):	100 percent so far as this is the first year in program; planned for 80 percent. Five TSTC and two Del Mar students transferred to TAMUK during Year 1. In Year 2, there was a 94 percent retention rate (30 out of 31) with Del Mar, STC, and TSTC.
Total Number of students in experiential learning (research) mentoring	53 out of 58 undergraduate students participated in summer experiential learning (research) and mentoring. Nine students participated in graduate research projects. Fifteen students visited research facilities at the Weslaco Organic Farm, the USDA APHIS research center, the Texas A&M Agrilife Research and Extension Center, and the TAMUK Citrus Center.
Total Number of participants presenting	7 students presented at conferences. Over 20 students attended conferences such as the Sustainable Agricultural Meeting and the Subtropical Plant and Science Meeting in February 2012. Six students presented their work or attended the Texas irrigation Expo in McAllen, Texas.
Total Number of students enrolled in disciplines applicable to USDA jobs	All students (70 out of 70) were in enrolled in disciplines applicable to USDA jobs (one student in nursing program). A total of 1,000 faculty hours were spent to positively increase the competitiveness of students for the job market with USDA agencies and the agricultural sciences.
Total Number of degrees awarded with USDA qualifications	4 students graduated with a Bachelor's of Science (B.S.) by Aug 2012 – 3 of whom have worked or is working on a USDA internship with one being hired by NRCS; 2 are starting M.S. programs at TAMUK.

Exhibit C-4: Outcome Indicators for Texas A&M University-Kingsville (TAMUK)

Outcome Indicator	Results and Comments
Total Number of students publishing	<p>Publishing (as reflected in interim report)</p> <p>Students: 1</p> <p>Faculty: 1</p> <ul style="list-style-type: none"> • Trevino, J., G. Schuster, S.D. Nelson, A.P. Ochoa, and J. Munyaneza. 2011. Effects of potato planting dates on psyllid populations and zebra chip incidence in Texas. Pp: 62-68. In: (Eds: F. Workneh, A. Rashed, and C.M. Rush) Proceedings of the 11th Annual 2011 Zebra Chip Reporting Session. San Antonio, TX. Nov. 6-9, 2011. <p>Published Abstracts (as reflected in final report):</p> <ul style="list-style-type: none"> • S.D. Nelson, M. Esparza, D.E. Garza, M. Setamou, and M. Young. 2012. Potential Benefits of Supplemental Calcium Additions for Sustaining Citrus Production and Quality. American Society of Horticultural Science Annual Conference. Miami, FL. 07/31/2012 • C.R. Simpson, S.D. Nelson, A. Volder, G. Schuster, S. King, J. Jifon, and J.C. Melgar. 2012. Water Quality Effects on Grafted and Non-Grafted Citrus. American Society of Horticultural Science Annual Conference. Miami, FL. 07/31/2012. • F. Melgoza, A. Kusakabe, S.D. Nelson, and J.C. Melgar 2012. Foliar and Ground Application of Abscisic Acid to Increase Cold Tolerance in Citrus. American Society of Horticultural Science Annual Conference. Miami, FL. 07/31/2012 (poster). • D.E. Garza, S.D. Nelson, and M. Setamou 2012. Foliar Applications of Micro and Macro Nutrients to Control ACP in Citrus. American Society of Horticultural Science Annual Conference. Miami, FL. 07/31/2012 (poster). • F. Melgoza, A. Kusakabe, S.D. Nelson, and J.C. Melgar 2012. Foliar and Ground Application of Abscisic Acid to Increase Cold Tolerance in Citrus. Project Directors' Conference. USDA/NIFA HSI Grants Program. 05/30/2012, Edinburg, TX. (poster). • Garza, D., Nelson, S. and Setamou, M 2012. Effects of Micro and Macro Nutrients on Major Citrus Pests in Texas. Southeastern/Southwestern Joint Annual Branch Meeting of the Entomological Society of America. Sharing Insect Science Globally. Little Rock, Arkansas 03/04/2012. • Garza, D., Nelson, S. and Setamou, M. 2012. Effects of Micro and Macro Nutrients on Major Citrus Pests in Texas. Sixty-sixth Annual Meeting of the Subtropical Plant Science Society. 02/29/2012. Weslaco, TX. <i>Subtrop. Plant Sci.</i> Vol. 64. (poster). • Melgoza, F., Kusakabe, A., Melgar, J.C., and Nelson, S.D. 2012.

Exhibit C-4: Outcome Indicators for Texas A&M University-Kingsville (TAMUK)

Outcome Indicator	Results and Comments
	<p>Abscisic Acid Increases Cold Tolerance in Citrus. Sixty-sixth Annual Meeting of the Subtropical Plant Science Society. 02/29/2012 Weslaco, TX. <i>Subtrop. Plant Sci.</i> Vol. 64. (poster).</p> <ul style="list-style-type: none"> • Trevino, J., Schuster, G. Nelson, S. Bextine, B. and Munyaneza, J. 2012. Effects of Potato Planting Timing in Texas on Zebra Chip Incidence and <i>Liberibacter</i> Infection Rate in Potato Psyllids. Sixty-sixth Annual Meeting of the Subtropical Plant Science Society. 02/29/2012 Weslaco, TX. <i>Subtrop. Plant Sci.</i> Vol. 64. (poster). • Gomez, M., C. Simpson, S. Nelson, A. Volder, S. King, J. Melgar and G. Schuster 2011. Salinity Impacts on Growth and Physiology of Grafted and Non-Grafted Citrus Trees. Ninth Annual Texas A&M System Pathways to the Doctorate Symposium, College Station, TX. 11/11/2011. (poster). • Garcia, L., and S. Nelson 2011. Nutrient Load Trends in Six Kleberg County Texas Streams. Ninth Annual Texas A&M System Pathways to the Doctorate Symposium, College Station, TX. 11/11/2011. (poster). • Vargas, D., and S. Nelson 2011. The TAMUK Southern Live Oak Tree Survey Ninth Annual Texas A&M System Pathways to the Doctorate Symposium, College Station, TX. 11/11/2011. (poster). • Trevino, J., G. Schuster, S. Nelson, B. Bextine, and J. Munyaneza 2011. Effects of Potato Planting Timing in Texas on Zebra Chip Incidence and <i>Liberibacter</i> Infection Rate in Potato Psyllids. 9th Annual Texas A&M System Pathways to the Doctorate Symposium, College Station, TX. 11/11/2011. (poster). • Garcia, L., and S. Nelson 2011. Nutrient Load Trends in Six Kleberg County Texas Streams. 2nd Annual Texas Irrigation Expo, McAllen, TX. 12/08/2011. (1st place undergraduate winner, poster). • Melgoza, F., Kusakabe, A., Melgar, J.C., and Nelson, S.D. 2011. Abscisic Acid Increases Cold Tolerance in Citrus. 2nd Annual Texas Irrigation Expo, McAllen, TX. 12/08/2011. (1st place Graduate winner, poster). • Gomez, M., C. Simpson, S. Nelson, A. Volder, S. King, J. Melgar, and G. Schuster 2011. Salinity Impacts on Growth and Physiology of Grafted and Non-Grafted Citrus Trees. 12/08/2011 (2nd place graduate winner, poster).
Comparison of GPA's before and after	Assessment needed as this is only the start of the first year of the program.
Developing curriculum	One new course being developed for Spring 2013.

Exhibit C-4: Outcome Indicators for Texas A&M University-Kingsville (TAMUK)

Outcome Indicator	Results and Comments
and faculty for required USDA courses	
Comparison of female success (before and after); gender and ethnicity	This cannot be measured until first project year is over.
Total Number of students hours advising and tutoring	Students advised by program leaders at each institution and are implied by program enrollment criteria. Effort to retain students is done by faculty within each institution working with students in research and via internships as an incentive to retain original student cohort from community colleges to transfer to 4-year institution to obtain minimum academic qualifications for careers in USDA and agriculture.
Tracking students placement into jobs or Ph. Ds/student mobility	Students are tracked at each institution by participating project directors and co-PDs. Metric tables that include information on career choice and job placement will be provided and maintained through the PD, Dr. Shad Nelson.
Track research activities/English skills	Internship and research experiences require students to present work in an oral English format to faculty, students and others at professional venues.
K-12 activities (and freshman)	Summer camps incorporate high school students, student ambassadors and past interns from TAMUK and other partnering institutions promote program to community college freshman and high school students, TAMUK College of Agriculture hosts over 1400 high school students in ag-related recruitment activities throughout each academic year.
Community engagement activities	University student clubs used as venue for community services, and students within the program present results and experiences at local and regional meetings and recruiting activities.
Budget implementation	Most of the first year budget is under implementation with primary expenditures focused on student summer internship and research programs. Each subcontracting institution implements and is responsible to adhere to the budgets set forth in original proposal and approved through main institution, TAMUK.
Agency/Participant Survey	Each student participates in a student pre- and post-survey. Student interns at TAMUK are required to rate their internship experience and the agency submits a summary report on the students effectiveness in the internship program. Similar surveys are distributed to all subcontracting institutions.
Project Implementation	Implement website development, summer 2012 internship program, 2012 summer camp in June at Kingsville, and students will provide reports on internship and research experiences in Fall 2012 semester.
Project's Outreach at K-12	Students from STC, TSTC, UTPA and DelMar College will join with High

Exhibit C-4: Outcome Indicators for Texas A&M University-Kingsville (TAMUK)

Outcome Indicator	Results and Comments
	<p>School students from various locations in Texas for a summer camp to be held in June to be taught and instructed by TAMUK graduate students and faculty regarding the agricultural and natural resources sciences.</p> <p>The summer camps are a recruiting and retention tool for student from community colleges and High School student to learn about the advantages to agriculture-related careers. In June 2012, 49 students attended two summer camps instructed by TAMUK graduate students and faculty. Of the 49 students, 24 undergraduates from Del Mar, STC, TSTC, and UTPA, and 25 were from Area X South Texas high schools.</p>
<p>Outcome Statement</p>	<p>The collaboration among the five academic institutions, three research stations, and six USDA agencies is serving as a model by which we can produce highly qualified underrepresented college graduates who have the training and experience to become successful USDA specialists and scientists. To better prepare students for opportunities in agricultural- or natural resource sciences-related internships within USDA (STEP UP Objective 2), targeted summer short-courses in the soil-, animal-, or natural resource- sciences were conducted during Year 1, including workshops focusing on the insertion of a jellyfish gene and a firefly gene into bacteria; isolation of bacterial chromosomal DNA; PCR-based identification of own DNA; and isolation of bacterial extra chromosomal (plasmid) DNA. All participating students will describe their experimentation at a local scientific symposium sponsored by STC in November 2012. A student research poster contest was held in conjunction with the 2011 Texas Irrigation Expo. In the high school/college undergraduate student category, Lea Garcia, TAMUK STEP UP participant, won the cash 1st Place for her work on Nutrient Load Trends in Six Kleberg County Texas Streams; 2nd Place was won by STEP UP participant, James Fullingim, UTPA, for Preliminary Investigation of Nutrient Transport and Water Quality in Irrigation Canals of the Lower Rio Grande Valley. In the graduate school category, STEP UP participants won 1st and 2nd place cash prizes – 1st Place: Francisco Melgoza, TAMU-Kingsville Citrus Center Flooding Can Cause Changes in Cold Tolerance in Grapefruit Trees; and 2nd Place: Miguel Gomez/C. Simpson, TAMUK, Saline Irrigation Water Impacts on Grafted and Non-Grafted Citrus Trees. Objective 3 of this project is to provide an underserved student population with the opportunity to experience firsthand exposure to research in agricultural or natural resource sciences through faculty-mentored projects, or the opportunity to have a USDA career training experience during a 10-week summer internship. The STEP UP faculty worked unceasingly to place 58 STEP UP undergraduates in either USDA internship opportunities or in the mentored faculty research projects. Undergraduate students Ana Navarro and Heather Hernandez, working with mentor Michael Persans,</p>

