2014 Explanatory Notes
National Institute of Food and Agriculture

Contents

# NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

## Purpose Statement

Section 7511(f)(2) of the Food, Conservation, and Energy Act of 2008 amends the Department of Agriculture Reorganization Act of 1994 (7 U.S.C. 6971) by establishing an agency to be known as the National Institute of Food and Agriculture (NIFA). On October 1, 2009, all authorities administered by the Administrator of the Cooperative State Research, Education, and Extension Service were transferred to the Director of the National Institute of Food and Agriculture (NIFA). NIFA continues to advance knowledge for agriculture, the environment, human health and well-being, and communities.

## Research and Education Activities

Research and Education programs administered by NIFA are the U.S. Department of Agriculture's principal entree to the university system of the United States for the purpose of conducting agricultural research and education programs as authorized by the Hatch Act of 1887, as amended (7 U.S.C. 361a-361i); the McIntire-Stennis Cooperative Forestry Act of 1962, as amended (16 U.S.C. 582a et seq.) (McIntire-Stennis Act); the Competitive, Special, and Facilities Research Grant Act, as amended (7 U.S.C. 450i) (the 1965 Act); the National Agricultural Research, Extension, and Teaching Policy Act of 1977, as amended (7 U.S.C. 3101 et seq.) (NARETPA); the Small Business Innovation Development Act of 1982 (Pub. L. 97-219, as amended (15 U.S.C. 638), Section 630 of the Act making appropriations for Agriculture, Rural Development and Related Agencies' programs for fiscal year ending September 30, 1987, and for other purposes, as made applicable by Section 101(a) of Pub. L. 99-591, 100 Stat. 3341, National Defense Authorization Act for Fiscal Year 2012 (Pub. L. 112-81); the Equity in Educational Land-Grant Status Act of 1994 (7 U.S.C. 301 note) (the 1994 Act); the Agricultural Research, Extension, and Education Reform Act of 1998 (Pub. L. 105-185), as amended (AREERA); the Food, Agriculture, Conservation, and Trade Act of 1990 (Pub. L. 101-624) (FACT Act), the Farm Security and Rural Investment Act of 2002 (Pub. L. 107–171) (FSRIA), and the Food, Conservation, and Energy Act of 2008 (Pub. L. 110-246) (FCEA). Through these authorities, the U.S. Department of Agriculture (USDA) participates with State and other cooperators to encourage and assist the State institutions in the conduct of agricultural research and education through the State Agricultural Experiment Stations (SAES) of the 50 States and the territories; by approved Schools of Forestry; the 1890 Land-Grant Institutions and Tuskegee University and West Virginia State University; 1994 Land-Grant Institutions; by Colleges of Veterinary Medicine; and other eligible institutions. The appropriated funds provide Federal support for research and education programs at these institutions.

The State institutions conduct research on the problems continuously encountered in the development of a permanent and sustainable agriculture and forestry system, and in the improvement of the economic and social welfare of rural and urban families. Because of differences in climate, soil, market outlets, and other local conditions, each State has distinct problems in the production and marketing of crops and livestock. Farmers, foresters, and rural people in the individual States naturally look to their SAES, universities, and colleges for solutions to the State and local problems and request services to help meet changing conditions.

The Department's higher education mission is carried out in strong alliance with States, universities, and the private sector. NARETPA designated USDA as the lead Federal agency for higher education in the food and agricultural sciences. Through NIFA, USDA has implemented that charge with a broad array of initiatives to link teaching, research, and extension; to improve the training of food and agricultural scientists and professionals; and to strengthen the quality of education programs throughout the nation.

Appropriations and additional provisions for research and education activities are authorized under the following Acts:

1. Hatch Act - Payments to agricultural experiment stations under the Hatch Act of 1887 as amended (7 U.S.C. 361a-361i), the Agricultural Experiment Stations Act of August 11, 1955 (Pub. L. 84-352); the Education Amendments of 1972 (Pub. L. 92-318); District of Columbia Public Postsecondary Education Reorganization Act (Pub. L. 93-471); NARETPA (Pub. L. 95-113), as amended; Omnibus Territories Act of October 15, 1977 (Pub. L. 95-134); Act of March 12, 1980 (Pub. L. 96-205); Education Amendments of 1980 (Pub. L. 96-374); Act of

December 24, 1980 (Pub. L. 96-597); Agriculture and Food Act of 1981 (Pub. L. 97-98); Act of December 8, 1983 (Pub. L. 98-213); Act of October 5, 1984 (Pub. L. 98-454); Food Security Act of 1985 (Pub. L. 99-198); Act of August 27, 1986 (Pub. L. 99-396); FACT Act; Federal Agriculture Improvement and Reform Act of 1996 (FAIR Act) (Pub. L. 104-127); AREERA; FSRIA; and FCEA.

Funds under the Hatch Act are allocated to the SAES of the 50 States, the District of Columbia, Puerto Rico, Guam, the Virgin Islands, Micronesia, American Samoa, and the Northern Mariana Islands for research to promote sound and prosperous agriculture and rural life.

Eligible State institutions are required to submit a Plan of Work to NIFA for approval before Hatch Act funds are distributed. The Hatch Act provides that the distribution of Federal payments to States for fiscal year 1955 shall become a fixed base, and that any sums appropriated in excess of the 1955 level shall be distributed in the following manner:

-20 percent equally to each State;
-not less than 52 percent to the States as follows: one-half in an amount proportionate to the relative rural population of each State to the total rural population of all States, and one-half in an amount proportionate to the relative farm population of each State to the total farm population of all States;
-not less than 25 percent for multi-State, multi-disciplinary, multi-institutional research activities to solve problems concerning more than one State; and
- 3 percent for the administration of the Act.

Federal funds provided under the Hatch Act to State institutions must be matched with non-Federal funding on a dollar-for-dollar basis. Matching requirements for the insular areas of the Commonwealth of Puerto Rico, the Virgin Islands, Guam, Micronesia, American Samoa, the Northern Mariana Islands, and the District of Columbia are subject to the matching requirements of an amount equal to not less than 50 percent of the formula funds distributed to each insular area and the District of Columbia as stated in the Hatch Act, as amended by section 7404 of the FCEA. These provisions also state that the Secretary may waive the matching funds requirement of an insular area and the District of Columbia for any fiscal year if the Secretary determines that the government of the insular area or the District of Columbia will be unlikely to meet the matching requirement for the fiscal year.

Section 7(c) of the Hatch Act allows unexpended funds to be carried over for use during the following fiscal year. In accordance with provisions of AREERA, at least 25 percent of available Hatch Act funds must be used to support multi-State research; States also must expend 25 percent, or two times the level spent in fiscal year 1997 (whichever is less), on activities that integrate cooperative research and extension.

The three percent of funds appropriated under the Hatch Act for administration includes the disbursement of funds and a continuous review and evaluation of the research programs of the SAES supported wholly or in part from Hatch funds. NIFA encourages and assists in the establishment of cooperation within and between the States, and also actively participates in the planning and coordination of research programs between the States and the Department at the regional and national levels.

2. McIntire-Stennis Act - The McIntire-Stennis Cooperative Forestry Act of October 10, 1962, (16 U.S.C. 582a et seq.) as amended by Section 7412 of FCEA; and subject to provisions of Pub. L. 96-374; Pub. L. 97-98; Pub. L. 99-198; FACT Act; and FAIR Act.

The Act authorizes funding of research in State institutions certified by a State representative designated by the governor of each State. The Act provides that appropriated funds be apportioned among States as determined by the Secretary. The Secretary annually seeks the advice of the Forestry Research Advisory Council (Council) to accomplish efficiently the program purpose. The Council consists of not fewer than sixteen members representing Federal and State agencies concerned with developing and utilizing the Nation's forest resources, the forest industries, the forestry schools of the State-certified eligible institutions, SAES, and volunteer public groups concerned with forests and related natural resources. Determination of apportionments follows consideration of pertinent factors including areas of non-Federal commercial forest land, volume of timber cut from growing stock, and the non-Federal dollars expended on forestry research in the State. Section 7412 of FCEA amended the

McIntire-Stennis Act to include 1890 Institutions (as defined in section 2 of AREERA (7 U.S.C. 7601)) as eligible for consideration in these determinations. The Act also provides that payments must be matched by funds made available and budgeted from non-Federal sources by the certified institutions for expenditure on forestry research.

3. Payments to 1890 Colleges, including Tuskegee University and West Virginia State University - Section 1445 of NARETPA; Act of October 28, 1978, (Pub. L. 95-547); and subject to provisions of Pub. L. 97-98; Pub. L. 99-198; FACT Act; FAIR Act; AREERA; FSRIA, and FCEA authorizing support of continuing agricultural research at colleges eligible to receive funds under the Act of August 30, 1890, including Tuskegee University. The general provisions section 753 of Pub. L. 107-76 makes West Virginia State University eligible to receive funds under this program. Eligible State institutions are required to submit a Plan of Work to NIFA for approval before these formula funds are distributed. The agricultural research programs at the 1890 Land-Grant Colleges and Universities are designed to generate new knowledge which will assist rural underprivileged people and small farmers to obtain a higher standard of living. Therefore, there is a high concentration of research effort in the areas of small farms, sustainable agriculture, rural economic development, human nutrition, rural health, and youth and elderly. Congress authorized appropriations in an amount not less than 15 percent of the amounts appropriated each year under Section 3 of the Hatch Act. The Act allows 3 percent for administrative expenses by the Secretary. Distribution of payments made available under section 2 of the 1965 Act for fiscal year 1978 are a fixed base and sums in excess of the 1978 level are to be distributed as follows:

-20 percent equally to each State;
-40 percent in an amount proportionate to the rural population of the State in which the eligible institution is located to the total rural population of all States in which eligible institutions are located; and
-40 percent in an amount proportionate to the farm population of the State in which the eligible institution is located to the total farm population of all the States in which eligible institutions are located.

Section 1445(a)(2) of NARETPA (7 U.S.C. 3222(a)(2)), as amended by section 7122 of FCEA requires that funds appropriated for this program be not less than 30 percent of the Hatch Act appropriation. Section 1445(a) allows unexpended funds to be carried over for use during the following fiscal year. Section 1449 (7 U.S.C. 3222d), requires that Federal funds be matched by the State from non-Federal sources. For fiscal year 2007 and each fiscal year thereafter, not less than 100 percent of formula funds to be distributed must be matched. The Secretary of Agriculture may waive the matching funds requirement above the 50 percent level for any fiscal year for an eligible institution of a State if the Secretary determines the State will be unlikely to satisfy the matching requirement. Allotments to Tuskegee University and Alabama A&M University shall be determined as if each institution were in a separate State.

4. Animal Health and Disease Research - Section 1433 of NARETPA (7 U.S.C. 3195), provides for support of livestock and poultry disease research in accredited schools or colleges of veterinary medicine or SAES that conduct animal health and disease research. These funds provide support for new research initiatives and enhance research capacity leading to improved animal health, reduced use of antibacterial drugs and improved safety of foods of animal origin. These funds shall be distributed as follows:

-4 percent shall be retained by the Department of Agriculture for administration, program assistance to the eligible institutions, and program coordination;
-48 percent shall be distributed in an amount proportionate to the value of and income to producers from domestic livestock and poultry in each State to the total value of and income to producers from domestic livestock and poultry in all the States; and
-48 percent shall be distributed in an amount proportionate to the animal health research capacity of the eligible institutions in each State to the total animal health research capacity in all the States.

Eligible institutions must provide non-Federal matching funds in States receiving annual amounts in excess of $100,000 under this authorization.

5. Research Grants - Section 2(c) of the 1965 Act (7 U.S.C. 450i(c)), as amended; and subject to provisions of NARETPA; Pub. L. 97-98; Critical Agricultural Materials Act, (Pub. L. 98-284); Pub. L. 99-198; FACT Act; FAIR Act; and AREERA authorizes Special Research Grants for periods not to exceed three years to SAES, all colleges

and universities, other research institutions and organizations, Federal agencies, private organizations or corporations, and individuals. Previously, grants were made available for the purpose of conducting research to facilitate or expand promising breakthroughs in areas of the food and agricultural sciences. However, AREERA expanded the purposes under this authority to include extension or education activities. Grants funded under this authority are only for research projects. Special Research Grants are awarded on a non-competitive or competitive basis involving scientific peer and merit review processes. Included in Special Research Grants are:

Expert Integrated Pest Management Decision Support System pursuant to Section 2(c) of the 1965 Act (7 U.S.C. 450i(c)), as amended supports key information systems that are used to diagnose pest management problems and identify appropriate management strategies that will reduce or eliminate negative impacts on production and profitability. Funds are awarded on a competitive basis under the program.

Integrated Pest Management and Biological Control pursuant to Section 2(c) of the 1965 Act (7 U.S.C. 450i(c)), as amended distributes funding through the Regional Integrated Pest Management Competitive Grants Program. The program supports the development of new integrated pest management tactics and systems, their on-farm validation, and the delivery of knowledge and information to agricultural producers and advisors through extension and outreach programs.

Minor Crop Pest Management pursuant to Section 2(c) of the 1965 Act (7 U.S.C. 450i(c)), as amended supports the work of the IR-4 program, which is the principal public program supporting the registration of pesticides and biological control agents for use on specialty crops. The IR-4 program provides coordination, funding, and scientific guidance for both field and laboratory research to develop data in support of registration packages to be submitted to the Environmental Protection Agency. Program investments are guided by a priority-setting process that engages commodity producers, State and Federal research scientists, and extension specialists. Funds are awarded on a competitive basis under the program.

Pest Management Alternatives pursuant to Section 2(c) of the 1965 Act (7 U.S.C. 450i(c)), as amended develops and implements pest management alternatives when regulatory action, voluntary action by the registrant, or other circumstances results in the unavailability of certain pesticides or pesticide uses. A competitive process is used to invest funding in developing new pest management tools and techniques that address critical pest problems identified by agricultural producers and other stakeholders.

Global Change UV-B Monitoring pursuant to Section 2(c) of the 1965 Act (7 U.S.C. 450i(c)), as amended supports a climatological network which includes 38 climatological sites: 35 in the U.S., two in Canada, and one in New Zealand. The program supports action items for informing decisions and modeling efforts as outlined in the U.S. Global Change Research Program strategic plan.

Potato Research pursuant to Section 2(c) of the 1965 Act (7 U.S.C. 450i(c)), as amended grants are awarded that develop and test improved potato varieties for commercial production. Targeted aspects of improvement include increased yields, quality, and market appeal; resistance to diseases, insects, and stress; and regional adaptability. The program also supports development of technologies to improve early generation and marker-assisted selection for resistance to critical and market-limiting insect pests and diseases. Funds are awarded on a competitive basis under the program.

Forest Products Research pursuant to Section 2(c) of the 1965 Act (7 U.S.C. 450i(c)), as amended for projects to create new and improved value-added products and renewable energy from U.S. wood in support of the forest products sector. Funds are awarded on a competitive basis under the program.

Critical Agricultural Materials pursuant to the Critical Agricultural Materials Act, Pub. L. 98-284, as amended research grants are competitively awarded that support product development, demonstration, and validation of product performance under operational field conditions. Specific focus is on paints, coatings, adhesives for composites, and aerial delivery systems or components that are manufactured from domestically produced agricultural materials and are of strategic and industrial importance to benefit the economy, defense and general well-being of the Nation.

