

## **Crosswalk of NIFA Knowledge Area Classification to the Five NIFA Priority Areas**

This Document is only to be used as guidance for the Planned Program Priority Areas in the AREERA State Plan of Work and Annual Report of Accomplishments. Note that these are recommended KA that can be used for each Priority Area and are not meant to be an exclusive list. Many KAs can be used in more than one Priority Area. KAs are a means of cataloguing activities within projects and programs, and therefore do not imply exclusivity to any one Priority Area. For example, KA 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants may effectively be used for cataloguing activity in both **Global Food Security and Hunger** and in **Climate Change**. Likewise, many of the KAs listed under **Plant Health and Production of Plant Products** (under **Global Food Security and Hunger**) may also be appropriate for **Sustainable Energy** when they relate to production of energy crops. The list below gives guidance to where the KAs may primarily be useful in the Plan of Work and Annual Report of Accomplishments.

### **Five Priority Definitions**

**Global Food Security and Hunger** NIFA supports research, education and extension that will boost U.S. agricultural production and improve global capacity to meet the growing food demand. NIFA also fosters innovation in fighting hunger by addressing food security for vulnerable populations.

#### **Plant Health and Production and Plant Products**

201. Plant Genome, Genetics, and Genetic Mechanisms
202. Plant Genetic Resources
203. Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204. Plant Product Quality and Utility (Preharvest)
205. Plant Management Systems
206. Basic Plant Biology

#### **Animal Health and Production and Animal Products**

301. Reproductive Performance of Animals
302. Nutrient Utilization in Animals
303. Genetic Improvement of Animals
304. Animal Genome
305. Animal Physiological Processes
306. Environmental Stress in Animals
307. Animal Management Systems
308. Improved Animal Products (Before Harvest)

#### **Agricultural Systems and Technology**

401. Structures, Facilities, and General Purpose Farm Supplies
402. Engineering Systems and Equipment
403. Waste Disposal, Recycling, and Reuse

- 404. Instrumentation and Control Systems
- 405. Drainage and Irrigation Systems and Facilities
- 501. New and Improved Food Processing Technologies
- 502. New and Improved Food Products
- 503. Quality Maintenance in Storing and Marketing Food Products
- 504. Home and Commercial Food Service
- 512. Quality Maintenance in Storing and Marketing Non-Food Products

**Agricultural Economics and Rural Communities**

- 601. Economics of Agricultural Production and Farm Management
- 602. Business Management, Finance, and Taxation
- 603. Market Economics
- 604. Marketing and Distribution Practices
- 605. Natural Resource and Environmental Economics
- 606. International Trade and Development
- 607. Consumer Economics
- 608. Community Resource Planning and Development
- 609. Economic Theory and Methods
- 610. Domestic Policy Analysis
- 611. Foreign Policy and Programs

Related KAs (Also used in other Priority Areas):

**Plant Health and Production and Plant Products**

- 211. Insects, Mites, and Other Arthropods Affecting Plants
- 212. Pathogens and Nematodes Affecting Plants
- 213. Weeds Affecting Plants
- 214. Vertebrates, Mollusks, and Other Pests Affecting Plants
- 215. Biological Control of Pests Affecting Plants
- 216. Integrated Pest Management Systems

**Animal Health and Production and Animal Products**

- 311. Animal Diseases
- 312. External Parasites and Pests of Animals
- 313. Internal Parasites in Animals
- 314. Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals
- 315. Animal Welfare/Well-Being and Protection

**Climate Change** NIFA supports projects that generate knowledge to develop an agriculture system that maintains high productivity in the face of climate changes and reduce greenhouse gas emissions. This will help producers to plan and make decisions in adapting to changing environments, sustaining economic vitality, and taking advantage of emerging economic opportunities offered by climate change mitigation technologies.

- 101. Appraisal of Soil Resources

- 102. Soil, Plant, Water, Nutrient Relationships
- 103. Management of Saline and Sodic Soils and Salinity
- 104. Protect Soil from Harmful Effects of Natural Elements
- 111. Conservation and Efficient Use of Water
- 112. Watershed Protection and Management
- 121. Management of Range Resources
- 122. Management and Control of Forest and Range Fires
- 123. Management and Sustainability of Forest Resources
- 124. Urban Forestry
- 125. Agroforestry
- 131. Alternative Uses of Land
- 132. Weather and Climate
- 133. Pollution Prevention and Mitigation
- 134. Outdoor Recreation
- 135. Aquatic and Terrestrial Wildlife
- 136. Conservation of Biological Diversity
- 141. Air Resource Protection and Management

**Sustainable Energy** NIFA contributes to the President’s goal of energy independence by supporting science to develop biomass used for biofuels, design optimum forest products and crops for bioenergy production, and produce value-added bio-based industrial products.

- 511. New and Improved Non-Food Products and Processes

Related KAs (Also used in other Priority Areas):

**Plant Health and Production and Plant Products**

- 201. Plant Genome, Genetics, and Genetic Mechanisms
- 202. Plant Genetic Resources
- 203. Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204. Plant Product Quality and Utility (Preharvest)
- 205. Plant Management Systems
- 206. Basic Plant Biology

**Childhood Obesity** NIFA supports research to identify effective measures that guide individuals and families to make informed, science-based decisions that will reduce child obesity and improve health.

- 701. Nutrient Composition of Food
- 702. Requirements and Function of Nutrients and Other Food Components
- 703. Nutrition Education and Behavior
- 704. Nutrition and Hunger in the Population
- 723. Hazards to Human Health and Safety
- 724. Healthy Lifestyle

**Food Safety** NIFA supports research that results to reduce the incidence of food-borne illnesses and provides a safer food supply by: eliminating causes of microbial contamination and antimicrobial resistance; educating consumer and food safety professionals; and developing food processing technologies to improve food safety.

- 211. Insects, Mites, and Other Arthropods Affecting Plants
- 212. Pathogens and Nematodes Affecting Plants
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- 214. Vertebrates, Mollusks, and Other Pests Affecting Plants
- 215. Biological Control of Pests Affecting Plants
- 216. Integrated Pest Management Systems
- 311. Animal Diseases
- 312. External Parasites and Pests of Animals
- 313. Internal Parasites in Animals
- 314. Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals
- 315. Animal Welfare/Well-Being and Protection
- 711. Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
- 712. Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
- 721. Insects and Other Pests Affecting Humans
- 722. Zoonotic Diseases and Parasites Affecting Humans

**Other Cross-cutting Areas**

- 801. Individual and Family Resource Management
- 802. Human Development and Family Well-Being
- 803. Sociological and Technological Change Affecting Individuals, Families, and Communities
- 804. Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures
- 805. Community Institutions, Health, and Social Services
- 806. Youth Development
- 901. Program and Project Design, and Statistics
- 902. Administration of Projects and Programs
- 903. Communication, Education, and Information Delivery