Exhibit C-4: Outcome Indicators for Texas A&M University-Kingsville (TAMUK)

Outcome Indicator	Results and Comments
	<p>analyzed freshwater and saltwater algae species for their potential for bioremediation and bio-fuel production. Also mentored by Dr. Persans is graduate student, Yessica Cerino, who is currently cloning and analyzing genes from non-accumulator and metal hyperaccumulator plants. These students made a poster presentation at the 2012 USDA-HSI Project Directors conference in Edinburg, Texas, and the 2012 American Society of Plant Biologists meeting in Austin, Texas. Involvement with these research projects, internships, and presentations, in combination with undergraduate and graduate student education, helps students develop research skills in agricultural- or natural resource sciences-related research, illustrating that, through this project, underrepresented students are becoming confident and knowledgeable research partners with important research findings to share.</p>
<p>Impact Statement</p>	<p>The impacts of this project are focused on the student's individual achievements and movement of students after graduation into careers with the USDA. Two Bachelor of Science students from TAMU-Kingsville receiving funds through this program will have employment with the USDA-NRCS after graduation. The excitement of these student for employment with the USDA has led other students at TAMUK to consider summer internships with USDA agencies and participate in this program</p>

Source: Texas A&M University-Kingsville, USDA First-Year Progress Report and AD-421 Report, May 2012

Exhibit C-5: Outcome Indicators for Texas State University-San Marcos (TSU)

Outcome Indicator	Results and Comments
Total Number of USDA Agencies and Partners	<p>Six (6).</p> <p>Five USDA agency partners include: FSIS, APHIS, FS, FNS, NRCS. One other partners includes Southwest Border Food Safety and Defense Center</p>
Total Number of Internships (USDA vs. Others):	<p>All 50 students have applied for and uploaded their resumes to the USDA portal. One student has an internship with the Forest Service in Illinois. Most will complete the USDA internship in Summer 2013.</p> <p>All 50 students were required to apply and upload resumes for USDA internships through the USDA portal. Many of the students participating in the grant are entering Freshmen/Sophomores (30 students) so it is anticipated that most of the students will complete the internship in Summer 2013 and Summer 2014. One student thus far received an internship with the USDA Forest Service in Illinois. It is understood by students that an internship must be completed prior to graduation.</p>
Total Number of students served/including gender and ethnicity	<p>Forty-nine undergraduates and 1 graduate student are currently being served (Hispanic). Of those students 17 (34.0 percent) are male and 33 (66.0 percent) are female.</p> <p>Race-Ethnicity: Hispanic: 50 (100 percent)</p> <p>Gender: Males: 17 (34 percent) Females: 33 (66 percent)</p> <p>Degree Program: Undergraduates: Agribusiness: 49 (98 percent) Graduates: 1 (2 percent))</p>
Total Percent of retention (undergraduate/grad/Ph. Ds):	<p>96 percent</p> <p>Forty-eight of the 50 students have been retained in the first year of the project for a retention rate of 96.0 percent. Those students who have dropped out will be replaced in Fall 2012.</p>
Total Number of students in experiential learning (research) mentoring	<p>Informational sheets were distributed to collect data for the website. Student research interests were recorded to match them up with a faculty mentor/research cluster during the July Summer camp. Initiation of research projects will take place in July.</p> <p>The MANRRS student organization has been established in conjunction with the agriculture ambassadors. All 13 students at Texas State are active members with additional members outside of the grant project</p>

Exhibit C-5: Outcome Indicators for Texas State University-San Marcos (TSU)

Outcome Indicator	Results and Comments
	(total membership exceeding 25 students). A total of one school (audience 7 classes for a total of around 200 students) was visited. Five more schools are on the schedule for August and September.
Total Number of participants presenting	Two (2). One student participated in the 26th Annual HACU conference and one student was nominated to attend the 2012 USDA Agricultural Outlook Forum Student Diversity Program.
Total Number of students enrolled in disciplines applicable to USDA jobs	Student numbers within disciplines applicable to USDA jobs includes: Agriculture (20), Nutrition Science (8), Chemistry (3), Biology (12), Environmental Science (6), and Information Technology (1). Agricultural related disciplines included: Agribusiness (1); Agriculture (4); Agriculture Education (1); Animal Science (13); and Horticulture (1).
Total Number of degrees awarded with USDA qualifications	Zero (0). The number of degrees awarded during year one is zero. Fifty (50) Hispanic students have been provided scholarships to complete a degree and be trained for USDA employment. Thirty-five of those students are at the community college level with anticipation of transferring to Texas State University.
Total Number of students publishing	The total number of students publishing is zero to date. Publication productivity will come when the research clusters are formed.
Comparison of GPA's before and after	The average overall GPA of students after Fall 2011 was 3.10. The average overall GPA after Spring 2012 was 3.07. Most students had an increase in their overall GPA from Fall 2011 to Spring 2012.
Developing curriculum and faculty for required USD	Development of curriculum activities for agroterrorism training. Fifty (50) students will be trained and receive a certificate from the Department of Homeland Security on June 9-10. The course is entitled Preparedness and Response to Food and Agriculture Incidents.
Comparison of female success (before and after); gender and ethnicity	The average overall GPA of students after Fall 2011 was 3.10. The average overall GPA after Spring 2012 was 3.07. Most students had an increase in their overall GPA from Fall 2011 to Spring 2012. Currently, there are a total of 33 (66 percent) females participating in the project. With respect to success, the average female overall GPA (after Fall 2011) was 2.74 and the overall GPA after Spring 2012 was 2.94.
Total Number of students honors advising and tutoring	Advising of students has taken place with newly hired assistants/ advisors. University Transfer Centers are actively becoming established. Students enrolled in master's programs are being groomed Ph.D. students who will later become faculty for the program.
Tracking students placement into jobs or Ph. Ds/student mobility	Utilization of the website for tracking students. One graduate student has been hired to help with the maintenance and data collection of the grant. Two more are accepted for the fall

Exhibit C-5: Outcome Indicators for Texas State University-San Marcos (TSU)

Outcome Indicator	Results and Comments
	2012 semester. A search for future students is occurring nationally.
Track research activities/English skills	<p>Research activities updates on the website.</p> <p>Faculty are currently being contacted to serve as mentors for the Academic Research clusters. Students' majors have been recorded to immerse them in the appropriate cluster. Formation of clusters will take place July 26-27 at the second session of the Summer camp.</p>
K-12 activities (and freshman)	<p>Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS) has been created and has 20 members. One secondary school was visited with roughly 200 secondary students in the audience. Ten (10) additional school visits are on the list for the 2013-2014 school year.</p>
Community engagement activities	<p>MANRRS has also planned to hold a fundraiser in the Fall 2012 semester and participate in one community service activity.</p>
Budget implementation	<p>Budget implementation has been streamlined through an accounting system operated by the half-time administrative assistant. The majority of the monies for year one went to participant cost and scholarships.</p>
Agency/Participant Survey	<p>Focus group activities and survey instruments will be distributed during the summer camp.</p>
Project's Outreach at K-12	<p>Joint admissions agreement-completed, University Transfer Centers-ongoing, website completed, summer camps-June and July, faculty research clusters-ongoing.</p>
Project Implementation	<p>The project director has visited each of the three participating community colleges and discussed degree plans (agriculture, nutrition, biology, environmental sciences, geography) with students and logistics of transferring to a four year university. University Transfer Centers are beginning to take shape at Laredo Community College and Palo Alto College with the hiring of Administrative Assistants/Advisors at each site. These constituents help students with questions regarding the grant, courses, summer camps, and transfer questions. A project website was launched on May 4, 2012 showcasing the grant's activities and students' interests. Students' pictures, interests, hobbies, majors, etc. are included. It is a one stop shop for students to find recently posted USDA internship opportunities. Summer camps for 2012 have been scheduled for June 8-10 and July 26-27. The first session will include leadership building activities and becoming trained and certified in recognizing agroterrorism threats through the Department of Homeland Security. Dorms and dining halls have already been reserved. The July summer camp session will include special meetings with academic advisors, USDA guest speakers, and the formation of the Academic Research Clusters.</p>

Source: Texas State University-San Marcos, USDA First-Year Progress Report, May 2012

Exhibit C-6: Outcome Indicators for University of Puerto- Mayagüez (UPR-M)

Outcome Indicator	Results and Comments
Total Number of USDA Agencies and Partners	The following USDA agencies wrote letter of support for the project: Natural Resources Conservation Service (NRCS), Forest Service (FS) Puerto Rico, Animal and Plants Health Inspection Service (APHIS) and USDA Agricultural Research Station in Puerto Rico. We have approached these other agencies for students internships: U.S. Geological Service (USGS), National Institute of Environmental Health Sciences (NIEHS), Agricultural Research Service (ARS), U.S. Environmental Protection Agency (USEPA) located in Puerto Rico as well as continental United States.
Total Number of Internships (USDA vs. Others):	At present 15 CETARS students (27 percent of CETARS population) have been selected to be part of internships at USDA and related agencies. The participating agencies/Institutions are USDAARS- NCAUR, USDA-NRCS, EPA, USDA, FSIS, USFS, HACU, NSF-funded programs, university programs and in the private sector. Additionally, three students (5 percent of CETARS population) will participate in NSF-sponsored internship activities.
Total Number of students served/including gender and ethnicity	The CETARS project serves a post-secondary student population 55 students (42 undergraduate, 7 MS and 6 PhD over five campuses). All 55 participants are of Hispanic origin of which 38 (69 percent) of them are females and 17 (31 percent) male. UPRM host 37 students of which 26 are undergraduates, 5 MS and 6 PhD's (62 percent females), UPRAg serves a population of 8 undergraduates (88 percent females), UPRH involves 3 undergraduates (100 percent females), the IAUSG hosts 5 students (4 undergraduate and 1 MS) of which 60 percent are females. The two UTEP students (one undergraduate and one MS) are females.
Total Percent of retention (undergraduate/grad/Ph.Ds):	At present we have 100 percent retention of the students that are completing their academic degrees. Four will graduate on June 2012, one of which will pursue studies toward a PhD at UPRM; another CETARS graduated has been accepted to pursue her Ph.D. at Ohio State University. The other two CETARS graduates have applied to Florida University. All graduates are planning to continue their careers in USDA related fields.
Total Number of students in experiential learning (research) mentoring	CETARS student population of 42 undergraduate students includes 37 actively involved in experiential learning activities, which represents a 88 percent of involvement. The experiential learning activities involves: (1) Special outreach activities at public schools (preparation of home gardens) in which 15 student are directly involved (36 percent), and (2) Research-training with on-call outreach participation that engages 22 students (52 percent). Twelve (44 percent) out of 27 undergraduates CETARS-UPRM students are involved in research-training projects whereas the other fifteen (55 percent) are actively involved in home gardening outreach projects at the ten K-9 public schools. At UPR-Humacao, all three students are involved in research, one of which is also involved in the outreach activities. At IAUSG all four students are