Aquaculture Centers grants pursuant to section 1475(d) of NARETPA support aquaculture research, development, demonstration, and extension education to enhance viable and profitable U.S. aquaculture production to benefit consumers, producers, service industries, and the American economy. Funds are awarded on a competitive basis through a regional system.

Supplemental and Alternative Crops pursuant to section 1473D of NARETPA grants are awarded to conduct fundamental and applied research related to the development of new commercial products derived from natural plant material for industrial, medical, and agricultural applications.

Sustainable Agriculture Research and Education pursuant to section 1621 of the FACT Act works to increase knowledge of and help farmers and ranchers to adopt practices that are profitable, environmentally sound, and good to communities. Competitive grants are awarded by four regional administrative councils. Projects address crop and livestock production and marketing, stewardship of soil and other natural resources, economics and quality of life.

Rangeland Research pursuant section 1480 of NARETPA provides U.S. agricultural producers, rural landowners, and land managers with integrated science strategies to make informed land management decisions with an emphasis on enhancing the restoration and sustainable integrity of U.S. rangelands. Funds are awarded on a competitive basis under the program.

6. Agriculture and Food Research Initiative - Subsection (b) of the 1965 Act (7 U.S.C. 450i(b)) as amended by section 7406 of FCEA establishes an Agriculture and Food Research Initiative (AFRI) to make competitive grants for fundamental and applied research, extension, and education to address food and agricultural sciences (as defined under section 1404 of NARETPA). The Secretary is authorized to award competitive grants to State agricultural experiment stations; colleges and universities; university research foundations; other research institutions and organizations; Federal agencies; national laboratories; private organizations or corporations; individuals; or any group consisting of two or more of the aforementioned entities. Grants will be awarded to address critical issues in United States agriculture in areas of global food security and hunger, climate change, sustainable bioenergy, childhood obesity, and food safety. Addressing these critical issues will engage scientists and educators with expertise in:
A) Plant health and production and plant products;
B) Animal health and production and animal products;
C) Food safety, nutrition, and health;
D) Renewable energy, natural resources, and environment;
E) Agriculture systems and technology; and
F) Agriculture economics and rural communities.

Of the amount of funds made available for research, no less than 60 percent shall be used for fundamental research and no less than 40 percent shall be used for applied research. No less than 30 percent of the amount allocated for fundamental research shall be made available to make grants for research to be conducted by multidisciplinary teams and no more than 2 percent may be used for equipment grants. In addition, awards may be made to assist in the development of capabilities in the agricultural, food, and environmental sciences (e.g., new investigator and strengthening awards). Eligible applicants include State agricultural experiment stations, colleges and universities, university research foundations, other research institutions and organizations, Federal agencies, national laboratories, private organizations or corporations, individuals, and any group consisting of two or more entities identified in this sentence.

To the maximum extent practicable, NIFA, in coordination with the Under Secretary for Research, Education, and Economics (REE), will make awards for high priority research, education, and extension, taking into consideration, when available, the determinations made by the National Agricultural Research, Extension, Education, and Economics Advisory Board. Integrated research, education and extension activities under this program are authorized pursuant to the authority found in section 406 of AREERA (7 U.S.C. 7626) and at an amount no less than 30 percent of the funds made available under this authority.

7. Small Business Innovation Research (SBIR) Program - The Small Business Innovation Development Act of 1982 (Pub. L. 97-219, as amended) (15 U.S.C. 638), Section 630 of the Act making appropriations for Agriculture, Rural Development and Related Agencies' programs for fiscal year ending September 30, 1987, and for other purposes, as made applicable by Section 101(a) of Pub. L. 99-591, 100 Stat. 3341authorizes a competitive program for SBIR. The Small Business Innovation Development Act was designed to strengthen the role of small, innovative firms in Federally funded research and development. Section 5102 of the National Defense Authorization Act for Fiscal Year 2012 (Pub. L. 112-81) amends the Small Business Innovation Development Act to allow the set aside of appropriations for extramural research and development for awards to eligible small firms as follows:

-Not less than 2.6 percent of appropriations in fiscal year 2012;
-Not less than 2.7 percent of appropriations in fiscal year 2013;
-Not less than 2.8 percent of appropriations in fiscal year 2014;
-Not less than 2.9 percent of appropriations in fiscal year 2015;
-Not less than 3.0 percent of appropriations in fiscal year 2016; and
-Not less than 3.2 percent of appropriations in fiscal year 2017 and each fiscal year thereafter.

Additionally, Section 5141 of the National Defense Authorization Act for Fiscal Year 2012 (Pub. L. 112-81) allows not more than 3 percent of program funds for fiscal years 2013 through 2015 for administration, oversight, and contract processing costs to conduct the SBIR program.

The SBIR Program is a three-phased effort, but only Phase I and Phase II, the feasibility and follow-on research and development phases respectively, are eligible for support with USDA funds. Firms are encouraged to secure Phase III funding for the commercialization phase from other public or private sources. The research areas supported under the SBIR program address critical issues in U.S. agriculture in the areas of global food security and hunger, climate change, sustainable bioenergy, childhood obesity, and food safety. Addressing these critical issues will engage small businesses with expertise in a number of areas including plant and animal production and protection, forests and related resource sciences, soil and water resources, food and nutrition sciences, rural development, biofuels and biobased products, aquaculture, and small and mid-sized farms. NIFA administers the SBIR program for USDA, including the funds set aside for SBIR from other USDA agencies.

8. Biotechnology Risk Assessment Research Grants Program (BRAG) – Section 1668 of FACT Act and as amended in section 7210 of FSRIA authorizes competitively awarded research grants to identify and develop appropriate management practices to minimize physical and biological risks associated with genetically engineered animals, plants, and microorganisms. Under BRAG, at least 2 percent of appropriations for biotechnology related research is set aside for awards under this program. NIFA and the Agricultural Research Service jointly administer this program.

BRAG supports the generation of new information that assists Federal regulatory agencies in making science-based decisions about the effects of introducing into the environment genetically engineered organisms, including plants, microorganisms (including fungi, bacteria, and viruses), arthropods, fish, birds, mammals, and other animals excluding humans. The program also supports applied and/or fundamental risk assessment research, which is defined as the science-based evaluation and interpretation of factual information in which a given hazard, if any, is identified, and the consequences associated with the hazard are explored.

9. 1994 Institutions Research - The 1994 Act authorizes a competitive research grants program for institutions designated as 1994 Institutions. Section 7402 of FCEA amended the 1994 Act by adding a new institution, increasing the number of recipients eligible to receive funding under this program to 34. The program allows scientists at the 1994 Institutions to participate in agricultural research activities that address tribal, national, and multi-State priorities.

10. Farm Business Management and Benchmarking Program – Section 7208 of FCEA amended FACT Act by adding section 1672D which authorizes the competitive program to improve the farm management knowledge and skills of agricultural producers, and establish and maintain a national, publicly available farm financial management database to support improved farm management. Funds are awarded on a competitive basis under the program.

11. Sun Grant Program – Section 7526 of FCEA established this program for grants to sun grant centers and subcenter to enhance national energy through the development, distribution, and implementation of biobased energy technologies. Through biobased energy and product technologies, activities are supported that promote diversification, and the environmental sustainability of, agricultural production in the U.S., and economic diversification in rural areas of the U.S. Funds are also used to enhance the efficiency of bioenergy and biomass research and development programs through improved coordination and collaboration among USDA, Department of Energy, and land-grant colleges and universities.

12. Capacity Building for Non-Land Grant Colleges of Agriculture – Section 7138 of FCEA established this competitively awarded grants program to assist the institutions in maintaining and expanding the capacity of the NLGCA Institutions to conduct education, research, and outreach activities relating to agriculture, renewable resources, and other similar disciplines.

13. Policy Research Centers – Section 1419A of NAREPTA as amended by Section 7111 of FCEA authorizes this competitive grants program for centers to conduct research and education programs that are objective, operationally independent, and external to the Federal Government and that concern the effect of public policies and trade agreements on the farm and agricultural sectors including commodities, livestock, dairy, and specialty crops; environment; rural families, households, and economies; and consumers, food, and nutrition. Funding is provided for disciplinary and interdisciplinary research and education concerning policy research including activities that quantify the implications of public policies and regulations; develop theoretical and research methods; collect, analyze, and disseminate data for policymakers, analysts, and individual; and develop programs to train analysts.

14. Federal Administration (direct appropriation) - Authority for direct appropriations is provided in the annual Agriculture, Rural Development, Food and Drug Administration and Related Agencies Appropriations Act. These funds are used to provide support services in connection with the planning and coordination of all research and education programs administered by NIFA, including the Research, Education, and Economics Data Information System and the Electronic Grants Administration System.

15. Higher Education - Section 1417 of NARETPA (7 U.S.C. 3152), was amended by section 7106 of FCEA to provide eligibility to the University of the District of Columbia to receive grants and fellowships for food and agricultural science education. This program is also subject to provisions found in NARETPA; Pub. L. 97-98; Pub. L. 99-198; Second Morrill Act of 1890; Act of June 17, 1988, (Pub. L. 100-339); FACT Act; Equity in Educational Land-Grant Status Act of 1994, (Pub. L. 103-382); FAIR Act; AREERA; Pub. L. 106-78, Aviation and Transportation Security Act of November 19, 2001, (Pub. L. 107-71), and National Veterinary Medical Service Act of December 6, 2003, (Pub. L. 108-161) (NVMSA).

Institution Challenge, Multicultural Scholars, and Graduate Fellowship Grants Program - Funds are awarded for grants and fellowships for food and agricultural sciences education as follows:

> Institution Challenge Grants pursuant to section 1417(b)(1) are designed to strengthen institutional capacities, including curriculum, faculty, scientific instrumentation, instruction delivery systems, and student recruitment and retention, to respond to identified State, regional, national, or international educational needs in the food and agricultural sciences, or in rural economic, community, and business development. All Federal funds competitively awarded under this program must be matched by the universities on a dollar-for-dollar basis from non-Federal sources.
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> The Higher Education Multicultural Scholars Program pursuant to section 1417(b)(5) increases the ethnic and cultural diversity of the food and agricultural scientific and professional workforce, and advances the educational achievement of minority Americans. This competitive program is designed to help the food and agricultural scientific and professional workforce achieve full participation by members of traditionally underrepresented racial and ethnic groups. It is open to all colleges and universities granting baccalaureate or higher degrees in agriculture, forestry, natural resources, home economics, veterinary medicine, and closely allied fields. Federal funds provide 75 percent of the four-year scholarship awards; the remaining 25 percent is contributed by the grantee institutions.

Higher Education-Graduate Fellowships Grants pursuant to section 1417(b)(6) are awarded on a competitive basis to colleges and universities to conduct graduate training programs to stimulate the development of food and agricultural scientific expertise in targeted national need areas. The program is designed to attract highly promising individuals to research or teaching careers in areas of the food and agricultural sciences where shortages of expertise exist. Typically graduate students in the food and agricultural sciences require a minimum of four years to complete a doctoral degree. The USDA fellowships program provides support for doctoral study for three years, and the universities are expected to support the student's fourth year of dissertation research.

The Secondary Education, Two-year Postsecondary Education, and Agriculture in the K-12 Classroom Program, authorized by section 1417(j) of NARETPA as amended (7 U.S.C. 3152 (j)), is designed to promote and strengthen secondary education in agribusiness and agriscience, and to increase the number and/or diversity of young Americans pursuing college degrees in the food and agricultural sciences. The intent of the program is to encourage teachers creatively to incorporate elements of agriscience and agribusiness into secondary education programs. Section 7109 of FCEA amended section 1417(j) of NARETPA to include support for current agriculture in the classroom programs for grades K-12. Proposals address targeted need areas of curricula design and instructional materials development; faculty development and preparation for teaching; career awareness; linkages between secondary, 2-year post-secondary, and institutions of higher learning; or education activities promoting diversity in students seeking degrees in agribusiness and agriscience. All Federal funds competitively awarded under this program must be matched by the institution on a dollar-for-dollar basis from non-Federal sources.

The 1890 Institution Teaching, Research, and Extension Capacity Building Grants Program pursuant to 1417(b)(4) stimulates the development of high quality teaching, research, and extension programs at the 1890 Land-Grant Institutions and Tuskegee University and West Virginia State University to build their capabilities as full partners in the mission of the Department to provide more, and better trained, professionals for careers in the food and agricultural sciences. This competitive program is designed to strengthen institutional teaching, research, and extension capacities through cooperative programs with Federal and non-Federal entities, including curriculum, faculty, scientific instrumentation, instruction delivery systems, student experimental learning, student recruitment and retention, studies and experimentation, centralized research support systems, and technology delivery systems, to respond to identified State, regional, national, or international educational needs in the food and agricultural sciences, or rural economic, community, and business development. Section 7107 of FCEA amended section 1417(b)(4) of NARETPA (7 U.S.C. 3152(b)(4)) to expand extension capacity.

The USDA-Hispanic Serving Institutions Education Partnerships Grants Program pursuant to section 1455 of NARETPA (7 U.S.C. 3241) is the foundation for USDA efforts to better serve Hispanic Americans and to prepare them for careers in agriscience and agribusiness. This competitive program expands and strengthens academic programs in the food and agricultural sciences at Hispanic-serving colleges and universities, including two-year community colleges that have at least 25 percent Hispanic enrollment. Section 7128 of FCEA amended section 1455 to require that all grants made under this program be awarded on a fully competitive basis, and removed the requirement for consortia in subsection (b)(1).

The Native American Institutions Endowment Fund, authorized by the 1994 Act provides for the establishment of an endowment for the 1994 Institutions (34 Tribally-controlled colleges). The interest derived from the endowment is distributed to the 1994 Institutions on a formula basis. This program will enhance educational opportunities for Native Americans by building educational capacity at these institutions. The institutions are also able to use the funding for facility renovation and construction. On the termination of each fiscal year, the Secretary shall withdraw the income from the endowment fund for the fiscal year, and after making adjustments for the cost of administering the endowment fund, at 4 percent, distribute the adjusted income as follows. Sixty percent of the adjusted income is distributed among the 1994 Institutions on a pro rata basis, the proportionate share being based on the Indian student count. Forty percent of the adjusted income is distributed in equal shares to the 1994 Institutions.

The Tribal Colleges Education Equity Grants Program - The 1994 Act authorizes the use of funds to benefit those entities identified as the 1994 Land Grant Institutions. Funds are distributed on a formula basis and may be used to support teaching programs in the food and agricultural sciences in the targeted need areas of: 1) curricula design and instructional materials development; 2) faculty development and preparation for teaching; 3) instruction delivery

systems; 4) student experimental learning; 5) equipment and instrumentation for teaching; and 6) student recruitment and retention. Section 7402 of FCEA amended section 532 of the 1994 Act by adding Ilisagvik College, bringing the total number of eligible participants up to 34. Also FCEA amended section 534 to authorize that funds payable to a 1994 Institution be withheld and redistributed to other 1994 Institutions in the event that the Institution declines to accept funds or fails to meet the accreditation requirements of section 533.