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Outcome Indicator	Results and Comments
	<p>involved in research as well as outreach activities. All UTEP participants are involved in research. The nine UPRAg participants have been involved in outreach activities throughout the year and are expected to conduct their summer research-training activities at UPRM during the upcoming summer session as part of the collaborative research agreement of the CETARS pipeline. All graduate students (13) have active research projects and serve as research mentors of the undergraduate participants. Participating graduate students are also serving as on-call outreach resources of the outreach component of the project.</p>
<p>Total Number of participants presenting</p>	<ul style="list-style-type: none"> a. Oral: Applications of nanotechnology in environmental analysis; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; American Association for the Advancement of Science- Caribbean Division; 2011; Annual Conference; Oct. 1, 2011; Dorado, PR , Marco de Jesus b. Invited Speaker: Nanotechnology and Nanomaterial's Processing & Applications. Oscar Perales-Perez First International Conference on Alternative Energy 2011. Caribbean University, San Juan, PR. October 2011. c. Oral: Nanostructured Raman substrates as chemical sensors for the detection antimicrobials agents. De Jesús, Marco A.; Olavarria-Fullerton, Jenifier; Areizaga Martinez, Héctor; Figueroa, Legna; Camareno, Gil.; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; 35th ACS Senior Technical Meeting, Nov. 3-4, 2011; Dorado, PR d. Poster: Membrane and Cytosolic Fraction Protein Profile of Halobacterias from Gua_nica Salterns; Abner Mercado; UPRAg; ABRCMS on November 9-12, 2011 and at the 32nd Puerto Rico; Interdisciplinary Meeting at the University of Puerto Rico at Carolina. e. Poster: Interfacial Binding of Arsenic Antimicrobials onto bimetallic Iron/Silver Nanocomposites. Flores, Elena M.; Olavarría, Jenifier; De Jesús, Marco A.; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; 35th ACS Senior Technical Meeting, Nov. 3-4, 2011; Dorado, PR f. Poster: Plasmonic Dimers as Surface-Enhanced Raman Scattering (SERS) Substrates for the Trace Detection of Arsenic Antimicrobials. Olavarria-Fullerton, Jenifier; Torres, M. Enid; De Jesús, Marco A.; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; 35th ACS Senior Technical Meeting, Nov. 3-4, 2011; Dorado, PR

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Outcome Indicator	Results and Comments
	<p>g. Poster: Metal–polymer Nanocomposites as Raman Sensors to Monitor Food Pathogens Interactions with Antimicrobial Agents. Figueroa, Legna; De Jesús, Marco A.; Olavarria-Fullerton, Jenifier; Areizaga, Héctor; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; 35th ACS Senior Technical Meeting, Nov. 3-4, 2011; Dorado, PR</p> <p>h. High Performance Liquid Chromatography-Diode Array Based Method for the Determination of Arsenic Feed Additives in Surface Waters; Enid M. Torres; Jenifier Olavarria; Marco A. De Jesús; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; Sigma Xi poster Day; March 29, 2012; Mayagüez, PR</p> <p>i. Predicting the plasmonic properties of SERS substrates by FDTD; Gil Camareno; Jenifier Olavarria; Marco A. De Jesús; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; Sigma Xi poster Day; March 29, 2012; Mayagüez, PR</p> <p>j. Magnetic nanocomposites to remove heavy metals and oxyanions in aqueous matrices; Tatiana L. Pineda; Jose L. Torres-Tellado; Felix R. Roman; Oscar Perales-Pérez; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; Sigma Xi poster Day; March 29, 2012; Mayagüez, PR</p> <p>k. Oxidative stress in solanum lycopersicum exposed o CoFe2O4 nanoparticles; Guzmán Pérez, Nitza; Alamo Irizarry, Bianca; López Moreno, Martha L.; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; Sigma Xi poster Day; March 29, 2012; Mayagüez, PR</p> <p>l. Effect of Magnetic field on the absorption and translocation of Magnetite nanoparticles on mesquite plants; Edrick Lugo; Hiram Morales; Martha L. López; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; Sigma Xi poster Day; March 29, 2012; Mayagüez, PR</p> <p>m. Interfacial binding of arsenic antimicrobials onto bimetallic Iron/silver nanocomposites; Elena M. Flores; Jenifier Olavarria; Marco A. De Jesus</p> <p>n. Assessing the micronutrient composition of Coloso and Voladoras soils and its relation for the sustainable development of the Coloso Agricultural Reserve in Aguada, PR.; Francisco Negrón; Marco A. De Jesus</p>

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Outcome Indicator	Results and Comments
	<p>o. Metal/Polymer nanocomposites for the detection of foodborne pathogenic bacteria; Grecia Gratacos; Marco A. De Jesus; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; Sigma Xi poster Day; March 29, 2012; Mayagüez, PR</p> <p>p. Plasmonic Dimer-Arrays as SERS substrates for the trace detection of Arsenic antimicrobials; Jenifier Olavarria; Sabrina Wells; Michael J. Sepaniak; Marco A. De Jesus; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; Sigma Xi poster Day; March 29, 2012; Mayagüez, PR</p> <p>q. Monitoring PAH's and DDT persistence in Coloso and Voladora Soils from the Coloso Agricultural Reserve; Katherine Rivera; Marco A. De Jesús; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; Sigma Xi poster Day; March 29, 2012; Mayagüez, PR</p> <p>r. Characterization of Macronutrient content in Coloso and Voladoras soils from the Coloso Agricultural Reserve; Rafael Hiciano; Marco A. De Jesus; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; Sigma Xi poster Day; March 29, 2012; Mayagüez, PR</p> <p>s. Porosity in sintered recycled glass and its applications in agriculture; Wesley Cuadrado; Jasmine Figueroa; Andrea López; Lilliana M. Hernández; Gerardo Nazario; Oscar M. Suárez; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; Sigma Xi poster Day; March 29, 2012; Mayagüez, PR</p> <p>t. Uptake and transport of CoFe₂O₄ nanoparticles in tomato plants; Leany Lugo; Mara Cuebas; Jose A. Ortiz; Martha L. López; University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; Sigma Xi poster Day; March 29, 2012; Mayagüez, PR</p> <p>u. Soil-Compost systems and the effect on plant growth and micronutrient uptake by coriander basil, turnip, parsley and rouquette plants; Melissa Rivera; Martha L. López. University of Puerto Rico, Mayagüez; Department of Chemistry; P.O. Box 9000, Mayagüez, PR. 00681.; Sigma Xi poster Day; March 29, 2012; Mayagüez, PR</p>

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Outcome Indicator	Results and Comments
	<p>v. Fe3O4 Nanoparticle uptake and transport in mesquite plants; Reinaldo J. Agostini; Martha L. López w. Invited Speaker: Environmental Nanotechnology. Oscar Perales-Perez. 7th Transdisciplinary Research Conference. University of Turabo, SJ, May 3-4, 2012.</p>
<p>Total Number of students enrolled in disciplines applicable to USDA jobs</p>	<p>There is a total of 55 CETARS sponsored students in USDA related fields of study among which are distributed among the five participating institutions. The number of students enrolled in these disciplines is itemized as follows:</p> <ul style="list-style-type: none"> a. Crops and agro-environmental sciences: 17 (30.9 percent) b. Chemistry: 17 (30.9 percent) c. Biotechnology 2 (3.6 percent) d. Chemical Engineering: 4 (7.3 percent) e. Civil Engineering: 3 (5.5 percent) f. Environmental Technology 8 (14.5 percent) g. Industrial Chemistry 3 (5.5 percent) h. Mechanical Engineering: 1 (1.8 percent)
<p>Total Number of degrees awarded with USDA qualifications</p>	<ul style="list-style-type: none"> a. Student 1; B.S. in Agronomy, UPRM (May 2012); Admitted at the PhD program in Soil Sciences at Ohio State University. b. Student 2; B.S. in Chemistry, UPRM (May 2012); Admitted at the PhD program in Applied Chemistry at UPRM. c. Student 3; B.S. Chemistry, IAUSG (May 2012); File for admission to graduate program in Florida d. Student 4; B.S. Chemistry, IAUSG (May 2012); File for admission to graduate program in Florida
<p>Total Number of students publishing</p>	<p>Despite of the fact that CETARS program is in its early onset, there are a number of publications and presentations that were submitted or under preparations or are expected to be submitted before the end of the project first-year.</p> <p>Articles published or in review:</p> <ul style="list-style-type: none"> • Alamo-Nole, L., Bailon-Ruiz, S., Perales-Perez, O., Roman, F.R. (2012) Preparative size-exclusion chromatography for separation and purification of water-stable Cd-based quantum dots Analytical Methods 4 (10), pp. 3127. This article made the cover page of this journal issue. • Luis A. Alamo-Nole, Oscar Perales-Perez and Felix R. Roman-Velazquez (2012) Use of recycled tires crumb rubber to remove

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Outcome Indicator	Results and Comments
	<p>organic contaminants from aqueous and gaseous phases. Desalin. Water Treat. 49:1-3, 296-306. http://www.deswater.com/vol49.php</p> <ul style="list-style-type: none">• Luis Alamo-Nole, Sonia Bailon-Ruiz, Tatiana Luna-Pineda Oscar Perales-Perez and Felix R. Roman (2012) Photocatalytic activity of quantum dots-magnetite nanocomposite to degrade organic dyes in aqueous phase. Journal of Material Chemistry A (Submitted)• Diana Sanchez-Rivera, Oscar Perales-Perez and Felix R. Roman (2012). Removal of inorganic arsenic oxyanions using Ca-Fe (III) alginate beads; Desalination and Water Treatment (in press).• J. Lopez-Morales, O. Perales-Perez, F. Roman-Velazquez (2012) Sorption of Triclosan onto Tire Crumb Rubber, Adsorption Science and Technology (in press).• Majumdar, S., Rico, C.M. Hong, J., Castillo-Michel, H., Peralta-Videa, J.R. and Gardea-Torresdey, J.L. (2012). Applications of Synchrotron micro-XRF to Study the Distribution of Biologically Important Elements in Different Environmental Matrices: A review. Analytica Chimica Acta, 755: 1-16 (cover page of journal issue).• Zhao, L., Peralta-Videa, J.R., Varela-Ramirez, A., Li, C., Zhang, J., Aguilera, R.J. and Gardea-Torresdey, J.L. (2012). Effect of Surface Coating and Organic Matter on the Uptake of CeO₂ NPs by Corn Plants Grown in Soil: Insight into the Uptake Mechanism. Journal of Hazardous Materials, 225-226, 131-138.• Zhao, L., Peralta-Videa, J.R., Ren, M., Varela-Ramirez, A., Li, C., Hernandez-Viezcas, J. A., Aguilera, R.J. and Gardea-Torresdey, J.L. (2012). Transport of Zn in a Sandy Loam Soil Treated with ZnO NPs and Uptake by Corn Plants: Electron• Microprobe and Confocal Microscopy Studies. Chemical Engineering Journal, 184: 1-8. This article made the cover page of this journal issue.• Bandyopadhyay, S. Peralta-Videa, J.R., Hernandez-Viezcas, J.A., Montes, M., Keller, A.A. and Gardea-Torresdey, J.L. (2012).

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Outcome Indicator	Results and Comments
	<p>Microscopic and Spectroscopic Methods Applied to the Measurements of Nanoparticles in the Environment. Applied Spectroscopy Reviews, 47: 180-206.</p> <p>Articles in preparation:</p> <ul style="list-style-type: none"> • Sánchez-Rivera, D., Perales-Perez, O., Roman, F.R. Removal of Se(IV), V(IV), and V(V) oxyanions from aqueous solutions using Ca-Fe(III) alginate beads. (To be submitted to Desalination) • Maria Isabel Morales, Ana C. Barrios, Cyren M. Rico, Jose R. Peralta-Videoa, Jorge L. Gardea-Torresdey. 2012. Toxicity assessment of cerium oxide nanoparticles in cilantro (Coriandrumsativum) grown in organic soil (to be submitted to the Journal of Agricultural and Food Chemistry)
Comparison of GPA's before and after	<p>At present from 25 CETARS undergraduate students from all campuses, 44 percent increased their GPA after they enrolled at CETARS; 28 percent of the students remain with the same GPA, 20 percent of the students had less GPA, and 8 percent of the students are in their first year at University. The actual average of the 25 CETARS Undergraduate students is 3.45/4.00. For Graduate CETARS students, most of them remain with the same GPA and maintain an average of 3.30/4.00.</p>
Developing curriculum and faculty for required USD	<p>As proposed, two courses were offered in the January-May 2012 semester at UPRM: CHEM 6007, 'Food and Agricultural Applications of Nanotechnology', and AGRO 4035 'Introduction to Conservation of Natural Resources'.</p> <ul style="list-style-type: none"> • CHEM 6007 was jointly-offered by CETARS Co-Pi's: Martha L. Lopez, Marco A. De Jesus and Oscar Perales-Perez from UPRM, and Dr. Jorge Gardea as invited speaker from UTEP. Three CETARS graduate students (two MS, one PhD) from the department of Chemistry and one undergraduate student from the department of Chemical Engineering were officially enrolled at UPRM. Three additional MS students from IAUSG Chemistry, as well as one undergraduate and one MS from UTEP-Chemistry where attending the online version of the course available through our UPRM Moodle platform. The course covered the fundamentals and applications of nanotechnology, nanomaterials processing and characterization, and nanotechnology-enabled applications in agricultural sciences and environmental protection. The course evaluation included 2 written examinations, one special project, one oral presentation of a theme related research topic and the submission of a theme related independent research. Representative project topics include: 1). Metal/Polydimethylsiloxane Nanocomposites for the

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Outcome Indicator	Results and Comments
	<p>Identification of Foodborne Pathogenic Bacteria; 2). Encapsulation of Teobromine in Dark Chocolate; 3). the pesticide Malathion nanoencapsulation with chitosan for controlled release in the mango three. 4). MgO-Chitosan Nanocomposite Films for Food Packaging. All students and faculty had full access to available material that included the power point presentations, syllabus, and news regarding the course and its schedule. Class retention for enrolled students was of 100 percent with an 82 percent grade average and a grade percent distribution of 25 percent A, and 75 percent B.</p> <ul style="list-style-type: none"> • AGRO 4035 was co-chaired by Dr. Mario Flores, Assistant Professor at the Crops and Agro-Environmental Sciences Department at UPRM. Seventeen students were registered at the course, being four of them CETARS'. The course involves the study of natural resources of Puerto Rico and the principles involved in their utilization, management and development. A complete on-line version of this course has been completed to be used by UPR-Aguadilla, UPR-Humacao and Inter-American University –San Germán. • The other two courses: Nanomaterials & Fine Particles Processing (INGE 5075), to be offered at UPRM, and 'Methods of Research' (BIOL 4953) will be offered during the 2012-2013 semesters. These courses will also be available.
<p>Comparison of female success (before and after); gender and ethnicity</p>	<p>The CETARS project has proven quite a success in terms of recruiting female students from underrepresented groups (62 percent average participation). Around 25 percent of the female undergraduate and graduate students mentioned that CETARS increased their academic GPA and expertise. Their participation in CETARS sponsored training activities such as Globe Program-Training Sessions, USDA Internships Webinar, Resume Writing Workshops, and the Home Gardening Training, Hydrology workshop, etc. are among the contributing factors to improve academic performance. These activities empowered participating students with the much-needed tools to build up the necessary skills and abilities to succeed in their research and academic performance. One interesting observation regarding female participants was that some of the participants of the Vegetable Gardens in schools expressed they have had to overcome prejudice regarding females in the field of agriculture. They expressed some of the school personnel felt that because of their sex they were not likely to succeed in the development of the vegetable gardens. They also perceived that female students were bias regarding their possible roles in agriculture; however they were able to overcome these misconceptions about their roles in agriculture related career. Females participants of these outreach activities emerged strengthen and more</p>

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Outcome Indicator	Results and Comments
	convinced about their future in agriculture related careers.
Total Number of students honors advising and tutoring	Our records indicate that a total of sixteen CETARS students are in the list of Honor. Fourteen of them are at the BS level, one at the MS and one at the PhD level. On a percentage basis, 75 percent of them (12) are females and 25 percent (four) males. At the time of writing this report, none of them are advising/tutoring other students. The advising and tutoring activities will be considered for the forthcoming years of the CETARS project and will be presented in future reports.
Tracking students placement into jobs or Ph. Ds/student mobility	During this year one of the undergraduate students finish her BS in chemistry and was admitted into the PhD program in Applied Chemistry and will continue in the CETARS pipeline.
Track research activities/English skills	<p>CETARS research activities between the participating students have been measured by the number of students who presented their research findings in conferences such as:</p> <ul style="list-style-type: none"> • 35th ACS Senior Technical Meeting, Nov. 3-4, 2011; Dorado, PR • American Association for the Advancement of Science- Caribbean Division; 2011 • Annual Conference; Oct. 1, 2011; Dorado, PR • JTM/PRISM 2012 32nd Puerto Rico Interdisciplinary Scientific Meeting, March 10, 2012 • Sigma Xi Poster Presentation at UPRM on March 29, 2012. <p>Future participation in national meetings such as the ACS National Meeting and Pittcon are currently under schedule.</p>
K-12 activities (and freshman)	<p>Over 13 K-12 schools distributed through 7 municipalities in PR where visited for a total of 643 students served. Over 69 percent of these schools where visited by UPRM outreach resources to establish a school vegetable garden and present lectures at least 10 training sessions and lectures related to crop and sustainable development.</p> <p>Fifteen lectures/workshops were presented per elementary school, for a total of 150 lectures presented. An average attendance of 15 students per lecture was reported. UPR-Malso hosted an "Agricultural Tour" which took place at the UPRM Alzamora Farm on March 2, 2012. Ninety students and 10 teachers from participating CETARS schools as well as CETARS outreach personnel participated of the activity.</p>
Community engagement activities	<ul style="list-style-type: none"> • April 22, 2012 – National Earth Week, Festival de Quimica/San Juan, PR; CETARS Poster Presentation and Eco-friendly Demonstrations; 5 CETARS participants; 1 faculty participant; number served >500. • April 15, 2012 – 1st Family and Bicycle Day/Sabana Grande, PR. USDA Poster Presentation and Homemade Filter Demonstration; 4 CETARS participants; 1 faculty participant; number served >50. • February 9, 2012 – Yauco District Science Fair/Yauco, PR; Scientific

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Outcome Indicator	Results and Comments
	<p>Fair Projects Evaluation and Orientation; 2 CETARS participants; 1 faculty participant; number served 40.</p> <ul style="list-style-type: none"> February 8, 2012 – San Germán InterAmerican School/San Germán, PR; High School Scientific Fair Projects Evaluation and Orientation; 5 CETARS participants; 2 faculty participant; number served 60-100. February 7, 2012 – San Germán InterAmerican School/San Germán, PR; Elementary Scientific Fair Projects Evaluation and Orientation; 5 CETARS participants; 2 faculty participant; number served 60-100. <p>Forthcoming activities: Community outreach seminars at the Aguada Credit Union Facility. 1st CETARS Workshop and Conference August 2012.</p>
Budget implementation	<p>All research accounts between the leading institution and the sub-awards for the participating sites were completed within the first 3 months after the project approval. The undergraduate and graduate assistantships were assigned. All project expenditures has been conducted as detailed in the project budget. The final version of the financial reports including the expenses of each participating institution is currently under way. The budget has been implemented as described in the proposal.</p>
Agency/Participant Survey	<p>A survey conducted by our internal evaluator Dr. Catherine Mazak reveal the following: CETARS students were asked to complete a short survey rating their experience in the program. The survey was sent to 55 participants by email (using the program SurveyMonkey, www.surveymonkey.com). Thirty-three (33) answered the survey, which was a 60 percent response rate. All students agreed that “CETARS has helped me grow as a student,” with 13 students agreeing and 18 students strongly agreeing (2 students did not answer). Thirty students (30) agreed (agree=12 and strongly agree=18) that “CETARS has helped me develop as a professional” (one student was unsure and 2 did not answer). Thirty-one (31) students agreed (agree=19; strongly agree=12) that “CETARS has helped me develop my peer network.” When asked whether CETARS had given them hands-on research experience, 19 strongly agreed that it had and 9 agreed that it had (one student was unsure and four answered N/A). Thirty-one (31) students agreed that their mentors had provided them with valuable information (one student was unsure and one student answered N/A). Twenty-two (22) students strongly agreed with the statement “I understand the process of applying for USDA internships”; eight (8) agreed with the statement. Only one disagreed and two were unsure.</p> <p>The strong positive evaluation of these aspects of the CETARS program speaks to the success of its first year. Students participated in research</p>

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Outcome Indicator	Results and Comments
	<p>and training (as documented earlier in this evaluation) and agreed that this has had a positive outcome for their development as students and professionals (as documented in this survey).</p>
<p>Project Activities/ Implementation</p>	<p>CETARS proposed a series of activities of which all have been implemented. UPR-Mayagüez proposed the following activities: K-12 outreach activities which include:</p> <ol style="list-style-type: none"> 1) Constructions of home gardens at 10 participating public schools and weekly follow-up visits to provide educative lectures and workshops to students. Each CETARS student visited the home garden weekly impacting over a 20 students per week per school (200 per week in the 10 schools). They also provided workshops on how to plant seeds, irrigate crops and take care of pests generating great enthusiasm between students, teachers and parents. These activities have been fully implemented with a great success. 2) Globe program outreach activity for K-12 students and teachers: In this activity 16 CETARS undergraduate and graduate students from the chemistry and engineering have been trained in Globe program protocols to measure soil and water properties and quality. All materials have been purchased. This summer teachers from the participating schools will be trained and the materials provided to commence schools visits next semester. This activity is in the implementation process. 3) Mentoring; all participating students (55) have mentors which include faculty and graduate students. The mentorship process has been very successful. Undergraduate and graduate students are actively participating of research and outreach activities under faculty mentorship. 4) Food Safety workshops were implemented as planned. Four workshops were offered by Dr. Edna Negrón impacting 30 cattle ranchers, 50 undergraduate students and 50 eggshells producers: <ol style="list-style-type: none"> 1) Food safety from farm to the table (14 ranchers); 2) Food defense, traceability and transportation (16 cattle and porcine producers); 3) Serve safe food for food handlers (50 undergraduate students); 4) Prevention on Salmonella Enteritidis in shell eggs during production, storage and transportation (50 egg shell producers). <p>Other activities that were not originally proposed but have been incorporated were:</p> <ol style="list-style-type: none"> 1) Resume writing workshops; this activity aimed to improve CETARS students' resumes in order for them to become more competitive in the internships applications.