The Alaska Native Serving and Native Hawaiian-Serving Institutions Education Grants Program, originally authorized by section 759 of Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2000, Pub. L. 106-78, and redesignated as section 1419B of NARETPA, is aimed at recruiting, supporting and educating minority scientists and professionals, and advancing the educational capacity of Native-serving institutions. Funds may be used to support projects in the targeted areas of: 1) enhancing educational equity for under-represented students; 2) strengthening educational capacities, including libraries, curriculum, faculty, scientific instrumentation, instruction delivery systems, and student recruitment and retention; 3) attraction and retention of undergraduate and graduate students; and 4) cooperative initiatives to maximize the development of resources such as faculty, facilities and equipment to improve teaching programs. Additionally, section 7112 of FCEA permits consortia to designate fiscal agents for the members of the consortia and to allocate among the members funds made available under this program. Funds are awarded on a competitive basis under the program.

The Resident Instruction Grants for Insular Areas Program, authorized by section 1491 of NARETPA (7 U.S.C. 3363), as amended, is designed to enhance teaching programs in extension programs in food and agricultural sciences that are located in the insular areas of the Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, the Northern Mariana Islands, Micronesia, the Marshall Islands, or the Republic of Palau. Funds may be used that enhance programs in agriculture, natural resources, forestry, veterinary medicine, home economics, and disciplines closely allied to the food and agriculture production and delivery systems. Funds are awarded on a competitive basis under the program.

The Distance Education Grants for Insular Areas Program, authorized by section 1490 of NARETPA (7 U.S.C. 3362), as amended, is designed to strengthen the capacity of institutions that are located in the insular areas of the Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, the Northern Mariana Islands, Micronesia, the Marshall Islands, or the Republic of Palau. Funds may be used to enhance the capability of the institutions to carry out collaborative distance food and agricultural education programs using digital network technologies. Funds are awarded on a competitive basis under the program.

The Veterinary Medicine Loan Repayment Program, authorized by section 1415A of NARETPA (7 U.S.C. 3151a) as amended, provides for a loan repayment program for a specified payment amount of qualifying educational loans of veterinarians for geographical areas that have a shortage of veterinarians; and areas of veterinary practice that the Secretary determines have a shortage of veterinarians, such as food animal medicine, public health, epidemiology, and food safety. FCEA amended section 1415A to require NIFA to give priority to agreements with veterinarians for the practice of food animal medicine in veterinarian shortage situations and prohibits transfer of funds to the Food Safety and Inspection Service under the National Veterinary Medical Service Act. Funds are awarded on a competitive basis under the program.

## Extension Activities

The mission of the Cooperative Extension System, a national educational network, is to help people improve their lives through an educational process that uses scientific knowledge focused on issues and needs. Cooperative Extension work was established by the Smith-Lever Act of May 8, 1914, as amended. This work is further emphasized in Title XIV of NARETPA to fulfill the requirements of the Smith-Lever Act, the Cooperative Extension Service in each State, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, the Northern Marianas and Micronesia, conduct educational programs to improve American agriculture, communities of all sizes, and strengthen families throughout the United States. This publicly funded, out-of-the classroom educational network combines the expertise and resources of Federal, State and local partners. The partners in this unique system are:

-NIFA of USDA;

-Cooperative Extension Services at land-grant universities throughout the United States and its territories; and

-Cooperative Extension Services in nearly all of the 3,150 counties in the United States.

Thousands of Extension employees and nearly 3 million volunteers support this partnership and magnify its impact. Strong linkages with both public and private external groups are also crucial to the Extension System's strength and vitality.

1. Smith-Lever 3 (b) & (c) - Smith-Lever 3 (b) & (c) formula funds of the Smith-Lever Act, 7 U.S.C. 343 (b)(3), as amended, comprise approximately two-thirds of the total Federal funding for extension activities. These funds are allocated to the States on the basis of the rural and farm population of each State and the territories. States can utilize funds for locally determined programs, as well as for high priority regional and national concerns.

In accordance with section 4 of the Smith-Lever Act, eligible State institutions are required to submit a Plan of Work to NIFA for approval before Smith-Lever 3 (b) & (c) formula funds are distributed. Of the funds authorized under section 3(c), four percent shall be allotted for Federal administrative, technical, and other services, and for coordinating the extension work of the Department and the several States, Territories, and possessions. The remaining balance of funds formula distribution is:

-20 percent is divided equally among the States;
-40 percent is paid to the several States in the proportion that the rural population of each bears to the total rural population of the several States as determined by the census; and
-40 percent shall be paid to the several States in the proportion that the farm population of each bears to the total farm population of the several States as determined by the census.

States must expend 25 percent, or two times the level spent in fiscal year 1997 (whichever is less), on cooperative extension activities in which two or more States cooperate to solve problems that concern more than one State. This also applies to activities that integrate cooperative research and extension.

Smith-Lever 3(b) and (c) funding provided to an 1862 Land-Grant Institution must be matched with non-Federal funding on a dollar-for-dollar basis. Matching requirements for the insular areas of the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, Micronesia, American Samoa, and the Northern Mariana Islands are subject to the matching requirements of an amount equal to not less than 50 percent of the formula funds distributed to each insular area. These provisions also state that the Secretary may waive the matching funds requirement of an insular area for any fiscal year if the Secretary determines the government of the insular area will be unlikely to meet the matching requirement for the fiscal year.

2. Smith-Lever 3(d) - These funds are allocated to the States to address special programs or concerns of regional and national importance. Section 7403 of FCEA amends section 3(d) of the Smith-Lever Act (7 U.S.C. 343(d)) to expand eligibility to the 1890 Land-Grant Institutions and required that funds be awarded on a competitive basis with the exception of the Expanded Food and Nutrition Education Program in which funds are distributed on a formula basis. Section 7417 of FCEA provided eligibility for these programs to the University of the District of Columbia. The following extension programs are supported under the Smith-Lever 3(d) funding mechanism and other specific authorizations:

Expanded Food and Nutrition Education Program – These funds are awarded to the 1862 and 1890 Land-Grant Institutions according to a statutory formula provided in section 1425 of NARETPA (7 U.S.C. 3175) which is amended by section 7116 of FCEA. Funds are used to provide low-income youth and families with information to increase nutrition knowledge and improve nutritional practices. Funds are awarded to the eligible institutions as follows: (1) FY 1981 bases; (2) $100,000 to each institution; (3) a percentage of the increase in funding that exceeds the FY 2007 appropriated level (i.e., 11 percent for FY 2010, 12 percent for FY 2011, 13 percent for FY 2012, 14 percent for FY 2013, and 14 percent for FY 2014 and thereafter) distributed to the 1890 Land-Grant Institutions according to the prorata population for each institution at or below 125 percent of the poverty level; and the

remainder to the 1862 Land-Grant Institutions according to the prorata population for each institution at or below 125 percent of the poverty level.

Pest Management – Competitively awarded projects facilitate development of extension programs at 1862 and 1890 land-grant institutions to raise the level of understanding and implementation of integrated pest management (IPM) principles by decision makers. Applications of IPM may be in production agriculture or other environments where insect pests, plant diseases, and weeds are an issue that limits profitability or adversely impacts the environment or human health due to exposure to pests or pesticides.

Farm Safety and Youth Farm Safety Education and Certification Program – The Rural Health and Safety Education Act of 1990, section 2390 of the FACT Act (7 U.S.C. 2661) – The Farm Safety program provides competitively awarded projects to Extension working with non-profit disability organizations in conducting AgrAbility projects designed to assist farmers and ranchers with disabilities to stay in agricultural production. The competitively-awarded Youth Farm Safety Education and Certification Program provides funding to states to conduct training and certification needs of youth working in agriculture.

Children, Youth, & Families At Risk - This program focuses on America's children, youth and families to help promote and provide positive, productive, secure environments and contributions to communities and the Nation. Projects are awarded competitively to focus on the national outcomes for youth and families which include early childhood, school age youth, teens, and family outcomes with emphasis on science and reading literacy, and building youth and family program and community capacity.

Federally-Recognized Tribes Extension Program (formerly Extension Indian Reservations) - Section 1677 of the FACT Act, 7 U.S.C. 5930 – Competitively awarded projects to State Extension Services are implemented by Federally Recognized Tribes to provide assistance and educational programs in agriculture, community development, youth development, and other societal issues facing Native Americans on reservations..

Sustainable Agriculture - Section 1629 of the FACT Act, 7 U.S.C. 5832 - Smith-Lever 3(d) funding for sustainable agriculture programs is used to address the activities described in section 1629 of the FACT Act. The purpose of the program is to provide education and training for Cooperative Extension System agents, and other agricultural professionals in the university system, private sector, or other government agencies, involved in the education and transfer of technical information concerning sustainable agriculture. Funds are used for statewide planning of sustainable agriculture programs and competitively awarded projects on a regional basis.

New Technologies for Agricultural Extension - Competitively awarded projects that support an Internet-based tool that provides fast and convenient access to objective, peer-reviewed, and researched-based information, education, and guidance on subjects that include food safety, homeland security, natural resources and environment, youth development, families, nutrition and health, and other agricultural related topics.

3. Payments to 1890 Colleges and Tuskegee University and West Virginia State University - Section 1444 of NARETPA, (7 U.S.C. 321-329), provides support to the 1890 Land-Grant Colleges and Universities for fostering, developing, implementing and improving extension educational programs to benefit their clientele. The general provisions, section 753, of Pub. L. 107-76 designated West Virginia State University as eligible to receive funds under any Act of Congress authorizing funding to 1890 Institutions, including Tuskegee University. Eligible State institutions are required to submit a five-year Plan of Work to NIFA for approval before these formula funds are distributed. Section 7121 of FCEA amended section 1444(a)(2) (7 U.S.C. 3221(a)(2)) to require that at least 20 percent of the total appropriations for each fiscal year under the Smith-Lever Act be allocated for payments to 1890 Institutions for extension activities. Funds will be distributed as follows:

-4 percent to NIFA for administrative, technical, and other services;
-Payments to States in fiscal year 1978 are a fixed base. Of funds in excess of this amount:
- 20 percent is distributed equally to each State;
- 40 percent is distributed in an amount proportionate to the rural population of the State in which the eligible institution is located to the total rural population of all States in which eligible institutions are located; and

-40 percent is distributed in an amount proportionate to the farm population of the State in which the eligible institution is located to the total farm population of all States in which eligible institutions are located.

In accordance with section 1449(c) of NARETPA (7 U.S.C. 3222d), Federal funds provided under section 1444 must be matched by the State from non-Federal sources. Section 1449(c) provides that the Secretary of Agriculture may waive the matching funds requirement above the 50 percent level for any fiscal year for an eligible institution of a State if the Secretary determines that the State will be unlikely to satisfy the matching requirement.

Allotments to Tuskegee University and Alabama A&M University shall be determined as if each institution were in a separate State. Four percent of the funds appropriated under this program is set-aside for Federal Administration.

4. 1890 Facilities (Sec. 1447) - Section 1447 of NARETPA, 7 U.S.C. 3222b, funds are used to upgrade research, extension, and teaching facilities at the 1890 land-grant colleges, including Tuskegee University and West Virginia State University. Funds are distributed on a noncompetitive formula basis.

5. The Renewable Resources Extension Act - Renewable Resources Extension Act of 1978, 16 U.S.C. 1671-1676, provides funding for expanded natural resources education programs. Funds are distributed primarily by formula to 1862 and 1890 Land-Grant Institutions for educational programs, and a limited number of special emphasis national programs.

6. Rural Health and Safety Education – Rural Health and Safety Education Act of 1990, section 2390 of the FACT Act 7 U.S.C. 2662 note-This program competitively awards projects that focus on issues related to individual and family health education in one or more of the following areas: 1) healthy living behaviors, family interaction and environmental attributes in rural areas; 2) health literacy and its impact on health status in rural and farm families; and/or 3) related issues of health promotion and health care to rural individuals and families. Land-grant colleges and universities are eligible to receive funds under the Act of July 2, 1862 (7 U.S.C. 301 et seq.), and the Act of August 30, 1890 (7 U.S.C. 321 et seq.), including Tuskegee University, West Virginia State University and the University of the District of Columbia. Applications may also be submitted by any of the Tribal colleges and universities designated as 1994 Land-Grant Institutions under the Educational Land-Grant Status Act of 1994 (7 U.S.C. 2662(i)).

7. Federal Administration (direct appropriation) - Provides a portion of the general operating funds for the Federal staff, and national program planning, coordination, and program leadership for the extension work in partnership with the States and territories. Agriculture in the Classroom (AITC) program is administered under the federal administration line. AITC advances agricultural literacy through a grassroots network of State coordinators, school teachers, agribusiness leaders, and other educators by supporting initiatives that include expanding outreach to underrepresented populations; regional demonstration projects; integration of information technology to reduce program delivery costs; and outstanding teacher recognition initiatives.

8. Extension Services at the 1994 Institutions - The 1994 Act authorizes appropriations for Native American communities and Tribal Colleges for extension activities as set forth in the Smith Lever Act. Funding is awarded on a competitive basis. Section 532 was amended to add Ilisagvik College, bringing the total number of eligible participants up to 34.

9. Food Animal Residue Avoidance Database Program (FARAD) – Section 7642 of AREERA authorizes the FARAD program. The program is a computer-based decision support system designed to provide livestock producers, extension specialists, and veterinarians with practical information on how to avoid drug, pesticide, and environmental contaminant residue problems.

10. Grants to Youth Serving Institutions - Section 410 of AREERA (7 U.S.C. 7630) provides grants to the Girl Scouts of the United States of America, Boy Scouts of America, National 4-H Council, and the National Future Farmers of America Organization to establish projects to expand the programs carried out by the organizations in rural areas and small towns. Section 7309 of FCEA amended section 410 by providing maximum flexibility in content delivery to each organization to ensure that the unique goals of each organization, as well as the local

community needs, are fully met. Additionally, recipients of funds under section 410 may redistribute all or part of the funds received to individual councils or local chapters within the councils without further need of approval from the Secretary.

11. Women and Minorities in Science, Technology, Engineering, and Mathematics Fields - Section 7204 of FCEA amended section 1672 of the FACT Act which provides for competitively awarded grants to increase participation by women and underrepresented minorities from rural areas in the field of science, technology, engineering, and mathematics. Additionally, priority will be given to eligible institutions that carry out continuing programs funded by the Secretary.

12. Beginning Farmer and Rancher Development Program - Section 7410 of FCEA amended section 7405 of FSRIA and made available $19,000,000 for each of FY 2010 through FY 2012. The purpose of this mandatory, competitive program is to support the nation's beginning farmers and ranchers by making competitive grants to new and established local and regional training, education, outreach, and technical assistance initiatives that address the needs of beginning farmers and ranchers. To be eligible for a grant under this authority, an applicant must be a collaborative State, tribal, local, or regionally-based network or partnership of public or private entities which may include a State cooperative extension service; a Federal, state, or tribal agency; a community-based and non-governmental organization; a college or university (including an institution offering associate's degree) or a foundation maintained by a college or university; or any other appropriate partner.

All grantees are required to provide a 25 percent match in the form of cash or in-kind contributions. The maximum amount of an award is $250,000 and the maximum project period is three years. Mandatory funding for the program expired at the end of September 2012.

13. Biodiesel Fuel Education Program - The goals of this program as originally established in Section 9004 of FSRIA were to stimulate biodiesel consumption and the development of a biodiesel infrastructure. Congressionally mandated funding will support competitively awarded grants to address the need to balance the positive environmental, social, and human health impacts of biodiesel utilization with the increased per gallon cost to the user. Biodiesel Education projects will focus on the development of practical indicators or milestones to measure their progress towards achieving the following objectives:
A) Enhance current efforts to collect and disseminate biodiesel information;
B) Coordinate with other biodiesel educational or promotional programs, and with Federal, State, and local programs aimed at encouraging biodiesel use, including the Energy Policy Act of 2005 program;
C) Create a nationwide networking system that delivers biodiesel information to targeted audiences, including users, distributors, and other infrastructure-related personnel;
D) Identify and document the benefits of biodiesel (e.g., lifecycle costing); and
E) Gather data pertaining to information gaps and develop strategies to address the gaps.