Exhibit C-6: Outcome Indicators for University of Puerto- Mayagüez (UPR-M)

Outcome Indicator	Results and Comments
	<p>2) Internships webinars/workshops: These activities were introduced in order to introduce CETARS students to internships opportunities at USDA and to teach them how to apply.</p> <p>3) CETARS lecture series: This activity was introduced as a mean to presents CETARS students with the different research project been carried out by participation faculty. Drs. F. Roman, O. Perales, J Gardea, M.L. Lopez and a guest speaker Dr. Maxime Guidellelecture CETARS students and faculty about their research projects. These lectures were brought to other participating campuses in order to attract undergraduates to continue their graduate program at UPR-Mayagüez and to promote collaborations between the CETARS faculty and students from the different participating institutions. Over 100 students participated of these CETARS lectures series.</p> <p>4) Moodle workshop. The purpose of this activity was to promote faculty development by providing hands on training in the Moodle platform. This an open source platform to offer courses online which is available to all institutions.</p> <p>5) Science on wheels chemistry show. This activity was implemented as part of CETARS to attract talented underrepresented minorities into science and agriculture related careers. This is a very successful program that has been on campus for more than a decade and is run by one of CETARS faculty member Dr. Juan Lopez-Garriga. Over a 500 students were impacted in two visits to schools and one to an ACS sponsored meeting.</p> <p>6) Agricultural tour. Five CETARS students for the Crops and Agro-environmental Department constructed a home garden on the Alzamora Farm on Campus and organized a field trip visit in which kids were shown the different developmental stages of plants and how to use basic farming equipment. Close to 100 students from the ten CETARS schools participated.</p> <p>The Inter-American University at San Germán was actively involved in outreach at 10 public schools visits and two open house activities impacting more than 1,000 K-12 students. They provided chemistry demonstrations including water purification processes and tours of the facilities.</p> <p>The UPR-Aguadilla also programmed several workshops and peer</p>

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Outcome Indicator	Results and Comments
	mentoring activities impacting 53 undergraduate students. They offered two workshops on Time management and Peer Mentoring. UPR-Humacao and UTEP CETARS students have been active in research and are planning outreach activities during the summer.

Source: University of Puerto Rico-Mayagüez, USDA First-Year Progress Report, May 2012

Exhibit C-7: Outcome Indicators for University of Texas-El Paso (UTEP)

Outcome Indicator	Results and Comments
Total Number of USDA Agencies and Partners	<p>BGREEN is a collaborative network of sustainable energy researchers, and USDA agencies working together to coordinate efforts and increase educational and post-graduation opportunities for undergraduate and graduate students pursuing careers contributing to the Sustainable Energy area. BGREEN is integrated by four universities; The University of Texas at El Paso, Texas A&M-Kingsville, Texas State University-San Marcos, and New Mexico State University. Our consortium is partnering with the following agricultural research agencies; Agricultural Research Service-Southern Plains Area Director, Natural Resources Conservation Service-RIAD, Texas AgriLife Research Center at El Paso, and Rural Development. Across the consortium, 15 faculty members participate in this project. Our project is currently supporting 53 students; 9 PhD, 9 MS, and 35 UG students. Out of the 53 students being supported, 18 are female students; 35 are male students; 43 are Hispanic. Most of the 53 students applied for USDA internships. A total of 17 students got an internship during the summer of 2012; 13 of those at USDA agencies and 4 of them at other agencies/places (Texas Agrilife (1), (Citrus Center (1), and INTEL-Albuquerque (2)), However, all the internships were related to our main theme: Sustainable Energy. 12 additional students stayed at home institutions to perform research under the supervision of faculty members. All the institutions have activities scheduled to outreach K-12 students.</p>
Total Number of Internships (USDA vs. Others):	<p>Seventeen (17).</p> <p>Across the consortium, 92 students applied for USDA internships, 53 of those students are currently being supported under the BGREEN project. A total of 17 students got an internship during the summer of 2012; 13 of those at USDA agencies and 4 of them at other agencies/places.</p>
Total Number of students served/including gender and ethnicity	<p>Across the four institutions, 53 students are currently being supported; 18 of those are female students; 35 are male students; 43 are Hispanic.</p> <p>Gender: Females: 18 (34.0 percent) Males: 35 (66.0 percent)</p> <p>Race-Ethnicity: Hispanic: 43 (81.1 percent)</p>
Total Percent of retention (undergraduate/grad/Ph. Ds):	<p>The level of study of the supported students is as follows; 9 PhD, 9 MS, and 35 UG.</p> <p>Degree Program: Environmental Science & Engineering (Energy Track), Industrial & Systems Engineering, Civil Engineering, Wildlife Biology,</p>

Exhibit C-7: Outcome Indicators for University of Texas-El Paso (UTEP)

Outcome Indicator	Results and Comments
	Biochemistry, Animal Science, Chemistry, AgriBusiness-Ranch Management, Agriculture Science , Agribusiness, Animal Science-Pre Vet, Agricultural Economics and Agricultural Business Undergraduate: 36 (66 percent) MS: 8 (17 percent) Ph.D.: 9 (17 percent)
Total Number of students in experiential learning (research) mentoring	A total of 17 students got an internship during the summer of 2012; 13 of those at USDA agencies and 4 of them at other agencies/places. 12 additional students are stayed at home institutions to perform research under the supervision of faculty members.
Total Number of participants presenting	A total of 15 students presented their research work at either regional or national conferences.
Total Number of students enrolled in disciplines applicable to USDA jobs	The BGREEN project directly addresses the MCOs related to the Sustainable Energy Priority Need area.
Total Number of degrees awarded with USDA qualifications	At the end of the first year, 8 students graduated; 7 students obtained a Bachelor of Science degree and 1 student obtained a Master of Science degree.
Total Number of students publishing	Forty-two (42) articles published in peer-reviewed journals were produced during this first year; students are co-authors in 8 of them. Students: (n = 8) Faculty: (n =42) <ol style="list-style-type: none"> 1. Taboada, H. and Espiritu, J. (2012). A Multi-Disciplinary and Multi-Institutional Approach to Prepare Industrial Engineers to Respond to Future Energy Challenges. In Proceedings of ASEE Annual Conference and Exposition (ASEE 2012). San Antonio, Texas, June 10-13, 2012. 2. Moreno, O., Taboada, H. and Villalobos, J. (2012) Energy Efficiency and Conservation: A Case Study at the University of Texas at El Paso. In Proceedings of the 2nd Southwest Energy Science and Engineering Symposium. El Paso, TX. March 24. 3. Ituarte-Villarreal C., Valles C. S. and Espiritu J. Optimal Sitting of Wind Turbines Using Viral Systems Algorithm. In Proceedings of the 2nd Southwest Energy Science and Engineering Symposium. El Paso, TX. March 24, 2012. 4. Ituarte-Villareal C. M. and Espiritu J. F. (2012). A Viral Systems Algorithm Implementation to Optimize the Layout of a Wind Farm Considering Reliability. In Proceedings of the Industrial Engineering Research Conference. Orlando, Florida. May 19-23,

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Outcome Indicator	Results and Comments
	<p>2012</p> <ol style="list-style-type: none"> <li data-bbox="597 352 1442 489">5. Lopez N. and Espiritu J. F. (2012). Multi-Objective Optimization of Hybrid Power Systems Using Evolutionary Algorithms. In Proceedings of the Industrial Engineering Research Conference. Orlando, Florida. May 19-23, 2012 <li data-bbox="597 527 1442 663">6. Ituarte-Villareal C. M., Valles C. S. and Espiritu J. F. (2012). Optimal Sitting of Wind Turbines Using Viral Systems Algorithm. In Proceedings of the 2nd Southwest Energy Science and Engineering Symposium. El Paso, TX. March 24, 2012. <li data-bbox="597 701 1442 873">7. Ituarte-Villareal C. M. and Espiritu J. F. (2011). Wind turbine placement in a wind farm using a viral based optimization algorithm. In Proceedings of the 41st International Conference on Computers & Industrial Engineering (CIE 41). Los Angeles, California. October 23-26, 2011. <li data-bbox="597 911 1442 1119">8. Lopez N., Aguirre O., Espiritu J. F. and Taboada H. A. (2011). Using Game Theory as a Post-Pareto Analysis for Renewable Energy Integration Problems Considering Multiple Objectives. In Proceedings of the 41st International Conference on Computers & Industrial Engineering (CIE 41). Los Angeles, California. October 23-26, 2011. <li data-bbox="597 1157 1442 1293">9. Lopez N. and Espiritu J. F. (2011). An approach to hybrid power systems integration considering different renewable energy technologies. In Proceedings of the Complex Adaptive Systems Conference. Chicago, Illinois. October 31- November 2, 2011. <li data-bbox="597 1331 1442 1467">10. Ituarte-Villareal C. M. and Espiritu J. F. (2011). Optimization of wind turbine placement using a viral based optimization algorithm. In Proceedings of the Complex Adaptive Systems Conference. Chicago, Illinois. October 31- November 2, 2011. <li data-bbox="597 1505 1442 1713">11. Lopez, N., Aguirre, O., Espiritu, J. and Taboada, H. (2011). Using Game Theory as a Post-Pareto Analysis for Renewable Energy Integration Problems Considering Multiple Objectives. In Proceedings of the 41st International Conference on Computers & Industrial Engineering. Los Angeles, Calif., October 23-26, 2011. <li data-bbox="597 1751 1442 1887">12. Sanchez M. J., Aguirre J., Perez M. Wicker R. B. and Noveron J. C. 3-D printing Nanolithography with DNA for Water Remediation Applications. In Proceedings of the 2nd Southwest Energy Science and Engineering Symposium. El Paso, TX. March 24,

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Outcome Indicator	Results and Comments
	2012.
	13. Taboada, H., Xiong, Z., Jin, T. and Jimenez, J. (2012). Exploring a Solar Photovoltaic-Based Energy Solution for a Green Manufacturing Environment. In Proceedings of IEEE Conference on Automation Science and Engineering, Seoul, Korea, August 21-24, pp. 40-45. (CASE 2012) – Conference theme: Green Automation toward a Sustainable Society. August 20-24, 2012, Seoul, Korea.
	14. Hu, H.; Martin, J. C.; Zhang, M.; Southworth, C. S.; Xiao, M.; Meng, Y.; Sun, L. Immobilization of Ionic Liquids in θ -Zirconium Phosphate for Catalyzing the Coupling of CO ₂ and Epoxides. RSC Advances 2012.
	15. Wang, W.; Martin, J. C.; Huang, R.; Huang, W.; Liu, A.; Han, A.; Sun, L. Synthesis of Silicon Complexes from Rice Husk Derived Silica Nanoparticles. RSC Advances 2012, 2, 9036-9041.
	16. Hu, H.; Martin, J. C.; Zhang, M.; Southworth, C. S.; Xiao, M.; Meng, Y.; Sun, L. Immobilization of Ionic Liquids in θ -Zirconium Phosphate for Catalyzing the Coupling of CO ₂ and Epoxides. RSC Advances 2012, 2, 3810-3815.
	17. Wang, W.; Martin, J. C.; Fan, X.; Han, A.; Luo, Z.; Sun, L. Silica Nanoparticles and Frameworks from Rice Husk Biomass. ACS Applied Materials & Interfaces 2012, 4, 977-981.
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	19. Sun, L.; Meng, Y.; Xiao, M.; Hu, H; Martin, J. C. Immobilization of Ionic Liquids via Solid State Intercalation in Layered Compounds. International Patent Application Publication No. WO2012/078783, publication date: June 14, 2012.
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Outcome Indicator	Results and Comments
	2, 966-9664.
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	27. T. Jin, Z. Tian, M. Huerta, J. Piechota, "Minimizing leveled cost of wind energy by coordinating maintenance policy and spares provisioning," in Proceedings of ICQR2MSE Symposium in Chengdu, China, 2012, pp. 1022-1027.
	28. Reyes G. and Sohn. Challenges on Bio-Fuels Distribution Network in the U.S. In Proceedings of the 2nd Southwest Energy Science and Engineering Symposium. El Paso, TX. March 24, 2012.
	29. Alodan H., Hespeler S., Soltero J., Garcia B. and Valles-Rosales D. Sustainable Commodity Wood Plastic Composite Materials from Chile Fibers and Plastics. In Proceedings of the 2nd Southwest Energy Science and Engineering Symposium. El