Mandatory funding in the amount of $1,000,000 is to be made available for each of FY 2008 through FY 2012 to carry out this program. Mandatory funding for the program expired at the end of September 2012.

14. Agriculture Risk Management Education Program - Section 133 of the Agricultural Risk Protection Act of 2000 amended the Federal Crop Insurance Act to establish a competitive grants program for educating agricultural producers on the full range of risk management activities. These activities include futures, options, agricultural trade options, crop insurance, cash forward contracting, debt reduction, production diversification, marketing plans and tactics, farm resources risk reduction, and other appropriate risk management strategies. This program brings the existing knowledge base to bear on risk management issues faced by agricultural producers and expands the program throughout the Nation on a regional and multi-regional basis. Mandatory funding in the amount of $5,000,000 is to be made available annually for competitive awards.

Integrated Activities

The following programs are included under the integrated activities account:

Section 7129 of FCEA amended section 406(b) of AREEERA (7 U.S.C. 7626(b)) by adding Hispanic-serving agricultural colleges and universities (HSACUs) to the eligibility for section 406 funds. HSACUs are defined in section 1404(10) of NARETPA as colleges and universities that (1) qualify as Hispanic-serving institutions; and (2) offer associate, bachelors, or other accredited degree programs in agriculture-related fields. The following programs are provided pursuant to the authority found in section 406. Funding for all programs is provided on a competitive basis.

1. Water Quality - This program assists the State Agricultural Experiment Stations and the Cooperative Extension System to become viable partners with other State and Federal agencies in addressing water quality problems of National importance.

2. Regional Pest Management Centers - Pest management centers are the focal point for team building efforts, communication networks, and stakeholder participation within a given region. The centers bring together and help focus the institutional and individual expertise needed to address successfully a range of pest management issues confronting farmers and other pest managers (e.g., regulatory restrictions, development of pest resistance, invasive species, and biotechnology).

3. Methyl Bromide Transition Program - This program is designed to support the discovery and implementation of practical pest management alternatives for commodities affected by the methyl bromide phase-out. The program focuses on short- to medium-term solutions for all commodities at risk using either combinations of presently available technologies or some newly developed practices.

4. Organic Transition Program - This program supports the development and implementation of biologically based pest management practices that mitigate the ecological, agronomic and economic risks associated with a transition from conventional to organic agricultural production systems.

Additional authorities for integrated programs include:

1. Regional Rural Development Centers - Section 2(c)(1)(B) of the 1965 Act (7 U.S.C. 450i(c)(1)(B)) provides funds at four regional centers in Pennsylvania, Mississippi, Utah, and Michigan. Programs are designed to improve the social and economic well-being of rural communities in their respective regions. These funds are distributed competitively according to the extent of the problem that requires attention in each state.

2. Food and Agriculture Defense Initiative Program - Section 1484 of NARETPA provides for the support and enhancement of nationally-coordinated plant and animal disease diagnostic networks and support activities to identify and respond to high risk biological pathogens in the food and agricultural system. The diagnostic networks currently supported are the National Plant Diagnostic Network (NPDN) and the National Animal Health Laboratory Network (NAHLN). These networks are state/federal partnerships that are used to increase the ability to protect the Nation from plant and animal disease threats by providing surveillance, early detection, mitigation, and recovery functions that serve to minimize these threats. The Extension Disaster Education Network (EDEN) is supported under this program also. EDEN is a collaborative national effort that is led by state Cooperative Extension Services (CES) to provide disaster education resources for CES educators to use to help farmers and other public sectors in the event of disasters, including agricultural disasters.

3. Organic Agriculture Research and Extension Initiative - Section 7206 of FCEA amended section 1672B of the FACT Act to provide $20,000,000 for FY 2010 through FY 2012 for the Organic Agricultural Research and Extension Initiative. The purpose of this congressionally mandated program is to make competitive grants to support research and extension activities regarding organically grown and processes agricultural commodities. Mandatory funding for the program expired at the end of September 2012.

4. Specialty Crop Research Initiative - Section 7311 of FCEA amended Title IV of AREERA (7 U.S.C. 7621 et seq.) to establish a specialty crop research and extension initiative to address the critical needs of the specialty crop industry by developing and disseminating science-based tools to address needs of specific crops and their regions. The Specialty Crop Research Initiative (SCRI) competitive grants program was established to solve critical industry issues through research and extension activities. Specialty crops are defined as fruits and vegetables, tree nuts, dried fruits, and horticulture and nursery crops including floriculture. SCRI will give priority to projects that are multistate, multi-institutional, or trans-disciplinary; and include explicit mechanisms to communicate results to producers and the public. Projects must address at least one of the following five focus areas:

A) Research in plant breeding, genetics, and genomics to improve crop characteristics;
B) Efforts to identify and address threats from pests and diseases, including threats to pollinators;
C) Efforts to improve production efficiency, productivity, and profitability over the long term;
D) New innovations and technology, including improved mechanization and technologies that delay or inhibit ripening; and
E) Methods to prevent, detect, monitor control, and respond to potential food safety hazards in the production and processing of specialty crops.

Eligible applicants for grants under this authority include Federal agencies, national laboratories, colleges and universities, research institutions and organizations, private organizations or corporations, State agricultural experiment stations, individuals, and groups consisting of two or more entities defined in this sentence. Mandatory funding in the amount of $50,000,000 is to be made available for each of FY 2009 through FY 2012 to carry out the SCRI. Mandatory funding for the program expired at the end of September 2012.

Biomass Research and Development Initiative

The purpose of this initiative, authorized under Section 9008 of FSRIA, is to competitively award grants, contracts, and financial assistance to eligible entities to carry out research and development and demonstration of: (1) Biofuels and biobased products; and (2) the methods, practices, and technologies, for the production of biofuels and biobased products. This program was transferred on October 1, 2008, from Rural Development to NIFA. Awardees are required to cost share at 20 percent. Waiver authority for the cost share requirement is provided to the Secretary. To be eligible for an award, an applicant must be an institution of higher education, a National Laboratory, a Federal research agency, a State research agency, a private sector entity, a nonprofit organization, or a consortium of two or more of the entities defined in this sentence. Mandatory funding is made available in the amount of $28,000,000 in FY 2010, $30,000,000 in FY 2011, and $40,000,000 in FY 2012. Mandatory funding for the program expired at the end of September 2012.

This initiative requires the Secretary of Agriculture and the Secretary of Energy, in consultation with the Environmental Protection Agency and heads of other appropriate departments and agencies to direct the initiative in the following three areas:

A) Feedstocks development;
B) Biofuels and biobased products development; and
C) Biofuels development analysis.

Community Food Projects

Section 25 of the Food Stamp Act of 1977, as amended by Section 4125 of the Farm Security and Rural Investment Act of 2002, authorized funding in support of competitively awarded Community Food Projects (CFP). The objectives of the CFP Program are to increase the food self-reliance of communities; promote comprehensive responses to local food, farm, and nutrition issues; develop innovative linkages between the public, for-profit, and nonprofit food sectors; and encourage long-term planning activities and comprehensive multi-agency approaches. Projects are intended to bring together stakeholders from the distinct parts of the food system and to foster understanding of national food security trends and how they might improve local food systems. Mandatory funding in the amount of $5,000,000 is provided annually.

For NIFA program coordination and planning are carried out by staff located entirely in the Washington, D.C. area. As of September 30, 2012, there were 393 permanent full-time employees and 22 other employees.

Agency Audit Reports

OMB Circular A-133 Audits

The audits below are ongoing in fiscal year 2013.

| Year | Audit Report Number | Name | Audit Period Year Ended |
|---|---|---|---|
| 2005 | 05-1019 | Northern Marianas College | 30-Sep-05 |
| 2006 | 06-1007 | College of Micronesia | 30-Sep-06 |
| 2006 | 06-1020 | Northern Marianas College | 30-Sep-06 |
| 2006 | 06-1060 | University of Missouri System | 30-Jun-06 |
| 2007 | 07-1032 | University of Missouri System | 30-Jun-07 |
| 2009 | 09-1001 | American Samoa Community College | 30-Sep-09 |
| 2009 | 09-1008 | College of Micronesia | 30-Sep-09 |
| 2009 | 09-1027 | Northern Marianas College | 30-Sep-09 |
| 2010 | 10-1001 | University of Wyoming | 30-Jun-10 |
| 2010 | 10-1005 | State of Wisconsin | 30-Jun-10 |
| 2010 | 10-1018 | Joslin Diabetes Center, Inc. | 30-Sep-10 |
| 2010 | 10-1019 | Kentucky State University | 10-Jun-10 |
| 2010 | 10-1020 | Marshall Public Schools | 30-Jun-10 |
| 2010 | 10-1047 | College of Menominee Nation | 30-Jun-10 |
| 2010 | 10-1049 | American Samoa Community College | 30-Sep-10 |
| 2010 | 10-1050 | Seattle Children's Hospital | 30-Sep-10 |
| 2010 | 10-1051 | Northern Marianas College | 30-Sep-10 |
| 2010 | 10-1052 | College of Micronesia | 30-Sep-10 |
| 2010 | 10-1053 | Christiana Care Health System, Inc. | 30-Jun-10 |
| 2011 | 11-1013 | Lincoln University | 30-Jun-10 |
| 2011 | 11-1019 | Creighton University | 30-Jun-10 |
| 2011 | 11-1020 | Plattsmouth Community School | 30-Aug-10 |
| 2011 | 11-1021 | Africare | 30-Jun-10 |
| 2011 | 11-1022 | American Samoa Community College | 30-Sep-10 |
| 2011 | 11-1023 | Arkansas Land and Farm Development Corp | 30-Sep-10 |
| 2011 | 11-1024 | Delaware State University | 30-Jun-10 |
| 2011 | 11-1025 | Georgetown University | 30-Jun-10 |
| 2011 | 11-1027 | State of Connecticut | 30-Jun-10 |
| 2011 | 11-1028 | State of Texas C/O Comp of Public Account | 30-Aug-10 |
| 2011 | 11-1029 | State of Wisconsin | 30-Jun-10 |
| 2011 | 11-1030 | The Shaw University, Inc. | 30-Jun-10 |
| 2011 | 11-1031 | Universidad Central Del Caribe, Inc. | 30-Jun-10 |
| 2011 | 11-1032 | University of Illinois | 30-Jun-10 |
| 2011 | 11-1033 | Yeshiva University | 30-Jun-10 |
| 2011 | 11-1034 | Jefferson County Commission | 30-Sep-10 |
| 2011 | 11-1035 | National Tribal Development Association | 30-Dec-10 |
| 2011 | 11-2026 | State of Colorado | 30-Dec-10 |

OIG Reports

The audits below were completed during fiscal year 2012.

| OIG Audit Number | Completion Date | Title |
|---|---|---|
| 50099-84-Hy | Jan. 20, 2012 | USDA's Response to Colony Collapse Disorder |
| 50601-16-Te | Feb. 23, 2012 | Controls Over Genetically Engineered Animal and Insect Research |

The audits below are ongoing in fiscal year 2013.

| OIG Audit Number | Title |
|---|---|
| 50601-0002-16 | Section 632(a) Transfer of Funds from USAID to the USDA for Afghanistan. |
| 50703-02-13 | Analysis of Jobs Reported for American Recovery and Reinvestment Act – USDA Federal Reporting Data Quality Review |
| 50703-1-23 | Trade Adjustment Assistance for Farmers Program |

GAO Studies

The reports below were completed during fiscal year 2012.

| GAO Job Code | Completion Date | Title |
|---|---|---|
| GAO-12-260 | Feb. 27, 2012 | Renewable Energy: Federal Agencies Implement Hundreds of Initiatives |
| GAO-12-55 | Oct. 31, 2011 | Biosurveillance: Nonfederal Capabilities Should Be Considered in Creating a National Biosurveillance Strategy |
| GAO-12-108 | Jan. 20, 2012 | STEM Education: Strategic Planning Needed to Better Manage Overlapping Programs across Multiple Agencies |
| GAO-12-257 | Mar. 9, 2012 | Food Safety: Pre-Slaughter Interventions Could Reduce E. coli in Cattle |
| GAO-12-342SP | Feb. 28, 2012 | Opportunities to Reduce Duplication, Overlap and Fragmentation, Achieve Savings and Enhance Revenue |
| GAO-12-667 | Jun. 29, 2012 | Employment for People with Disabilities: Little Is Known about the Effectiveness of Fragmented and Overlapping Programs |
| GAO-12-588 | Jul. 23, 2012 | Financial Literacy: Overlap of Programs Suggests There May Be Opportunities for Consolidation |
| GAO-12-819 | Aug. 23, 2012 | Entrepreneurial Assistance: Opportunities Exist to Improve Programs' Collaboration, Data-Tracking, and Performance Management |
| GAO-12-862 | Sep. 24, 2012 | International Food Assistance Targeting |
| GAO-12-938R | Sep. 14, 2012 | The Distribution of Federal Economic Development Grant Funds to Communities with High Rates of Poverty and Unemployment |
| GAO-12-731 | Jul. 12, 2012 | Trade Adjustment: USDA has Enhanced Technical Assistance for Farmers and Fishermen, but Steps Are Needed to Better Evaluate Program Effectiveness |

The reports below are ongoing in fiscal year 2013.

| GAO Job Code | Title |
|---|---|
| 131154 | Potential Overlap, Duplication and Fragmentation of Federal Elder Justice Programs |
| 291011 | Federal Autism Programs |
| 310974 | Implementing Provisions of E-Government Act of 2002 |
| 320886 | Feed the Future Initiative |
| 361329 | Federal Initiatives Overlap but Take Measures to Avoid Duplication |

| | |
|---|---|
| 361355 | Federal Efforts to Rapidly Detect Highly Contagious Animal Diseases |
| 361362 | Duplication of USDA's Agricultural Research Efforts |
| 361379 | Wind Energy Initiatives |
| 361385 | Budget Justification Review of USDA's FY 2013 Budget Request |
| 361388 | Energy-Water Nexus Capping Report |
| 361395 | Vulnerability of the SBIR and STTR Programs to Fraud, Waste and Abuse |
| 361396 | SBIR and STTR Programs' Expenditure Compliance |
| 450965 | Training the Federal Grant Management Workforce |
| 542185 | Federal Excess and Underutilized Property |

## NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Available Funds and Staff Years (SY)
(Dollars in thousands)

| Item | 2011 Actual Amount | 2011 Actual SY | 2012 Actual Amount | 2012 Actual SY | 2013 Estimated Amount | 2013 Estimated SY | 2014 Estimated Amount | 2014 Estimated SY |
|---|---|---|---|---|---|---|---|---|
| *Detailed Information for each account can be found in the Project Statements.* | | | | | | | | |
| Research and Education Activities: | | | | | | | | |
| Discretionary Appropriations | $704,447 | 234 | $710,321 | 242 | 715,123 | 245 | 806,477 | 254 |
| Extension Activities: | | | | | | | | |
| Discretionary Appropriations | 480,092 | 155 | 475,183 | 155 | 478,091 | 157 | 459,037 | 154 |
| Mandatory Appropriations | 25,000 | - | 25,000 | - | 5,000 | - | 5,000 | - |
| Integrated Activities: | | | | | | | | |
| Discretionary Appropriations | 37,000 | 8 | 21,482 | 8 | 21,613 | 8 | 28,129 | 9 |
| Mandatory Appropriations | 70,000 | - | 70,000 | - | - | - | - | - |
| Biomass Research and Development Initiative | 30,000 | - | 40,000 | - | - | - | - | - |
| Rescission | -2,434 | - | - | - | - | - | - | - |
| Adjusted Appropriation | 1,344,105 | 397 | 1,341,986 | 405 | 1,219,827 | 410 | 1,298,643 | 417 |
| Transfers In (Congressional Relations) | 130 | | 111 | | - | | | |
| Balance Available, Start of Year | 233,482 | - | 219,410 | - | 204,187 | - | - | - |
| Other Adjustments | 23,983 | - | 29,492 | - | - | - | - | - |
| Total Available | 1,601,700 | 397 | 1,590,999 | 405 | 1,424,014 | 410 | 1,298,643 | 417 |
| Lapsing Balances | -12,147 | - | -780 | - | - | - | - | - |
| Balance Available, End of Year | -219,410 | - | -204,187 | - | - | - | - | - |
| Obligations | 1,370,143 | - | 1,386,032 | | 1,424,014 | | 1,298,643 | |
| Other Appropriations: | | | | | | | | |
| Biodiesel Fuel Education Program | 1,000 | - | 1,000 | | - | | - | |
| Community Food Projects Program | 5,000 | - | 5,000 | | 5,000 | | 5,000 | |
| Total, Other Appropriations | 6,000 | | 6,000 | | 5,000 | | 5,000 | |
| Total, Appropriations | 1,376,143 | | 1,392,032 | | 1,429,014 | | 1,303,643 | |
| Obligations under other USDA appropriations: | | | | | | | | |
| Research and Education Activities: | | | | | | | | |
| Agricultural Research Service: | | | | | | | | |
| Bean Productivity Research | - | - | 5,000 | - | - | - | - | - |
| Biotechnology Risk Assessment | 1,667 | - | 1,642 | - | 1,726 | - | 1,726 | - |
| IR-4 Quality Assurance Program | 338 | - | | - | | - | | - |
| Salary, Benefits and Operating Expenses for Detailee | - | - | 14 | - | 338 | - | 338 | - |
| Support of the EC-US Task Force on Animal Bio | - | - | 4 | - | - | - | - | - |
| Economic Research Service: | | | | | | | | |
| Salary, Benefit and Operating Expenses for Detailee | - | - | 21 | - | - | - | - | - |
| Farm Service Agency: | | - | | - | | - | | |
| Nitrogen Cycling AG Watersheds | 1,000 | - | - | - | - | - | | - |
| Forest Service: | | | | | | | | |
| Biotechnology Risk Assessment | 63 | - | 63 | - | 63 | - | 63 | - |
| Assessment of Carbon Stock | 500 | - | - | - | - | - | - | - |
| Graduate Training Joint Funding | 150 | - | - | - | - | - | - | - |
| Salary, Benefits and Operating Expenses for Detailees | - | - | 76 | - | - | - | - | - |
| National Atmospheric Deposition Program | 206 | - | 235 | - | 223 | - | 223 | - |
| Climate Change Ecosystem Program | 500 | - | - | - | - | - | - | - |
| Office of Human Resource Management: | | | | | | | | |
| SES Candidate | - | - | 116 | - | - | - | - | - |
| Risk Management Agency: | | | | | | | | |
| Salary, Benefits for Detailees-OSDFR | 262 | - | - | - | | - | | - |
| Various agencies sharing cost of the USDA Small | | - | | - | | - | | - |
| Business Innovation Research Program (SBIR) | 2,391 | - | 2,017 | - | 2,400 | - | 2,400 | - |
| Various research agencies sharing cost of the Current | | - | | - | | - | | - |
| Research Information System (CRIS) | 640 | - | 640 | - | 640 | - | 640 | - |
| Miscellaneous Reimbursements | 52 | - | - | - | - | - | - | - |
| Other Anticipated Reimbursements | - | - | - | - | 4,438 | - | 4,438 | - |
| Subtotal, Res./Ed. Other USDA Appropriations | 7,769 | - | 9,828 | - | 9,828 | - | 9,828 | - |

| Item | 2011 Actual Amount | SY | 2012 Actual Amount | SY | 2013 Estimated Amount | SY | 2014 Estimated Amount | SY |
|---|---|---|---|---|---|---|---|---|
| Extension Activities: | | | | | | | | |
| Foreign Agricultural Service: | | | | | | | | |
| Afghanistan Extension Project | 15,577 | - | - | - | - | - | - | - |
| Animal and Plant Health Inspection Service: | | | | | | | | |
| People's Garden | 200 | - | - | - | - | - | - | - |
| Food and Nutrition Service: | | | | - | - | - | - | - |
| Study SNAP-Ed Activities | - | - | 300 | - | - | - | - | - |
| Food Safety and Nutrition Service: | | | | | | | | |
| People's Garden | 250 | - | - | - | - | - | - | - |
| Forest Service: | | | | | | | | |
| People's Garden | 150 | - | - | - | - | - | - | - |
| Miscellaneous Reimbursements | 302 | - | - | - | - | - | - | - |
| Other Anticipated Reimbursements | - | - | - | - | 300 | - | 300 | - |
| Subtotal, Extension Other USDA Appropriations | 16,479 | - | 300 | - | 300 | - | 300 | - |
| Total, NIFA Other USDA Appropriations | 24,248 | - | 10,128 | - | 10,128 | - | 10,128 | - |
| | | | | | | | | |
| Other Federal Funds: | | | | | | | | |
| Research and Education Activities: | | | | | | | | |
| Army Corps of Engineers: | | | | | | | | |
| Economics & Mgmt. of Multifunction Water Resources Projects | - | - | 445 | - | - | - | - | - |
| Role of Internet in Knowledge Transfer in Outdoor Recreations | - | - | 13 | - | - | - | - | - |
| Support of USAC Mapping Program | 198 | - | - | - | - | - | - | - |
| Department of Commerce: | | | | | | | | |
| Support of National Trends Network | | - | 242 | - | 242 | - | 242 | - |
| NOAA National Atmospheric Deposition Program | 207 | - | - | - | | - | | - |
| Department of Defense: | | | | | | | | |
| EFMP Benchmark Study | - | - | 320 | - | - | - | - | - |
| Family Advocacy Program | - | - | 1,241 | - | - | - | - | - |
| Support for Military Student During Parental Absence | - | - | 300 | - | - | - | - | - |
| Traumatic Brain Injury | - | - | 1,006 | - | - | - | - | - |
| Environmental Protection Agency: | | | | | | | | |
| NOAA National Atmospheric Deposition Program | 431 | - | 434 | - | 434 | - | 434 | - |
| Department of Interior: | | | | | | | | |
| Geological Survey, National Atmospheric Deposition Program | 715 | - | 640 | - | 640 | - | 640 | - |
| National Park Service, National Atmospheric Deposition Program | 375 | - | 386 | - | 386 | - | 386 | - |
| Bureau of Land Management, National Trends Network | - | - | 56 | - | 56 | - | 56 | - |
| Fish and Wildlife Service 4-H Awards Program | - | - | - | - | 18 | - | 18 | - |
| Department of State: | | | | | | | | |
| Salary, Benefits and Operating Expenses for Detailee | 205 | - | - | - | - | - | - | - |
| Department of Treasury: | | | | | | | | |
| Salary, Benefits, and Operating Expenses for Detailees | - | - | 6 | - | - | - | - | - |
| Tennessee Valley Authority: | | | | - | | | | |
| Support of National Trends Network | - | - | 27 | - | 27 | - | 27 | - |
| Miscellaneous Reimbursements | 117 | - | - | - | - | - | - | - |
| Other Anticipated Reimbursements | - | - | - | - | 3,313 | - | 3,313 | - |
| Subtotal, Res./Educ. Other Federal Funds | 2,248 | - | 5,116 | - | 5,116 | - | 5,116 | - |
| | | | | | | | | |
| Extension Activities: | | | | | | | | |
| Department of Defense: | | | | | | | | |
| Army Substance Abuse Program, Ft-Hood | - | - | 62 | - | - | - | - | - |
| Army Substance Abuse Education | - | - | 141 | - | - | - | - | - |
| Autism Review Phase 3 | - | - | 429 | - | 500 | - | 500 | - |
| AZ Reach | - | - | 550 | - | 1,500 | - | 1,500 | - |
| Air Force 4-H Program | 1,700 | - | 400 | - | 1,000 | - | 1,000 | - |
| Air Force Advocacy Program | 950 | - | | - | | - | | - |
| Air Force Psychological Health | 969 | - | - | - | - | - | - | - |
| 4-H Military Partnership Project | 936 | - | 1,233 | - | 500 | - | 500 | - |
| 4-H Military Youth Program | 11,592 | - | - | - | - | - | | - |
| Army Youth Development Program | - | - | 500 | - | - | - | - | - |
| Community Capacity Building Project | - | - | 1,210 | - | - | - | - | - |
| Community Info Service/Survivor Outreach Program, Ft. Hood | - | - | 41 | - | 500 | - | 500 | - |
| Child Care Virtual Lab | 500 | - | 550 | - | 500 | - | 500 | - |
| Child and Youth Deployment Support | 2,000 | - | - | - | - | - | - | - |

| Item | 2011 Actual Amount | SY | 2012 Actual Amount | SY | 2013 Estimated Amount | SY | 2014 Estimated Amount | SY |
|---|---|---|---|---|---|---|---|---|
| Extension Activities: | | | | | | | | |
| Extension Partnership | 850 | - | | - | | - | - | - |
| Evidence Based Programming | 228 | - | 294 | - | 250 | - | - | - |
| Family Advocacy Program and New Parent Support | 2,017 | - | 1,274 | - | - | - | - | - |
| Family Life Skills, Fort Bliss (TX AgriLife Extension Services) | - | - | 1,239 | - | 1,100 | - | 1,000 | - |
| Family Life Skills, Fort Hood (TX AgriLife Extension Services) | - | - | - | - | 1,500 | - | 1,250 | - |
| Family Life Skills, Fort Sam Houston (TX AgriLife Extension Services) | - | - | - | - | 450 | - | 400 | - |
| Family Life Skills, Fort Drum (Cornell Jefferson County Coop. Ext.) | - | - | - | - | 900 | - | 800 | - |
| Family Life Skills Education Program at Ft. Riley | 1,630 | - | 193 | - | - | - | - | - |
| Family Advocacy Program | - | - | 505 | - | 500 | - | 500 | - |
| Family Readiness Program at University of AZ | 2,000 | - | - | - | - | - | - | - |
| Family Readiness Program at Purdue | 500 | - | - | - | - | - | - | - |
| FY 12 Yellow Ribbon Program | - | - | 1,000 | - | 1,000 | - | 1,000 | - |
| Internship for Child Care Centers, Purdue | 413 | - | 1,100 | - | | - | - | - |
| Military Community Life Skills | 1,000 | - | 155 | - | 1,000 | - | 1,000 | - |
| Military Family Learning Network eXtension | - | - | 987 | - | 500 | - | 500 | - |
| Readiness at Penn State | 1,000 | - | - | - | - | - | - | - |
| Relocation Assistance Program | - | - | 135 | - | - | - | - | - |
| Risk Reduction and Suicide Prevention | - | - | 141 | - | - | - | - | - |
| Second Language and Culture (GWU) | 2,000 | - | - | - | - | - | - | - |
| Special Needs Camps | - | - | 770 | - | 770 | - | 770 | - |
| Substance Abuse Program | 226 | - | - | - | - | - | - | - |
| Support of the Substance Abuse Program | - | - | 263 | - | - | - | - | - |
| Survivor Outreach Service Program | 122 | - | - | - | - | - | - | - |
| Teen Adventure Camps | - | - | 1,100 | - | 1,500 | - | 1,500 | - |
| Youth Adventure Camps, Purdue | 1,500 | - | - | - | - | - | - | - |
| Department of Housing and Urban Development: | | | | | | | | |
| IPM Training to Public Housing Authorities | 310 | - | 350 | - | 310 | - | 310 | - |
| U.S. Department of Navy: | | | | | | | | |
| Clearinghouse for Military Family Readiness | - | - | 1,100 | - | 1,000 | - | 1,000 | - |
| Family Resiliency Conference | 152 | - | - | - | - | - | - | - |
| 4-H Military Partnership Project | - | - | 1,500 | - | 1,300 | - | 1,300 | - |
| Project Youth Extension Service | - | - | 2,200 | - | 700 | - | 700 | - |
| Internship Programs-Child Care Centers | - | - | 1,100 | - | 1,100 | - | 1,100 | - |
| Environmental Protection Agency: | | | | | | | | |
| Agricultural Water Quality | - | - | 250 | - | - | - | - | - |
| Clean Water Act | 220 | - | - | - | | - | | - |
| Training for Pesticide Applicators | 500 | - | 500 | - | 500 | - | 500 | - |
| Healthy Homes and Lead Hazard Control | - | - | 325 | - | - | - | - | - |
| Miscellaneous Reimbursements | 285 | - | - | - | - | - | - | - |
| Other Anticipated Reimbursements | - | - | - | - | 2,700 | - | 2,700 | - |
| Subtotal, Extension Other Federal Funds | 33,600 | - | 21,597 | - | 21,580 | - | 20,830 | - |
| Total, NIFA Other Federal Funds | 35,848 | - | 26,713 | - | 26,696 | - | 25,946 | - |
| Total, NIFA Available Funds | 1,436,239 | 397 | 1,428,873 | 405 | 1,465,838 | 410 | 1,339,717 | 417 |

The Native American Interest Endowment Fund is included in the Research and Education Activities Discretionary Appropriations amount.