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Outcome Indicator	Results and Comments
	Paso, TX. March 24, 2012.
	30. German Reyes and Hansuk Sohn, "Sustainable Fleet Management Plan on NMSU Campus," Proceedings of the 83rd Annual National Technical Association Conference, page 142-147, Washington, DC, September 14-16, 2011.
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	32. Preparation of mesoporous silica-supported palladium catalysts for biofuel upgrade". L. Fei, H. K. Reddy, J. Hill, Q. Lin, B. Yuan, Y. Xu, S. Deng, H. M. Luo. Nanotechnology, 309093 (2012).
	33. Structure and magnetotransport properties of epitaxial nanocomposite $\text{La}_{0.67}\text{Ca}_{0.33}\text{MnO}_3:\text{SrTiO}_3$ thin films grown by a chemical solution approach" L. Fei, L. Zhu, X. M. Cheng, H. Wang, S. Baber, J. Hill, Q. Lin, Y. Xu, S. Deng, H. M. Luo. Appl. Phys. Lett. 100, 082403 (2012).
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	35. Energetic optimization of algal lipid production in bubble columns: Part I: Evaluation of gas sparging, Arudchelvam, Y. and Khandan, N. N., 46, 757-764, Biomass & Bioenergy, 2012.
	36. Energetic optimization of algal lipid production in bubble columns Part II: Evaluation of CO_2 enrichment, Arudchelvam, Y. and Khandan, N. N., 46, 765-772, Biomass & Bioenergy, 2012.
	37. Internally illuminated photobioreactor for algal cultivation under CO_2 -supplementation: Performance evaluation, Pegallapati A. K. and Khandan, N. N., in press, Renewable Energy, 2012.
	38. Valles-Rosales, D. Alodan, H. Hespeler, S. Alvarado, A. and Rodriguez, I. (2012). "A Study of an Innovative Sustainable Blend of Materials between Red Chile Pepper Stems and Polymers." Presentation: ISERC Conference, Orlando, FL. May, 2012.

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Outcome Indicator	Results and Comments
	<p>39. Abuhasel, K. Valles, Delia. And Alvarado, A. (2012). "A Neural Network Analysis of Chicken Feather Fiber Used as a Nutrient Source for Nannochloropsis oculata and Chlorella sorokiniana." Submitted to the International Journal of Intelligent Systems Technologies and Applications (IJISTA). Submission code: IJISTA-44465.</p> <p>40. Alvarado, A. and Valles, D. (2012). "A Recurrent Neural Network for Warpage Prediction in Injection Molding." Submitted to the Journal of Applied Research and Technology. Submission code: JART 361.</p> <p>41. Abuhasel, K. and Valles, D. (2012). "Interaction of Brackish Water and Nutrients on Biomass Production of Chlorella Sorokiniana and Nannochloropsis Oculata." Submitted to the Journal of Energy Sources, Part A: Recovery, Utilization, and Environmental Effects. Submission code: UESO-2012-0029.</p> <p>42. E. Biediger, R. Silguero, M. Clayton, B. Yarta, G. Gonzales, R. Stanko, and S. Nelson. 2012. Supplemental requirements for beef cattle fed native and improved forage using fecal analysis. Texas Section Society of Range Management. Fredericksburg, TX. Oct. 10-12, 2012. (abstract).</p>
Comparison of GPA's before and after	On average, the students supported under BGREEN maintained a GPA above 3.2.
Developing curriculum and faculty for required USD	A total of 5 new 3-credit courses and 5 learning modules have been developed.
Comparison of female success (before and after); gender and ethnicity	53 students are currently being supported; 18 of those are female students; 35 are male students; 43 are Hispanic.
Total Number of students hours advising and tutoring	Ph.D students Karla Gutierrez and Olivia Moreno (UTEP) received the CULTIVAR Fellowship. Ph.D student Olivia Moreno (UTEP) was awarded a Climate Corps Fellowship by the Environmental Defense Fund. Ph.D student Karla Gutierrez (UTEP) was awarded a scholarship from Workforce Solutions Upper Rio Grande. UG student J. Martin (TSU) won the NSF REU Fellowship to conduct summer research at Baylor University (2012). TSU undergraduate students J. Martin, A.Oliphant, H. Chen, K.DeBord, and K.Long won the US EPA P3 (People, Prosperity, and the Planet) Award (2012). MS student J. Yu (TSU) won the Society of Plastics Engineers (SPE) South Texas Section Scholarship (2012). UG student J. Martin (TSU) won the Society of Plastics Engineers (SPE) South Texas Section Scholarship (2012). UG student Gabriel Hurtado (TSU) won the Houston-Louis Stokes Alliance for Minority Participation (H-LSAMP) Scholarship (2011 and 2012). UG student Miguel Huerta

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Outcome Indicator	Results and Comments
	(TSU) won 3rd place in the poster presentation in the 2nd Southwest Energy Science and Engineering Symposium, March 24, 2012, El Paso, TX. A poster presentation given by UG student Saul Villarreal (TSU) won the 1st place at the 24th Annual HENAAC Conference, October 11-13, 2012. UG student Miguel Gomez (TAMUK) received a 'paid SCEP internship' by the USDA in Denham, LA this past summer by USDA-NRCS as soils major.
Tracking students placement into jobs or Ph. Ds/student mobility	The project is currently supporting 9 PhD, 9 MS, and 35 UG students.
Track research activities/English skills	All the research presentations given by students at different meetings offer them the opportunity to improve their presentation and communication skills.
K-12 activities (and freshman)	A number of different K-12 activities took place during the summer at the different institutions.
Community engagement activities	Dr. Nelson at TAMU-Kingsville worked in conjunction with the Harlingen Irrigation District to host the 2nd Annual Irrigation Expo in McAllen, Texas. Dr. Nelson hosted the High School and College Science Fair Competition where students from the Lower Rio Grande Valley competed in presenting their research projects to the community. Over 250 participants attended the three day event. Some student interns participated in community educational events with their USDA partners to promote the work and importance of the USDA.
Budget implementation	Budget expenditures are on track.
Agency/Participant Survey	A participant survey was administered to all students participating under the project. Results were analyzed by Project Evaluator.
Project's Outreach at K-12	
Project Implementation	Most of the planned activities are being carried out according to the anticipated schedule.

Source: University of Texas-El Paso, USDA First-Year Progress Report, May 2012

Appendix D: Online Student Survey

Thank you for taking time to share your views. This survey is designed to help your college/university to better support, equip, and prepare students to be successful in completing a program of study in food and agricultural sciences. Your college/university has been awarded a grant from the United States Department of Agriculture, National Institute of Food and Agriculture (USDA/NIFA) to increase the number and diversity of professionals in food and agricultural sciences. The survey is divided into seven major areas. Confidentiality of individuals will be preserved; no individual will be identified in any reports without written permission. Your perspectives are essential to improving programs and to the field as a whole.

SECTION #1: Background, Degree Plans and Goals

***1. Your Student ID or Banner ID Number**

***2. Gender**

- Male
- Female

***3. Race/ethnicity**

How do you describe yourself?

- American Indian or Alaska Native
- Hawaiian or Other Pacific Islander
- Asian or Asian American
- Black or African American
- Hispanic or Latino
- Non-Hispanic White
- Other

Comments

***4. Do you speak a language other than English?**

- Yes
- No

If yes, what is this language? (For example: Spanish, Vietnamese, Korean)

***5. How well do you speak English?**

- Very well
- Well
- Not well
- Not at all

***6. College/University You Attend**

If other, please specify

***7. In which project are you participating (Note that you may be enrolled at one institution but participating in a project at a collaborating institution)?**

CSU-SB: Watershed Management Experiential Learning for USDA Careers

TSU: Food Safety and Agroterrorism Training: Educating Our Future Workforce

FIU: Florida - Caribbean Consortium for Agriculture Education and Hispanic Workforce Development

UPR-M: UPR-Mayaguez Center for Educational and Training In Agricultural and Related Sciences

NMSU: Preparing Students for Career Paths with the USDA Forest Service by Linking Student Success with Experiential Learning Opportunities...

UTEP: BGREEN – Building a Regional Energy and Educational Network

TAMUK: Step Up to USDA Career Success: Science, Technology and Environmental Programs for Undergraduate Preparation to USDA Career Success

Other (please specify)

***8. Program of Study in Which You Are Enrolled (For example: agriculture science, agronomy, animal science, horticulture, environmental science, etc.)**

***9. Current GPA**

10. Hours Completed in the Program

***11. Degree Program Completed?**

- Yes
- No
- N/A

If yes, what was your major and minor?

***12. Classification**

	Freshman	Sophomore	Junior	Senior	Graduate	Doctoral	N/A
In the 2011-12 Academic Year, I was enrolled as...	<input type="radio"/>						
This fall (2012), I am enrolled as...	<input type="radio"/>						

If "N/A," please describe.

***13. Current Degree Plan**

- Associate's
- Bachelor's
- Master's
- Doctorate
- N/A

If "N/A," please describe.

***14. Do You Have An Official (approved and signed) Degree Plan?**

- Yes
 No
 N/A

If no, by when (month/year) will you have an approved degree plan?

***15. Degree(s) You Already Hold**

- Associate's
- Doctorate
- Bachelor's
- None of the above
- Master's

SECTION #2: Academic Interests and Career Plans

***16. Please tell us about your main areas of interests and career or academic plans.**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
My career interests are related to agriculture, nutrition and natural resources.	<input type="radio"/>					
I am satisfied with the program of study I am enrolled in.	<input type="radio"/>					
I have declared and/or plan to declare a major in an agriculture-related field of study.	<input type="radio"/>					
I plan to complete a degree in the agriculture-related field in which I am enrolled.	<input type="radio"/>					
Upon finishing my undergraduate studies, I plan to enroll in graduate studies in an agriculture-related field.	<input type="radio"/>					
I also am considering other careers of interest.	<input type="radio"/>					

SECTION #3: College/University, Programs and Course of Study

***17. Please share your perspectives on the college/university you attend.**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
The college/university I attend was my first choice of higher education institutions.	<input type="radio"/>					
The college/university I attend is well known for programs of study related to USDA jobs.	<input type="radio"/>					
I am satisfied with the program of study offered by the college/university I attend.	<input type="radio"/>					
The courses I am taking are academically challenging.	<input type="radio"/>					
A degree from this college/university will help me get a job immediately after graduation	<input type="radio"/>					
A degree from this program will prepare me for graduate school or a post-graduate degree.	<input type="radio"/>					
I consider the program in which I am enrolled at this college/university to be one of the best in the country.	<input type="radio"/>					

The college/university I attend could be strengthened by...

***18. If you had a friend who was interested in a similar career, what would you tell them about your experience with this program?**

SECTION #4: Recruitment of Under-Represented Students

***19. The college/university I attend is taking pro-active steps to...**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
Recruit more students for agriculture related programs of study.	<input type="radio"/>					
Recruit more under-represented students for agriculture related programs.	<input type="radio"/>					
Enroll Hispanic students in agriculture related programs of study.	<input type="radio"/>					
Include diversity/multicultural perspectives in classes, presentations, assignments and discussions.	<input type="radio"/>					

These are some ways the college/university I attend could strengthen outreach/recruitment to under-represented students...