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Permanent Positions by Grade and Staff Year Summary

| Item | 2011 | | | 2012 | | | 2013 | | | 2014 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Wash D.C. | Field | Total | Wash D.C. | Field | Total | Wash D.C. | Field | Total | Wash D.C | Field | Total |
| Senior Executive Service..... | 8 | 0 | 8 | 8 | 0 | 8 | 8 | 0 | 8 | 8 | 0 | 8 |
| GS-15..... | 80 | 0 | 80 | 76 | 0 | 76 | 76 | 0 | 76 | 76 | 0 | 76 |
| GS-14..... | 53 | 0 | 53 | 52 | 0 | 52 | 52 | 0 | 52 | 52 | 0 | 52 |
| GS-13..... | 52 | 0 | 52 | 50 | 0 | 50 | 50 | 0 | 50 | 52 | 0 | 52 |
| GS-12..... | 63 | 0 | 63 | 69 | 0 | 69 | 69 | 0 | 69 | 69 | 0 | 69 |
| GS-11..... | 22 | 0 | 22 | 28 | 0 | 28 | 28 | 0 | 28 | 28 | 0 | 28 |
| GS-10..... | 3 | 0 | 3 | 3 | 0 | 3 | 3 | 0 | 3 | 3 | 0 | 3 |
| GS-9..... | 24 | 0 | 24 | 35 | 0 | 35 | 35 | 0 | 35 | 36 | 0 | 36 |
| GS-8..... | 16 | 0 | 16 | 17 | 0 | 17 | 17 | 0 | 17 | 17 | 0 | 17 |
| GS-7..... | 56 | 0 | 56 | 49 | 0 | 49 | 49 | 0 | 49 | 50 | 0 | 50 |
| GS-6..... | 17 | 0 | 17 | 13 | 0 | 13 | 13 | 0 | 13 | 13 | 0 | 13 |
| GS-5..... | 6 | 0 | 6 | 7 | 0 | 7 | 7 | 0 | 7 | 8 | 0 | 8 |
| GS-4..... | 3 | 0 | 3 | 3 | 0 | 3 | 3 | 0 | 3 | 3 | 0 | 3 |
| GS-3..... | 1 | 0 | 1 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 0 | 4 |
| GS-2..... | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Total Permanent Positions | 405 | 0 | 405 | 415 | 0 | 415 | 415 | 0 | 415 | 420 | 0 | 420 |
| Unfilled Positions | -11 | 0 | -11 | -22 | 0 | -22 | -17 | 0 | -17 | -12 | 0 | -12 |
| Total, Permanent Full-Time Employment, end-of-year | 394 | 0 | 394 | 393 | 0 | 393 | 398 | 0 | 398 | 408 | 0 | 408 |
| Staff Year Estimate | 397 | 0 | 397 | 405 | 0 | 405 | 410 | 0 | 410 | 417 | 0 | 417 |

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Research and Education Activities

The estimates include appropriation language for this item as follows:

Research and Education Activities

*For payments to agricultural experiment stations, for cooperative forestry and other research, for facilities, and for other expenses, $801,140,000, as follows: to carry out the provisions of the Hatch Act of 1887 (7 U.S.C. 361a-i), $236,334,000; for grants for cooperative forestry research (16 U.S.C. 582a through a-7), $32,934,000; for payments to eligible institutions (7 U.S.C. 3222), $50,898,000, provided that each institution receives no less than $1,000,000; for special grants (7 U.S.C. 450i(c)), $1,405,000; for competitive grants on improved pest control (7 U.S.C. 450i(c)), $11,913,000; for competitive grants (7 U.S.C. 450(i)(b)), $383,376,000, to remain available until expended; for the 1994 research grants program for 1994 institutions pursuant to section 536 of Public Law 103–382 (7 U.S.C. 301 note), $1,801,000, to remain available until expended; for the veterinary medicine loan repayment program under section 1415A of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3151a), $4,790,000, to remain available until expended; for an education grants program for Hispanic-serving Institutions (7 U.S.C. 3241), $9,219,000; for competitive grants for the purpose of carrying out all provisions of 7 U.S.C. 3156 to individual eligible institutions or consortia of eligible institutions in Alaska and in Hawaii, with funds awarded equally to each of the States of Alaska and Hawaii, $3,194,000; for aquaculture grants (7 U.S.C. 3322), $3,920,000; for sustainable agriculture research and education (7 U.S.C. 5811) and 7 U.S.C. 5832, $22,667,000; for a program of capacity building grants (7 U.S.C. 3152(b)(4)) to institutions eligible to receive funds under 7 U.S.C. 3221 and 3222, $19,336,000, to remain available until expended (7 U.S.C. 2209b); for payments to the 1994 Institutions pursuant to section 534(a)(1) of Public Law 103-382, $3,335,000; for grants for insular areas under sections 1490 and 1491 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3362 and 3363), $1,650,000; and for necessary expenses of Research and Education*

*Activities, $14,368,000, of which $7,830,000, to remain available until expended, are to provide partial support for grants management systems.*

Hispanic-Serving Agricultural Colleges and Universities Endowment Fund

*For the Hispanic-Serving Agricultural Colleges and Universities Endowment Fund under section 1456(b) (7 U.S.C. 3243(b)) of the National Agricultural Research, Extension, and Teaching Policy Act of 1977, $10,000,000, to remain available until expended.*

Native American Institutions Endowment Fund

*For the Native American Institutions Endowment Fund authorized by Public Law 103–382 (7 U.S.C. 301 note), $11,880,000, to remain available until expended.*

RESEARCH AND EDUCATION ACTIVITIES

Lead-Off Tabular Statement

| | |
|---|---|
| 2013 Estimate | $709,917,000 |
| Budget Estimate, 2014 | 801,140,000 |
| Change in Appropriation | 91,223,000 |

RESEARCH AND EDUCATION ACTIVITIES

Summary of Increases and Decreases

(Dollars in thousands)

| | 2011 Actual | 2012 Change | 2013 Change | 2014 Change | 2014 Estimate |
|---|---|---|---|---|---|
| Discretionary Appropriation: | | | | | |
| Hatch Act…… | $236,334 | $0 | $1,446 | -1,446 | 236,334 |
| McIntire-Stennis Cooperative Forestry…… | 32,934 | 0 | 202 | -202 | 32,934 |
| Evans-Allen Program (1890 Colleges and Tuskegee University)…….. | 50,898 | 0 | 311 | -311 | 50,898 |
| Animal Health and Disease (Sec. 1433)……. | 2,944 | 1,056 | 24 | -4,024 | 0 |
| Joe Skeen Institute for Rangeland Management…… | 981 | -20 | 6 | -967 | 0 |
| New Era Rural Technology Program……. | 873 | -873 | 0 | 0 | 0 |
| Aquaculture Centers (Sec. 1475)…….. | 3,920 | 0 | 24 | -24 | 3,920 |
| Critical Agricultural Materials Act…… | 1,081 | 0 | 7 | -1,088 | 0 |
| Agriculture and Food Research Initiative…. | 264,470 | 0 | 1,619 | 117,287 | 383,376 |
| Sustainable Agriculture…….. | 14,471 | 0 | 89 | 8,107 | 22,667 |
| Alternative Crops…….. | 833 | -8 | 5 | -830 | 0 |
| Farm Business Management and Benchmarking Program…… | 1,497 | -47 | 9 | -1,459 | 0 |
| Sun Grant Program…….. | 2,246 | -46 | 13 | -2,213 | 0 |
| Policy Research…….. | 0 | 4,000 | 24 | -4,024 | 0 |
| Capacity Building for Non-Land-Grant Colleges of Agriculture…….. | 0 | 4,500 | 28 | -4,528 | 0 |
| 1994 Research Program…….. | 1,801 | 0 | 11 | -11 | 1,801 |
| Higher Education Programs: | | | | | |
| Graduate Fellowship Grants……. | 3,851 | -3,851 | 0 | 0 | 0 |
| Institution Challenge Grants……. | 5,643 | -5,643 | 0 | 0 | 0 |
| Multicultural Scholars Program……. | 1,239 | -1,239 | 0 | 0 | 0 |
| Fellowship Grants, Challenge Grants and Multicultural Scholars Program…. | 0 | 9,000 | 55 | -9,055 | 0 |
| Native American Institutions (Equity Grants)…… | 3,335 | 0 | 20 | -20 | 3,335 |

| | 2011 Actual | 2012 Change | 2013 Change | 2014 Change | 2014 Estimate |
|---|---|---|---|---|---|
| Hispanic Education Partnership Grants…. | 9,219 | 0 | 56 | -56 | 9,219 |
| Secondary/2-year Post-secondary…….. | 981 | -81 | 6 | -906 | 0 |
| Capacity Building Grants (1890 Institutions)…….. | 19,336 | 0 | 118 | -118 | 19,336 |
| Alaska Native-serving and Native Hawaiian-serving Edu. Grants…….. | 3,194 | 0 | 20 | -20 | 3,194 |
| Resident Instruction Grants for Insular Areas…… | 898 | 2 | 6 | -906 | 0 |
| Distance Education Grants for Insular Areas……. | 749 | 1 | 5 | -755 | 0 |
| Grants for Insular Areas…… | 0 | 0 | 0 | 1,650 | 1,650 |
| Veterinary Medical Services Act……. | 4,790 | 0 | 29 | -29 | 4,790 |
| Federal Administration: | | | | | |
| Electronic Grants Administration System | 2,132 | -132 | 12 | -2,012 | 0 |
| Data Information System (REEIS)…….. | 2,699 | -99 | 16 | -2,616 | 0 |
| Grants Management Systems…… | 0 | 0 | 0 | 7,830 | 7,830 |
| Office of Extramural Programs (Grants)…. | 439 | -439 | 0 | 0 | 0 |
| Pay Costs and FERS……. | 5,565 | -5,565 | 0 | 0 | 0 |
| Peer Panels……. | 396 | -396 | 0 | 0 | 0 |
| General Administration……. | 0 | 5,900 | 36 | 602 | 6,538 |
| Special Research Grants | | | | | |
| Global Change, UV-B monitoring…… | 1,405 | -105 | 8 | 97 | 1,405 |
| Forest Products Research……. | 0 | 1,350 | 8 | -1,358 | 0 |
| Potato Research……. | 1,433 | -83 | 8 | -1,358 | 0 |
| Improved Pest Control: | | | | | |
| Expert IPM Decision Support System….. | 156 | -3 | 1 | -154 | 0 |
| Integrated Pest Management…… | 2,410 | -48 | 14 | -2,376 | 0 |
| Minor Crop Pest Management (IR-4)….. | 12,156 | -243 | 73 | -73 | 11,913 |
| Pest Management Alternatives…….. | 1,431 | -29 | 9 | -1,411 | 0 |
| Total, Research and Education Activities | 698,740 | 6,859 | 4,318 | 91,223 | 801,140 |
| Endowment Funds | | | | | |
| Native American Institutions Endowment Interest Fund…… | (4,307) | (415) | (484) | (131) | (5,337) |
| Hispanic -Serving Ag. Colleges and Universities Endowment Fund…… | 0 | 0 | 0 | 10,000 | 10,000 |
| Native American Institutions Endowment Fund…… | 11,880 | 0 | 0 | 0 | 11,880 |
| Total Endowment Funds…… | 11,880 | 0 | 0 | 10,000 | 21,880 |
| Total, Appropriation or Change…… | 710,620 | 6,859 | 4,318 | 101,223 | 823,020 |

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE
RESEARCH AND EDUCATION

Project Statement
Adjusted Appropriations Detail and Staff Years (SY)
(Dollars in Thousands)

| | 2011 Actual | | 2012 Actual | | 2013 Estimate | | Inc. or Dec. | | 2014 Estimate | |
|---|---|---|---|---|---|---|---|---|---|---|
| Project | Amount | SY | Amount | SY | Amount | SY | Amount | SY | Amount | SY |
| Discretionary Appropriations: | | | | | | | | | | |
| Hatch Act | $236,334 | | $236,334 | | $237,780 | | -1,446 | | $236,334 | |
| Cooperative Forestry Research Program | 32,934 | | 32,934 | | 33,136 | | -202 | | 32,934 | |
| Payments to 1890 Colleges and Tuskegee University | 50,898 | | 50,898 | | 51,209 | | -311 | | 50,898 | |
| Animal Health and Disease Research, Section 1433 | 2,944 | | 4,000 | | 4,024 | | -4,024 | | - | |
| Special Research Grants | | | | | | | | | | |
| Other Special Research Grants | 1,433 | | 2,700 | | 2,716 | | -2,716 | | - | |
| Global Change, UV-Monitoring | 1,405 | | 1,300 | | 1,308 | | +97 | | 1,405 | |
| Total Special Research Grants | 2,838 | | 4,000 | | 4,024 | | -2,619 | | 1,405 | |
| Improved Pest Control | | | | | | | | | | |
| Expert IPM Decision Supp. System | 156 | | 153 | | 154 | | -154 | | - | |
| Integrated Pest Management | 2,410 | | 2,362 | | 2,376 | | -2,376 | | - | |
| Minor Crop Pest Mgmt, IR-4 | 12,156 | | 11,913 | | 11,986 | | -73 | | 11,913 | |
| Pest Management Alternatives | 1,431 | | 1,402 | | 1,411 | | -1,411 | | - | |
| Total Improved Pest Control | 16,153 | | 15,830 | | 15,927 | | -4,014 | | 11,913 | |
| Critical Agricultural Materials Act of 1984 | 1,081 | | 1,081 | | 1,088 | | -1,088 | | - | |
| Aquaculture Centers, Section 1475 | 3,920 | | 3,920 | | 3,944 | | -24 | | 3,920 | |
| Sustainable Agriculture | 14,471 | | 14,471 | | 14,560 | | +8,107 | | 22,667 | a/ |
| 1994 Research Program | 1,801 | | 1,801 | | 1,812 | | -11 | | 1,801 | |
| Supplemental and Alternative Crops, Section 1473D | 833 | | 825 | | 830 | | -830 | | - | |
| Capacity Building for Non-Land Grant Colleges of Agriculture | - | | 4,500 | | 4,528 | | -4,528 | | - | |
| Agriculture and Food Research Initiative (formerly NRI) | 264,470 | | 264,470 | | 266,089 | | +117,287 | | 383,376 | |
| Farm Business Management and Benchmarking Program | 1,497 | | 1,450 | | 1,459 | | -1,459 | | - | |
| Policy Research | - | | 4,000 | | 4,024 | | -4,024 | | - | |
| Sun Grant Program | 2,246 | | 2,200 | | 2,213 | | -2,213 | | - | |
| Joe Skeen Institute for Rangeland Restoration, NM, TX, MT | 981 | | 961 | | 967 | | -967 | | - | |
| New Era Rural Technology Program | 873 | | - | | - | | - | | - | |
| Federal Administration (direct appropriation) | | | | | | | | | | |
| REEIS | 2,699 | | 2,600 | | 2,616 | | -2,616 | | - | |
| Peer Panels | 396 | | - | | - | | - | | - | |
| Office of Extramural Programs | 439 | | - | | - | | - | | - | |
| Pay Costs and FERS | 5,565 | | - | | - | | - | | - | |
| Grants Management Systems | - | | - | | - | | +7,830 | | 7,830 | |
| Electronic Grants Administration System | 2,132 | | 2,000 | | 2,012 | | -2,012 | | - | |
| Other General Administration | - | | 5,900 | | 5,936 | | +602 | | 6,538 | |
| Total Federal Administration | 11,231 | | 10,500 | | 10,564 | | +3,804 | | 14,368 | |