SECTION #5: Supports and Opportunities for Experiential Learning

20. The following support areas have contributed to my continued enrollment and success in this college/university.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
career counseling	<input type="radio"/>					
social and emotional counseling	<input type="radio"/>					
academic support with course requirements	<input type="radio"/>					
out-of-state internships	<input type="radio"/>					
in-state internships	<input type="radio"/>					
partnering with faculty in research activities	<input type="radio"/>					
opportunities to conduct independent research, analyze and interpret my data and present my work	<input type="radio"/>					
faculty mentoring	<input type="radio"/>					
tutoring services	<input type="radio"/>					
professional meeting and conferences	<input type="radio"/>					
USDA agency visits	<input type="radio"/>					
visits to non-USDA agencies	<input type="radio"/>					
opportunities to get involved in helping my community	<input type="radio"/>					
publishing opportunities	<input type="radio"/>					

Some additional supports that would be helpful to me are...

***21. Regarding your experience on campus so far...**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
I feel comfortable getting what I need to succeed academically in this college/university.	<input type="radio"/>					
It is clear what I need to do to meet graduation requirements at this college/university.	<input type="radio"/>					
If I have a question about my degree plan, I know whom to ask.	<input type="radio"/>					
It is easy to find my way around campus.	<input type="radio"/>					
I have participated in classes or other opportunities designed to help me feel part of the college/university culture.	<input type="radio"/>					
I feel like I belong in this college/university.	<input type="radio"/>					

Comments

***22. What challenges, if any, have you experienced in the program? (Check all that apply)**

- Housing
- Classes
- Financial Issues/Problems
- Getting Coaching and Mentoring
- Problems with Internship
- Getting counseling
- Accessing information about jobs
- Accessing information about internships
- Knowing how to navigate the university
- Other
- None of the above, I have not experienced any challenges

If other, please describe.

***23. If you noted any challenges, above, have they been resolved?**

- Yes
- No
- N/A

If applicable, how were challenges resolved?

24. How could the USDA/NIFA project at your college/university be improved?

25. What kinds of jobs interest you most?

SECTION #6: USDA related INTERNSHIPS, JOBS and COMMUNICATIONS

***26. Regarding USDA-related internships and jobs...**

	Yes	No	N/A
I receive information about USDA job and internship opportunities on a regular basis.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am familiar with the requirements of the various USDA-related jobs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have selected a USDA-related job of interest.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know what courses are necessary for USDA-related jobs that interest me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The college/university I attend offers the courses I need for the job I seek.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am aware of internships and experiential learning opportunities within a USDA agency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I applied for an internship or experiential learning opportunity within an USDA agency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was successful in acquiring an internship or experiential learning opportunity within a USDA agency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I applied for an internship or experiential learning opportunity in a non-USDA agency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was successful in acquiring an internship or experiential learning opportunity in a non-USDA agency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What aspects of USDA-related jobs would you like to learn more about?

***27. Conferences are providing me opportunities for...(Check all that apply)**

- Professional growth
- Presentation experience
- Networking opportunities
- Learning about jobs
- Learning about internships
- Knowing other cities
- None of the above, attending conferences has not been valuable to me
- N/A

Comments

***28. These factors would keep me from relocating to take a USDA related job. (Check all that apply)**

- Distance - the job requires relocation to a new town/city
- My family would not want me to move
- Potential costs
- Not knowing anyone there
- Unfamiliar with the area/city where job is located
- None of the above, I am willing to relocate wherever the job is (to another state, Washington DC, etc.)

Other factors that would affect my decision about relocation for a job or internship are...

SECTION #7: Preparation for your field of interest and overall goals

***29. Please describe your high school preparation and overall goals.**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
I feel I was well prepared in high school to enroll in college.	<input type="radio"/>					
My high school encouraged me to enroll in college.	<input type="radio"/>					
My dream has always been to have a professional career.	<input type="radio"/>					
A career in a USDA related area is my immediate goal.	<input type="radio"/>					
Getting a college degree has always been my goal.	<input type="radio"/>					

Comments

30. Any other comments that you would like to share?

Appendix E: Student Survey Results

Final USDA/NIFA Student Survey

Education

Design Survey

Collect Responses

Analyze Results

View Summary

Browse Responses

Filter Responses

Crosstab Responses

Download Responses

Share Responses

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Default Report

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Response Summary

Total Started Survey: 268
Total Finished Survey: 267 (99.6%)

Select a page to view below or [view all pages](#):

« #1. »

PAGE: 1

1. Your Student ID or Banner ID Number		Download
		Response Count
		Show Responses 268
	answered question	268
	skipped question	0

2. Gender		Create Chart	Download
		Response Percent	Response Count
Male		44.8%	120
Female		55.2%	148
	answered question		268
	skipped question		0

3. Race/ethnicity How do you describe yourself?		Create Chart	Download
		Response Percent	Response Count
American Indian or Alaska Native		1.1%	3

Hawaiian or Other Pacific Islander		0.0%	0
Asian or Asian American		3.0%	8
Black or African American		2.6%	7
Hispanic or Latino		83.6%	224
Non-Hispanic White		10.1%	27
Other		4.5%	12
Comments			5
Show Responses			
answered question			268
skipped question			0

4. Do you speak a language other than English? Create Chart Download			
		Response Percent	Response Count
Yes		73.9%	198
No		26.1%	70
If yes, what is this language? (For example: Spanish, Vietnamese, Korean)			186
Show Responses			
answered question			268
skipped question			0

5. How well do you speak English? Create Chart Download			
		Response Percent	Response Count
Very well		73.9%	198
Well		22.4%	60
Not well		3.4%	9
Not at all		0.4%	1
answered question			268
skipped question			0

6. College/University You Attend Create Chart Download			
		Response	Response

		Percent	Count
CSU-Bakersfield		1.9%	5
CSU-Channel Islands		0.0%	0
CSU-Dominguez Hills		0.0%	0
CSU-Fresno		1.1%	3
CSU-Fullerton		0.0%	0
CSU-Long Beach		0.0%	0
CSU-Los Angeles		0.7%	2
CSU-Monterey Bay		4.1%	11
CSU-Northridge		0.4%	1
CSU-Cal Poly Pomona		0.0%	0
CSU-San Bernardino		0.7%	2
CSU-San Diego State		0.4%	1
CSU-San Marcos		1.5%	4
CSU-Stanislaus		1.1%	3
Florida International University (FIU)		4.1%	11
Inter American University of Puerto Rico - San Germán		5.2%	14
Inter American University of Puerto Rico (IAU)		0.0%	0
Laredo Community College (LCC)		3.0%	8
Luna Community College		0.0%	0
Miami Dade College (MDC)		5.2%	14
New Mexico Highlands University		2.6%	7
New Mexico State University		10.4%	28
New Mexico State University-Alamogordo		0.0%	0
New Mexico State University-Carlsbad		0.0%	0
New Mexico State University-Gallup		0.0%	0
Northwest Vista College (NWVC)		3.0%	8
Palo Alto College		2.6%	7
South Texas College (STC)		0.0%	0
St. Thomas University (STU)		3.0%	8
Texas A&M University-Kingsville		7.5%	20
Texas State University-San Marcos		8.6%	23

University of Puerto Rico-Aguadilla		2.6%	7
Universidad Interamerica de Puerto Rico-Bayamón (UIPR Bayamón)		0.0%	0
University of Puerto Rico-Cayey (UPR Cayey)		0.0%	0
University of Puerto Rico-Humacao		1.5%	4
University of Puerto Rico-Mayagüez		12.7%	34
University of Puerto Rico-Rio Piedras (UPR RP)		0.0%	0
University of Texas-El Paso		7.1%	19
Other		9.0%	24
		If other, please specify Show Responses	26
		answered question	268
		skipped question	0

7. In which project are you participating (Note that you may be enrolled at one institution but participating in a project at a collaborating institution)?

 [Create Chart](#)  [Download](#)

		Response Percent	Response Count
CSU-SB: Watershed Management Experiential Learning for USDA Careers		23.2%	32
FIU: Florida - Caribbean Consortium for Agriculture Education and Hispanic Workforce Development		29.7%	41
NMSU: Preparing Students for Career Paths with the USDA Forest Service by Linking Student Success with Experiential Learning Opportunities...		17.4%	24
TAMUK: Step Up to USDA Career Success: Science, Technology and Environmental Programs for Undergraduate Preparation to USDA Career Success		15.2%	21
TSU: Food Safety and Agroterrorism Training: Educating Our Future Workforce		0.7%	1
UPR-M: UPR-Mayaguez Center for Educational and Training In Agricultural and Related Sciences		0.0%	0
UTEP: BGREEN - Building a Regional Energy and Educational Network		13.8%	19
		Other (please specify) Show Responses	5

answered question	138
skipped question	130

8. Program of Study in Which You Are Enrolled (For example: agriculture science, agronomy, animal science, horticulture, environmental science, etc.) [Download](#)

	Response Count
Show Responses	268
answered question	268
skipped question	0

9. Current GPA [Download](#)

	Response Count
Show Responses	268
answered question	268
skipped question	0

10. Hours Completed in the Program [Download](#)

	Response Count
Show Responses	186
answered question	186
skipped question	82

11. Degree Program Completed? [Create Chart](#) [Download](#)

		Response Percent	Response Count
Yes		7.5%	20
No		87.3%	234
N/A		5.2%	14
If yes, what was your major and minor?			19

[Show Responses](#)

answered question	268
skipped question	0

12. Classification [Create Chart](#) [Download](#)

	Freshman	Sophomore	Junior	Senior	Graduate	Doctoral	N/A	Rating Count
In the 2011-12 Academic Year, I was enrolled as...	16.4% (41)	24.0% (60)	20.0% (50)	17.6% (44)	13.6% (34)	4.8% (12)	3.6% (9)	250
This fall (2012), I am enrolled as...	4.4% (11)	21.1% (53)	25.1% (63)	25.9% (65)	15.5% (39)	6.4% (16)	1.6% (4)	251
If "N/A," please describe. Show Responses								8
answered question								268
skipped question								0

13. Current Degree Plan [Create Chart](#) [Download](#)

	Response Percent	Response Count
Associate's		11.9% 32
Bachelor's		64.9% 174
Master's		16.8% 45
Doctorate		7.5% 20
N/A		1.5% 4
If "N/A," please describe. Show Responses		2
answered question		268
skipped question		0

14. Do You Have An Official (approved and signed) Degree Plan? [Create Chart](#) [Download](#)

	Response Percent	Response Count
Yes		62.7% 168
No		24.6% 66

N/A		12.7%	34
If no, by when (month/year) will you have an approved degree plan? Show Responses			38
		answered question	268
		skipped question	0

15. Degree(s) You Already Hold		 Create Chart	 Download
		Response Percent	Response Count
Associate's		16.4%	44
Bachelor's		25.4%	68
Master's		5.2%	14
Doctorate		0.0%	0
None of the above		60.8%	163
		answered question	268
		skipped question	0