| Project | 2011 Actual Amount | SY | 2012 Actual Amount | SY | 2013 Estimate Amount | SY | Inc. or Dec. Amount | SY | 2014 Estimate Amount | SY |
|---|---|---|---|---|---|---|---|---|---|---|
| Discretionary Appropriations: | | | | | | | | | | |
| Higher Education: | | | | | | | | | | |
| Inst. Challenge, Multicultural Scholars, and Graduate Fellowship Grants | - | | 9,000 | | 9,055 | | -9,055 | | - | |
| Graduate Fellowships Grants | 3,851 | | - | | - | | - | | - | |
| Institution Challenge Grants | 5,643 | | - | | - | | - | | - | |
| Multicultural Scholars | 1,239 | | - | | - | | - | | - | |
| 1890 Institution Capacity Building Grants | 19,336 | | 19,336 | | 19,454 | | -118 | | 19,336 | |
| Hispanic Serving Institutions Education Grants Program | 9,219 | | 9,219 | | 9,275 | | -56 | | 9,219 | |
| Tribal Colleges Education Equity Grants Program | 3,335 | | 3,335 | | 3,355 | | -20 | | 3,335 | |
| Secondary/2-Year Post Secondary | 981 | | 900 | | 906 | | -906 | | - | |
| Veterinary Medical Services Act | 4,790 | | 4,790 | | 4,819 | | -29 | | 4,790 | |
| Alaska Native-serving and Native Hawaiian-Serving Institutions | 3,194 | | 3,194 | | 3,214 | | -20 | | 3,194 | |
| Grants for Insular Areas | - | | - | | - | | +1,650 | | 1,650 | |
| Resident Instruction Grants for Insular Areas | 898 | | 900 | | 906 | | -906 | | - | b/ |
| Distance Education Grants for Insular Areas | 749 | | 750 | | 755 | | -755 | | - | b/ |
| Total Higher Education Grants | 53,235 | | 51,424 | | 51,739 | | -10,215 | | 41,524 | |
| Subtotal Appropriation | 698,740 | | 705,599 | | 709,917 | | +91,223 | | 801,140 | |
| Endowment Funds | | | | | | | | | | |
| Native American Institutions Endowment Fund | (11,880) | | (11,880) | | (11,880) | | - | | (11,880) | |
| Native American Institutions Endowment Interest Earned | 4,307 | | 4,722 | | 5,206 | c/ | +131 | | 5,337 | |
| Hispanic Serving Agricultural Colleges and Universities | - | | - | | - | | - | | (10,000) | |
| Total Endowment Fund | 4,307 | | 4,722 | | 5,206 | | +131 | | 5,337 | |
| Total Adjusted Appropriation | 703,047 | | 710,321 | | 715,123 | | +91,354 | | 806,477 | |
| Rescissions and Transfers (Net) | 1,400 | | - | | - | | - | | - | |
| Total Appropriation | 704,447 | | 710,321 | | 715,123 | | +91,354 | | 806,477 | |
| Rescission | -1,400 | | - | | - | | - | | - | |
| Transfer In (Congressional Relations) | 69 | | 59 | | | | | | | |
| Balance Available, Start of Year | 228,295 | | 178,933 | | 197,606 | | -197,606 | | - | |
| Recoveries, Other (Net) | 18,911 | | 28,735 | | - | | - | | - | |
| Total Available | 950,322 | | 918,048 | | 912,729 | | -106,252 | | 806,477 | |
| Lapsing Balances | -1,538 | | -229 | | - | | - | | - | |
| Balance Available, End of Year | -178,933 | | -197,767 | | - | | - | | - | |
| Total Obligations | 769,851 | 234 | 720,052 | 242 | 912,729 | 245 | -106,252 | | 806,477 | 254 |

a/ This program consolidates Research and Education Activities and Extension Activities Sustainable Agriculture Programs
b/ These programs are consolidated under Research and Education Activities, Grants for Insular Areas Program.
c/ Reflects actual FY 2012 interest earned amount. FY 2014 Budget includes the estimate of $4,751,000.

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE
RESEARCH AND EDUCATION

Project Statement
Obligations Detail and Staff Years (SY)
(Dollars in Thousands)

| | 2011 Actual | | 2012 Actual | | 2013 Estimate | | Inc. or Dec. | | 2014 Estimate | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Project | Amount | SY | Amount | SY | Amount | SY | Amount | SY | Amount | SY | |
| Discretionary Obligations: | | | | | | | | | | | |
| Hatch Act | $234,796 | | $222,570 | | $237,780 | | -1,446 | | $236,334 | | |
| Cooperative Forestry Research Program | 32,934 | | 32,934 | | 33,136 | | -202 | | 32,934 | | |
| Payments to 1890 Colleges and Tuskegee University | 50,898 | | 50,898 | | 51,209 | | -311 | | 50,898 | | |
| Animal Health and Disease Research, Section 1433 | 2,944 | | 4,000 | | 4,024 | | -4,024 | | - | | |
| Special Research Grants | | | | | | | | | | | |
| Other Special Research Grants | 1,433 | | 2,700 | | 2,716 | | -2,716 | | - | | |
| Global Change, UV-Monitoring | 1,405 | | 1,300 | | 1,308 | | +97 | | 1,405 | | |
| Total Special Research Grants | 2,838 | | 4,000 | | 4,024 | | -2,619 | | 1,405 | | |
| Improved Pest Control | | | | | | | | | | | |
| Expert IPM Decision Supp. System | 156 | | 153 | | 154 | | -154 | | - | | |
| Integrated Pest Management | 2,410 | | 2,362 | | 2,376 | | -2,376 | | - | | |
| Minor Crop Pest Mgmt, IR-4 | 12,156 | | 11,913 | | 11,986 | | -73 | | 11,913 | | |
| Pest Management Alternatives | 1,431 | | 1,402 | | 1,411 | | -1,411 | | - | | |
| Total Improved Pest Control | 16,153 | | 15,830 | | 15,927 | | -4,014 | | 11,913 | | |
| Critical Agricultural Materials Act of 1984 | 61 | | 1,091 | | 2,108 | | -2,108 | | - | | |
| Aquaculture Centers, Section 1475 | 3,920 | | 3,920 | | 3,944 | | -24 | | 3,920 | | |
| Sustainable Agriculture | 14,471 | | 14,471 | | 14,560 | | +8,107 | | 22,667 | | a/ |
| 1994 Research Program | 1,552 | | 1,968 | | 2,356 | | -555 | | 1,801 | | |
| Supplemental and Alternative Crops, Section 1473D | 833 | | 825 | | 830 | | -830 | | - | | |
| Capacity Building for Non-Land Grant Colleges of Agriculture | - | | 4,500 | | 4,528 | | -4,528 | | - | | |
| Agriculture and Food Research Initiative | 321,815 | | 283,593 | | 455,780 | | -72,404 | | 383,376 | | |
| Farm Business Management and Benchmarking Program | 1,497 | | 1,450 | | 1,459 | | -1,459 | | - | | |
| Policy Research | - | | 4,000 | | 4,024 | | -4,024 | | - | | |
| Sun Grant Program | 2,246 | | 2,200 | | 2,213 | | -2,213 | | - | | |
| Joe Skeen Institute for Rangeland Restoration | 981 | | 961 | | 967 | | -967 | | - | | |
| New Era Rural Technology Program | 873 | | - | | - | | - | | - | | |
| Federal Administration (direct appropriation) | | | | | | | | | | | |
| REEIS | 2,699 | | 2,600 | | 2,616 | | -2,616 | | - | | |
| Peer Panels | 396 | | - | | - | | - | | - | | |
| Office of Extramural Programs | 439 | | - | | - | | - | | - | | |
| Pay Costs and FERS | 5,554 | | - | | - | | - | | - | | |
| Grants Management Systems | - | | - | | - | | 7,830 | | 7,830 | | |
| Electronic Grants Administration System | 2,132 | | 2,000 | | 2,012 | | -2,012 | | - | | |
| Other General Administration | - | | 5,900 | | 5,936 | | +602 | | 6,538 | | |
| Total Federal Administration | 11,220 | | 10,500 | | 10,564 | | +3,804 | | 14,368 | | |

| Project | 2011 Actual Amount | SY | 2012 Actual Amount | SY | 2013 Estimate Amount | SY | Inc. or Dec. Amount | SY | 2014 Estimate Amount | SY | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Discretionary Obligations: | | | | | | | | | | | |
| Higher Education: | | | | | | | | | | | |
| Inst. Challenge, Multicultural Scholars, and Graduate Fellowship Grants | - | | 9,784 | | 14,347 | | - | | - | | |
| Graduate Fellowships Grants | 3,851 | | - | | - | | - | | - | | b/ |
| Institution Challenge Grants | 5,643 | | - | | - | | - | | - | | b/ |
| Multicultural Scholars | 1,239 | | - | | - | | - | | - | | b/ |
| 1890 Institution Capacity Building Grants | 19,336 | | 22,147 | | 20,513 | | -1177 | | 19,336 | | |
| Hispanic Serving Institutions Education Grants Program | 9,219 | | 9,219 | | 9,275 | | -56 | | 9,219 | | |
| Tribal Colleges Education Equity Grants Program | 3,335 | | 3,335 | | 3,355 | | -20 | | 3,335 | | |
| Secondary/2-Year Post Secondary | 981 | | 900 | | 906 | | -906 | | - | | c/ |
| Veterinary Medical Services Act | 4,790 | | 5,390 | | 4,819 | | -29 | | 4,790 | | |
| Alaska Native-serving and Native Hawaiian-Serving Institutions | 3,194 | | 3,194 | | 3,214 | | -20 | | 3,194 | | |
| Grants for Insular Areas | - | | - | | - | | +1,650 | | 1,650 | | |
| Resident Instruction Grants for Insular Areas | 898 | | 900 | | 906 | | -906 | | - | | |
| Distance Education Grants for Insular Areas | 749 | | 750 | | 755 | | -755 | | - | | |
| Carryover | 12,277 | | 0 | | - | | - | | - | | |
| Total Higher Education Grants | 65,512 | | 55,619 | | 58,090 | | -16,566 | | 41,524 | | |
| Subtotal | 765,544 | | 715,330 | | 907,523 | | -106,383 | | 801,140 | | |
| Endowment Funds | | | | | | | | | | | |
| Native American Institutions Endowment Fund | (11,880) | | (11,880) | | (11,880) | | - | | (11,880) | | |
| Hispanic Serving Agricultural Colleges and Endowment Fund | - | | | | | | | | | | |
| Native American Institutions Endowment Interest Earned | 4,307 | | 4,722 | | 5,206 | | +131 | | 5,337 | | |
| Hispanic Serving Agricultural Colleges and Universities | - | | - | | - | | - | | (10,000) | | |
| Total Endowment Fund | 4,307 | | 4,722 | | 5,206 | | +131 | | 5,337 | | |
| Total Obligations | 769,851 | | 720,052 | | 912,729 | | -106,252 | | 806,477 | | |
| Lapsing Balance | 1,538 | | 229 | | | | | | | | |
| Balance Available, End of Year | 178,933 | | 197,767 | | - | | - | | - | | |
| | | | - | | - | | - | | - | | |
| Total Available | 950,322 | | 918,048 | | 912,729 | | -106,252 | | 806,477 | | |
| Transfer In (Congressional Relations) | -69 | | -59 | | | | | | | | |
| Recoveries, Other (Net) | -18,911 | | -28,735 | | - | | - | | - | | |
| Rescission | 1,400 | | - | | - | | - | | - | | |
| Balance Available, Start of Year | -228,295 | | -178,933 | | -197,606 | | +197,606 | | - | | |
| Total Appropriation | 704,447 | 234 | 710,321 | 242 | 715,123 | 245 | +91,354 | | 806,477 | 254 | |

a/ Programs on sustainable ag are merged into a single program under the research account; matching program is eliminated.
b/ These programs are consolidated under Research & Education Activities, Grants for Insular Areas Program.
c/ In 2014, this program is merged into a STEM initiative under AFRI.

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Justification of Increases and Decreases

NIFA research, education, and extension activities support all the USDA Research, Education and Economics Mission Area Action Plan goals. Goals include:

- Goal 1. Local and Global Food Supply and Security;
- Goal 2. Responding to Climate and Energy Needs;
- Goal 3. Sustainable Use of Natural Resources;
- Goal 4. Nutrition and Childhood Obesity;
- Goal 5. Food Safety;
- Goal 6. Education and Science Literacy; and
- Goal 7. Rural Prosperity/Rural-Urban Interdependence.

RESEARCH AND EDUCATION ACTIVITIES

1. An increase of $117,287,000 for Agriculture and Food Research Initiative (AFRI) ($266,089,000 available in 2013) as follows:

   The requested funding is to support and enhance AFRI's investment in basic and applied research to advance knowledge in the food and agricultural sciences and to develop solutions to challenges in agriculture, food production, biomass production, food safety, nutrition and childhood obesity, and sustainable natural resources, including water and land use. Agriculturally-relevant discovery research will provide the foundation upon which current and future solutions are built and will sustain the disciplines needed to ensure that the agricultural sector of the economy continues to remain vibrant and successful over time. This funding is expected to help ensure American global preeminence in a wide array of agricultural and related disciplines. This is in keeping with the President's long-term goal and guidance from the Office of Management and Budget (OMB) and Office of Science and Technology Policy (OSTP) to increase the investment in research and development through transformational solutions to the nation's practical challenges and to create jobs and promote local economies.

   AFRI supports congressionally-established priority areas in: 1) Plant health and production and plant products, which will support research in areas such as production agriculture, crop improvement through use of genomics, genetics, breeding, biochemistry, and physiology, manage pests through advances in entomology, pathology, weed biology, and adaptation to climate variability; 2) Animal health and production and animal products, which will support work in areas such as livestock production, animal improvement through use of genomics, genetics, breeding, reproduction, animal nutrition, and physiology, improved nutrient and manure management, promote animal well-being and disease-related specialties such as immunology and virology, and adaptation to climate variability; 3) Food safety, nutrition, and health, which will support work in areas such as nutrition and obesity, microbiology, food science and engineering; 4) Renewable energy, natural resources, and environment, which will support work in areas such as soil science, hydrology, water quality and quantity, air quality, forestry, climate variability, and ecology; 5) Agriculture systems and technology, which will support work in areas such as precision agriculture, engineering, nanotechnology, bioproducts, biomaterials, and bioprocessing; and 6) Agriculture economics and rural communities, which will support work in areas such as economics, rural sociology, family sciences, youth development, and geography.

   The 2008 Farm Bill provides broad authority to the AFRI program to support single-function grants for research, education, or extension, as well as grants to integrate these functions. It also allows for support of integrated research, extension, and education projects pursuant to Section 406 of the Agricultural Research, Extension, and Education Reform Act of 1998. This very broad authority allows for maximum flexibility in supporting a wide range of activities, and makes possible the consolidation of small programs into AFRI without compromising programmatic functions, goals or impacts.

The NIFA 2014 budget proposes to increase the AFRI program by $117,287,000, which includes:

- A new food, agricultural, natural resources, and human sciences education and literacy initiative;
- A new Critical Agricultural Research and Extension (CARE) Competition as part of Foundational Program;
- A new challenge area program focused on addressing critical water and water resources problem;
- Continued support for high priority areas including production agriculture, adaptation of crop and livestock agriculture to climate variability, food security, sustainable bioenergy, nutrition and health, and food safety; and
- Fostering inter-agency collaborations to leverage greater investment in agriculturally-relevant areas of science, and attract new communities of scientists to address challenging agricultural issues.

Outcomes

For each of the challenge areas described below, funding will support new grants as well as ongoing work initiated in 2010, 2011, 2012, and 2013. The challenge area programs were designed to support discrete programmatic elements each year. Results from 2010, 2011, 2012, and 2013 projects, when combined with results from work to be initiated in 2014, will allow for the fuller achievement of program goals in support of OMB, OSTP, USDA, and Congressional priorities. Flexible use of program dollars across fiscal years allows the program to maximize impact while ensuring rigorous oversight of ongoing projects. Therefore, sustained base funding is necessary to complete work initiated in earlier years, while increases are necessary to address the major new issues of each problem area.

AGRICULTURAL AND FOOD PRODUCTION AND SECURITY: Funding will support ongoing research, education, and extension focused on sustainable plant and animal production systems, including: improving feed efficiency of agriculturally relevant animals; utilizing genomic approaches to protect animals and plants from disease and extending knowledge to producers to enhance prevention and control of disease; enhancing reproductive fertility in food animals; minimizing crop losses from plant pathogens and weeds; management of insect pests; and enhancing food systems to provide increased productivity and profitability for producers. NIFA will fund targeted work addressing the problems of U.S. agriculture, creating mutual benefits domestically and abroad, and allowing for new opportunities for interdepartmental initiatives as appropriate. This is a top priority of the President and supports the Department's goal of helping America promote sustainable agricultural production and biotechnology exports as our nation works to create jobs and enhance local economies in the United States while increasing global food security. This funding will continue to improve understanding of existing genomic information and classical breeding to develop new and improved animal breeds and crop cultivars for increased food production and quality. Funding will also support new grants for research, education and extension to address detection, diagnostics, prevention, and potential impacts of new and emerging weeds, diseases, and arthropods in crop and livestock production systems.