16. Please tell us about your main areas of interests and career or academic plans.		 Create Chart	 Download					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	Rating Average	Rating Count
My career interests are related to agriculture, nutrition and natural resources.	50.6% (135)	28.5% (76)	14.2% (38)	4.5% (12)	2.2% (6)	0.0% (0)	4.21	267
I am satisfied with the program of study I am enrolled in.	67.7% (180)	29.7% (79)	2.3% (6)	0.4% (1)	0.0% (0)	0.0% (0)	4.65	266
I have declared and/or plan to declare a major in an agriculture-related field of study.	34.6% (92)	25.2% (67)	23.7% (63)	8.3% (22)	3.8% (10)	4.5% (12)	3.82	266
I plan to complete a degree in the agriculture-related field in which I am enrolled.	41.4% (110)	23.3% (62)	16.5% (44)	10.5% (28)	2.6% (7)	5.6% (15)	3.96	266
Upon finishing my undergraduate studies, I plan to enroll in graduate studies in an agriculture-related field.	25.2% (67)	23.7% (63)	26.3% (70)	7.5% (20)	3.0% (8)	14.3% (38)	3.71	266
I also am considering other careers of interest.	25.8% (69)	37.1% (99)	24.0% (64)	6.7% (18)	4.1% (11)	2.2% (6)	3.75	267

answered question	268
skipped question	0

17. Please share your perspectives on the college/university you attend. [Create Chart](#) [Download](#)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	Rating Average	Rating Count
The college/university I attend was my first choice of higher education institutions.	44.4% (119)	31.7% (85)	11.9% (32)	10.4% (28)	1.5% (4)	0.0% (0)	4.07	268
The college/university I attend is well known for programs of study related to USDA jobs.	30.0% (80)	33.3% (89)	24.0% (64)	7.9% (21)	1.9% (5)	3.0% (8)	3.84	267
I am satisfied with the program of study offered by the college/university I attend.	58.2% (156)	33.6% (90)	6.0% (16)	2.2% (6)	0.0% (0)	0.0% (0)	4.48	268
The courses I am taking are academically challenging.	57.8% (155)	35.4% (95)	5.6% (15)	1.1% (3)	0.0% (0)	0.0% (0)	4.50	268
A degree from this college/university will help me get a job immediately after graduation	41.5% (110)	41.1% (109)	14.3% (38)	2.3% (6)	0.0% (0)	0.8% (2)	4.23	265
A degree from this program will prepare me for graduate school or a post-graduate degree.	57.5% (153)	32.7% (87)	5.3% (14)	0.4% (1)	0.4% (1)	3.8% (10)	4.52	266
I consider the program in which I am enrolled at this college/university to be one of the best in the country.	37.6% (100)	33.1% (88)	23.3% (62)	4.9% (13)	1.1% (3)	0.0% (0)	4.01	266

The college/university I attend could be strengthened by... [Show Responses](#) 117

answered question	268
skipped question	0

18. If you had a friend who was interested in a similar career, what would you tell them about your experience with this program? [Download](#)

Response	Count
Show Responses	268

answered question	268
skipped question	0

19. The college/university I attend is taking pro-active steps to...							Create Chart	Download
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	Rating Average	Rating Count
Recruit more students for agriculture related programs of study.	42.9% (115)	35.4% (95)	15.3% (41)	3.4% (9)	1.1% (3)	1.9% (5)	4.18	268
Recruit more under-represented students for agriculture related programs.	39.5% (105)	34.2% (91)	18.8% (50)	3.0% (8)	1.5% (4)	3.0% (8)	4.10	266
Enroll Hispanic students in agriculture related programs of study.	46.6% (124)	32.3% (86)	14.7% (39)	1.9% (5)	1.1% (3)	3.4% (9)	4.26	266
Include diversity/multicultural perspectives in classes, presentations, assignments and discussions.	46.1% (123)	34.5% (92)	13.9% (37)	3.7% (10)	0.7% (2)	1.1% (3)	4.23	267
These are some ways the college/university I attend could strengthen outreach/recruitment to under-represented students...								62
								Show Responses
answered question								268
skipped question								0

20. The following support areas have contributed to my continued enrollment and success in this college/university.							Create Chart	Download
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	Rating Average	Rating Count
career counseling	28.6% (76)	40.2% (107)	18.4% (49)	6.4% (17)	1.9% (5)	4.5% (12)	3.91	266
social and emotional counseling	18.1% (48)	27.9% (74)	30.9% (82)	10.2% (27)	2.6% (7)	10.2% (27)	3.54	265
academic support with course requirements	40.2% (107)	41.0% (109)	13.9% (37)	1.1% (3)	1.1% (3)	2.6% (7)	4.21	266
out-of-state internships	29.4% (78)	19.2% (51)	29.1% (77)	6.8% (18)	1.1% (3)	14.3% (38)	3.81	265
in-state internships	42.5% (113)	29.7% (79)	13.2% (35)	3.8% (10)	0.8% (2)	10.2% (27)	4.22	266
partnering with faculty in research activities	49.0% (129)	31.2% (82)	11.0% (29)	2.7% (7)	0.8% (2)	5.3% (14)	4.32	263
opportunities to conduct independent research, analyze and interpret my data and present my work	47.5% (125)	31.6% (83)	9.1% (24)	3.8% (10)	1.1% (3)	6.8% (18)	4.29	263
faculty mentoring	53.0% (141)	31.2% (83)	9.4% (25)	3.4% (9)	0.4% (1)	2.6% (7)	4.37	266

tutoring services	37.2% (99)	30.5% (81)	20.7% (55)	5.3% (14)	1.5% (4)	4.9% (13)	4.02	266
professional meeting and conferences	48.7% (129)	35.5% (94)	10.2% (27)	1.9% (5)	0.8% (2)	3.0% (8)	4.33	265
USDA agency visits	36.8% (98)	32.7% (87)	18.8% (50)	4.1% (11)	1.1% (3)	6.4% (17)	4.07	266
visits to non-USDA agencies	25.9% (68)	30.8% (81)	26.6% (70)	5.7% (15)	1.5% (4)	9.5% (25)	3.82	263
opportunities to get involved in helping my community	44.7% (118)	32.6% (86)	15.5% (41)	2.7% (7)	1.1% (3)	3.4% (9)	4.21	264
publishing opportunities	29.5% (78)	29.5% (78)	25.4% (67)	4.5% (12)	1.5% (4)	9.5% (25)	3.90	264
Some additional supports that would be helpful to me are... Show Responses								36
answered question								266
skipped question								2

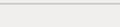
21. Regarding your experience on campus so far...

[Create Chart](#) [Download](#)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	Rating Average	Rating Count
I feel comfortable getting what I need to succeed academically in this college/university.	56.7% (152)	36.9% (99)	4.9% (13)	1.1% (3)	0.0% (0)	0.4% (1)	4.50	268
It is clear what I need to do to meet graduation requirements at this college/university.	64.6% (173)	29.1% (78)	4.1% (11)	1.5% (4)	0.4% (1)	0.4% (1)	4.57	268
If I have a question about my degree plan, I know whom to ask.	63.4% (170)	28.4% (76)	5.6% (15)	1.9% (5)	0.4% (1)	0.4% (1)	4.53	268
It is easy to find my way around campus.	73.1% (196)	23.9% (64)	1.9% (5)	0.7% (2)	0.0% (0)	0.4% (1)	4.70	268
I have participated in classes or other opportunities designed to help me feel part of the college/university culture.	54.9% (147)	32.1% (86)	6.3% (17)	4.5% (12)	0.7% (2)	1.5% (4)	4.38	268
I feel like I belong in this college/university.	60.5% (161)	28.9% (77)	7.9% (21)	1.9% (5)	0.4% (1)	0.4% (1)	4.48	266
Comments Show Responses								16
answered question								268
skipped question								0

22. What challenges, if any, have you experienced in the program? (Check all that apply)

[Create Chart](#) [Download](#)

		Response Percent	Response Count
Housing		13.1%	35
Classes		26.9%	72
Financial Issues/Problems		37.7%	101
Getting Coaching and Mentoring		9.3%	25
Problems with Internship		11.6%	31
Getting counseling		4.1%	11
Accessing information about jobs		17.2%	46
Accessing information about internships		19.8%	53
Knowing how to navigate the university		3.7%	10
Other		4.9%	13
None of the above, I have not experienced any challenges		35.8%	96
If other, please describe. Show Responses			24
answered question			268
skipped question			0

23. If you noted any challenges, above, have they been resolved?

[Create Chart](#) [Download](#)

		Response Percent	Response Count
Yes		31.3%	84
No		20.1%	54
N/A		48.5%	130
If applicable, how were challenges resolved? Show Responses			30
answered question			268
skipped question			0

24. How could the USDA/NIFA project at your college/university be improved?

[Download](#)

	Response Count
Show Responses	145
answered question	145
skipped question	123

25. What kinds of jobs interest you most? [Download](#)

	Response Count
Show Responses	204
answered question	204
skipped question	64

26. Regarding USDA-related internships and jobs... [Create Chart](#) [Download](#)

	Yes	No	N/A	Rating Count
I receive information about USDA job and internship opportunities on a regular basis.	67.9% (182)	28.4% (76)	3.7% (10)	268
I am familiar with the requirements of the various USDA-related jobs.	76.9% (206)	19.4% (52)	3.7% (10)	268
I have selected a USDA-related job of interest.	61.1% (162)	30.9% (82)	7.9% (21)	265
I know what courses are necessary for USDA-related jobs that interest me.	72.0% (193)	25.0% (67)	3.0% (8)	268
The college/university I attend offers the courses I need for the job I seek.	80.1% (214)	9.0% (24)	10.9% (29)	267
I am aware of internships and experiential learning opportunities within a USDA agency.	82.8% (222)	14.2% (38)	3.0% (8)	268
I applied for an internship or experiential learning opportunity within an USDA agency.	63.4% (170)	28.7% (77)	7.8% (21)	268
I was successful in acquiring an internship or experiential learning opportunity within a USDA agency.	46.8% (125)	36.0% (96)	17.2% (46)	267
I applied for an internship or experiential learning opportunity in a non-USDA agency.	37.5% (100)	51.3% (137)	11.2% (30)	267
I was successful in acquiring an internship or experiential learning	30.5% (81)	44.0% (117)	25.6% (68)	266

opportunity in a non-USDA agency.	
What aspects of USDA-related jobs would you like to learn more about? Show Responses	67
answered question	268
skipped question	0

27. Conferences are providing me opportunities for...(Check all that apply) [Create Chart](#) [Download](#)

	Response Percent	Response Count
Professional growth	81.7%	219
Presentation experience	72.4%	194
Networking opportunities	68.7%	184
Learning about jobs	72.0%	193
Learning about internships	72.0%	193
Knowing other cities	53.0%	142
None of the above, attending conferences has not been valuable to me	2.2%	6
N/A	9.7%	26
	Comments Show Responses	17
answered question		268
skipped question		0

28. These factors would keep me from relocating to take a USDA related job. (Check all that apply) [Create Chart](#) [Download](#)

	Response Percent	Response Count
Distance - the job requires relocation to a new town/city	19.4%	52
My family would not want me to move	12.7%	34
Potential costs	38.1%	102
Not knowing anyone there	9.3%	25
Unfamiliar with the area/city where job is located	15.7%	42
None of the above, I am willing to relocate wherever the job is (to	53.0%	142

another state, Washington DC, etc.)	
Other factors that would affect my decision about relocation for a job or internship are... Show Responses	28
answered question	268
skipped question	0

29. Please describe your high school preparation and overall goals. [Create Chart](#) [Download](#)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	Rating Average	Rating Count
I feel I was well prepared in high school to enroll in college.	46.6% (124)	27.1% (72)	10.2% (27)	10.5% (28)	4.9% (13)	0.8% (2)	3.46	266
My high school encouraged me to enroll in college.	57.5% (154)	26.5% (71)	8.6% (23)	4.9% (13)	2.2% (6)	0.4% (1)	3.79	268
My dream has always been to have a professional career.	79.7% (212)	15.4% (41)	2.3% (6)	1.9% (5)	0.8% (2)	0.0% (0)	4.41	266
A career in a USDA related area is my immediate goal.	41.4% (111)	28.0% (75)	23.5% (63)	4.5% (12)	1.9% (5)	0.7% (2)	3.47	268
Getting a college degree has always been my goal.	81.0% (217)	16.0% (43)	1.5% (4)	0.7% (2)	0.7% (2)	0.0% (0)	4.44	268
							Comments Show Responses	11
answered question								268
skipped question								0

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