AGRICULTURAL PRODUCTION AND CLIMATE VARIABILITY: Funding in this area will support ongoing research, education, and extension activities on adaptive management and mitigation potentials of agricultural and natural resource systems to address climate variables such as precipitation and temperature, and their impacts as a result of violent weather extremes, floods, or persistent droughts. This includes: classical breeding, germplasm phenotyping, and genomics work to support the development of new plant varieties and animal breeds adapted to changing climate conditions; and the development of new cropping, forest, and livestock management systems that are responsive to climatic challenges including limits on irrigation water supplies, invasive species, forest fires, and weather extremes. Funding will support the adaptation of major agriculture and forestry production systems to climate variables and to mitigate greenhouse gases in the atmosphere. Dramatic climate effects during 2011 and 2012, including significant droughts and floods in major agricultural and forested regions, made it clear that USDA needs to continue to extend scientific knowledge through advanced research, extension, and education. These efforts will assist farmers, ranchers, forest owners, and rural communities in identifying new management approaches and business practices that should be made so that agriculture production can be sustainable and profitable in the face of variable climates. Novel approaches to science-based education will enhance the development

of new agricultural professionals addressing climate change. Research related to climate variability and water resource issues would be addressed through a new challenge area that focuses on water, described below.

WATER AND WATER RESOURCES: NIFA intends to initiate a new challenge area within AFRI in FY 2014 to address water and water resources issues. Continued significant variations from the historical rate of water supply and availability are projected to have major impacts on agricultural, forest, and range production systems. This new program area within AFRI will be coordinated with and leverage efforts in the Agricultural Production and Climate Variability and Sustainable Bioenergy challenge areas, and help solve critical water resource problems in rural and agricultural watersheds across the United States. The program will focus on developing solutions for water management that link food, water, climate change, energy, and environmental issues. Funding will be used to develop management practices, technologies, and tools for farmers, ranchers, forest owners, and citizens to improve water resource quantity and quality. NIFA's approach will link social, economic, and behavioral sciences with traditional biophysical sciences and engineering to address watershed or aquifer scale problems. NIFA has identified three critical topics that warrant immediate, comprehensive, and coordinated efforts in research, education, and extension to combat the growing environmental challenges posed by current water resource management. These three topics are: 1) Ensuring agricultural water security focused on surface water and groundwater needed to produce a wide array of agricultural goods and services now and into the future; 2) Improving nutrient management in agricultural landscapes focused on nitrogen and phosphorous; and 3) Reducing impacts of chemicals of emerging concern and the presence and movement of environmental pathogens at the landscape. Support for a partnership program with the National Science Foundation to advance scientific work concerning water climate change, and sustainability will be continued under the Water and Water Resources area.

SUSTAINABLE BIOENERGY: Funding in this area will advance ongoing research, education, and extension in support of the Administration's priority to have "a comprehensive plan to invest in alternative and renewable energy." Meeting the Congressional mandate to produce 36 billion gallons of biofuels by 2022 and the President's goal of 60 billion gallons by 2030 requires a substantial investment in the sustainable production of high-quality, cost-effective feedstocks for biofuel production. This priority supports the Department's goals of assisting rural communities to create wealth so they are self-sustaining, repopulating, and economically thriving while helping America promote sustainable agricultural production and biotechnology exports as America works to increase food security. Funding will support five regional projects with activities in 22 states involving 32 universities plus nine Federal and eight industrial partners. These regional projects link research for sustainable biomass production, logistics of handling feedstocks for biofuels, and education programs to create the needed skilled workforce. Funding also will go to ongoing targeted research on enhanced value co-products; crop protection; land-use changes resulting from feedstock production and conversion; implications of the development of bioenergy delivery systems on water; and identification of socioeconomic impacts of biofuels in rural communities in order to enhance sustainable rural economies.

NUTRITION AND HEALTH: Obesity is the number one health problem in America. Funding will support ongoing research, education, and extension focused on children and adolescents ages 2-19 years old. Funded research will identify and generate new knowledge of the behavioral social, cultural, and/or environmental factors, including the food environment, that influence childhood obesity and will be used to develop and implement effective family, peer, community, and/or school-based interventions for preventing overweight and obesity and promoting healthy behaviors in children and adolescents. Programs will continue to support research, education, and extension efforts to develop and increase consumption of healthy foods that are low in fats, sugars, and salt, and high in nutrients. Funding also will support new grants to: 1) further develop and extend approaches to prevent childhood obesity and obesity-related diseases; 2) improve knowledge with a strong emphasis on health literacy; 3) identify individual patterns of behavior in children and adolescents and how these individuals respond to others, the environment, and policy; and 4) address the need for transdisciplinary education in nutrition to include psychology, family studies, child and youth development, kinesiology, food science, and healthy food preparation. Additionally, research will be funded to support projects designed to study the function, efficacy, and human requirements of

nutrients which nutritional scientists have very limited data. Data will be generated to obtain baseline information so to better inform applied research and integrated projects.

FOOD SAFETY: Funding will support ongoing research, education, and extension to improve the safety of the U.S. food supply through new and improved rapid detection methods, pre- and post-harvest epidemiological studies, and improved food harvesting and processing technologies. This challenge area supports critical environmental and ecological research to improve our understanding of disease-causing microorganisms, antibiotic resistance, food allergies, and naturally occurring contaminants in meats, poultry, seafood, and fresh fruits and vegetables. This priority supports the Department's goal of ensuring that everyone in America has access to safe, nutritious, and balanced meals. Funding will continue to focus on minimizing antibiotic resistance transmission through the food chain, as well as minimizing microbial food safety hazards of fresh and fresh-cut fruits and vegetables. Funding also will support new grants to: 1) advance investigator-driven integrated research to solve complex food safety challenges in plant and animal food systems; 2) amplify applied research that advances education and outreach activities to traditional and non-traditional food safety audiences; 3) expand and improve strategies for reducing antimicrobial resistance, enhance safety of fresh and fresh-cut fruits and vegetables, and improve processing technologies for enhancing food safety; and 4) integrated nutrition and food safety efforts to create a healthier food supply.

FOUNDATIONAL SCIENCE: Funding will allow substantive research investments in each of six AFRI's congressionally-established priority areas listed above. This budget also proposes to initiate the Critical Agricultural Research and Extension (CARE) Competition as a part of the AFRI Foundational Program. Funding will be used to support projects that address critical and emerging needs. Grants will be modest, with funding of up to $50,000 per year for a maximum of three years.

The AFRI-CARE Competition will focus on short-term issues important to agricultural production in response to stakeholder concerns that agricultural production research is being neglected. More than half of the comments received in the recent AFRI listening sessions were directly attributable to unmet needs in agricultural production. In response to this concern, NIFA proposes that this effort be an integrated research, education, and extension approach that will prioritize funding for high quality plant and animal production and protection. The program will emphasize achieving results that can be applied by the producer as quickly as possible following project completion. To assure stakeholder needs are being met, NIFA proposes requiring producers and/or producer group engagement to set priorities and to ensure that funded projects provide relevant solutions to their needs. These projects may be either extension-led or research-led. Projects will focus on animal production; crop production; crop and animal product quality; and/or crop and livestock health management. Strict focus on a short to medium-term application of results is an important difference from grants made under other parts of the AFRI Foundational program or the challenge area programs.

Expected outcomes from projects supported through the AFRI-CARE Competition will include rapid answers to critical issues and/or support of preliminary work needed to facilitate long term research outcomes for sustained agricultural productivity and profitability. AFRI-CARE projects will be highly coordinated between their research and extension components and both functions will be implemented from project initiation to completion. The needs of all audiences will be addressed as these grants will focus on critical problems faced by operations of all sizes, including small producers and those implementing innovative production methods

Also in response to overwhelming stakeholder input, this budget proposes to increase the proportion of AFRI funds allocated to the Foundational Program to 38 percent, which is an increase of 8 percent over FY 2013. The intent is to increase the proportion in small increments over the next three years to enhance the Foundational Programs. A portion of the funding in the Foundational Programs will be provided to support new efforts in bioeconomy research focused on bioproducts, biomaterials, and bioprocessing.

FOOD, AGRICULTURAL, NATURAL RESOURCES, AND HUMAN SCIENCES EDUCATION AND LITERACY INITIATIVE: This budget proposes a new initiative from the perspective of enhancing

science, agriculture, food, and environmental education and literacy in schools and colleges across America that offer education in the food, agricultural, natural resources and human sciences disciplines. This initiative supports NIFA's strategic education and literacy framework and combines funds traditionally used to support the NIFA Fellows program to create a new initiative called "food, agricultural, natural resources, and human sciences education and literacy initiative". This initiative is proposed to synergize efforts from preschool through graduate and post-graduate education, i.e., K-20. The overall goal of this initiative is to ensure that the food and agriculture education pipeline is enhanced by developing a vibrant and diverse workforce that reflects the nation's demographics and contribute to the national food and agricultural system through programs that focus on science-based learning, engagement, workforce development, and professional careers in agriculture. NIFA's education framework will enhance the ability of the agency to focus on a more coordinated and synergistic approach in developing, maintaining, and enhancing the agriculture-related career pipeline. This is in alignment with the recommendations made in the December 2012 PCAST "Report to the President on Agricultural Preparedness and the Agriculture Research Enterprise."

Funding will strengthen and enhance AFRI's support of predoctoral and postdoctoral education and research training in priority program areas including sustainable crop and livestock production, agricultural socio-economics and agribusiness, forestry and natural resources, human sciences, sustainable bioenergy production, climate variability and change, food safety, food security, and the prevention of childhood obesity. Awards will be made to individuals based upon their qualifications and interest in pursuing research careers in areas consistent with NIFA priorities and in emerging frontiers in agriculture that require multi- and interdisciplinary approaches.

Funding also will advance the development of the agricultural-related science learning and engagement activities focused on the K-20 academic pipeline by supporting projects that include holistic approaches to agricultural sciences teaching and learning, leadership, encourage professional development of educators, and increase the institutional capacity for training of workforce to produce the innovations, technology, and products for the future. It also will strengthen the activities that support agricultural sciences-related workforce and careers, through support of students in the form of scholarships, fellowships and traineeships. Support at the undergraduate level, including 2-year community colleges, and continued support at the graduate and postdoctoral levels is particularly important in fostering and ensuring the pipeline for the next generation of scientists and leaders in the food, agricultural, natural resources, and human sciences sector. The projects will particularly promote training and scholarship support for undergraduate students from underrepresented and underserved groups and graduate fellowships for master's and doctoral students in the disciplines considered to be in shortage in the food, agricultural, natural resources, and human sciences fields and will complement research areas traditionally supported by the NIFA Fellows program. This initiative will strongly encourage the participation of individuals from groups that are underrepresented on the basis of race and ethnicity, gender, disability, geographical location, and socio-economic backgrounds.

INTERAGENCY COLLABORATIONS: NIFA supports research, education, and extension that focus on meeting society's grand challenges. One of the ways NIFA achieves this is by leveraging resources and expertise by partnering with other Federal agencies, including the National Science Foundation, Department of Energy, and National Institutes of Health. NIFA supports inter-agency programs that show strong alignment with Farm Bill priorities, the Secretary's goals, and the REE Mission Area Action Plan. These programs are administered through both AFRI Foundational and Challenge area programs. Partnering, which is congruent with the vision called upon recently by PCAST, gives broader visibility to agricultural issues and problems, and engages communities of scientists that might not otherwise work in USDA problem areas.

Program activities support all REE Action Plan Goals.

2. A decrease of $1,446,000 for Hatch Act ($237,780,000 available in 2013) as follows:

Outcomes

Base funding under this program supports research on all aspects of agriculture, including: plant and animal production, protection, and health; soil and water conservation and use; processing, distribution, safety, marketing, and utilization of food and agricultural products; forestry, including range management and range products; multiple use of forest rangelands, and urban forestry; aquaculture; home economics and family life; human nutrition; rural and community development; sustainable agriculture; molecular biology; and biotechnology. Program activities support all the REE Action Plan Goals. Funding for the program is maintained at the enacted FY 2012 level.

3. A decrease of $202,000 for McIntire-Stennis Cooperative Forestry ($33,136,000 available in 2013) as follows:

Outcomes

This program provides base funding to support research related to the use of the Nation's forest resources. Funding will assist in carrying out a program of state forestry research and developing a trained pool of forest scientists capable of conducting needed forestry research, which should include: 1) ecological restoration; 2) catastrophe management; 3) valuing and trading ecological services; 4) energy conservation, biomass energy and bio-based materials development; 5) forest fragmentation: 6) carbon sequestration and climate change; and 7) ways of fostering healthy forests and a globally competitive forest resources sector. Program activities support REE Action Plan Goal 3. Funding for the program is maintained at the enacted FY 2012 level.

4. A decrease of $311,000 for Evans-Allen ($51,209,000 available in 2013) as follows:

Outcomes

This program provides base funding for agricultural research activities at 1890 Land-Grant Institutions (1890 Institutions). The agricultural research programs at the 1890 Institutions are designed to generate new knowledge which will assist rural underprivileged people and small farmers to obtain a higher standard of living. Therefore, there is a high concentration of research effort in the areas of small farms, sustainable agriculture, rural economic development, human nutrition, rural health, and youth and elderly. Program activities support all REE Action Plan Goals. Funding for the program is maintained at the enacted FY 2012 level.

5. A net decrease of $3,917,000 for Special Grants ($17,235,000 available in 2013) as follows:

   a. A decrease of $73,000 for Minor Crop Pest Management, IR-4 ($11,986,000 available in 2013) as follows:

      The requested funding will support and enhance the capacity of the IR-4 program to assist growers in obtaining registrations of pesticides on specialty food crops (fruits, vegetables, nuts, herbs/spices) and minor uses on major crops, particularly in light of continued loss of effective pesticides and methods of pest control. The program will invest in efforts to register pesticides that are lower risk but effective and economical. Among the areas for program growth are biopesticides and organic, public health, and global initiatives to harmonize Maximum Residue Levels. The impact of not funding this program would be a decline and/or loss of effective pest management materials on specialty crops. This program provides an important component in integrated pest management strategies to control economically important pests.

Outcomes

A significant performance measurement for the program is the number of pesticides registered by EPA for use by specialty crop growers. The crop grouping approach to registering pesticides on similar crops has also been successful and adopted by EPA to expedite registration. Growers, food processors and the general public benefit from IR-4 activities. According to Michigan State University's Center for Economic Analysis, the IR-4 Project is anticipated to support research and industry sales sufficient to support 104,650 U. S. jobs and raises annual gross domestic product by more than $7.2 billion. NIFA's efforts result in positive changes in the knowledge about various issues such as the food program, ornamental horticulture program, biopesticide and organic support program, public health pesticide program, and the global initiative to harmonize Maximum Residue Levels. Advances in these areas are possible because of partners in regulatory agencies, researchers, the IR-4 Project Management Committee, coordinators, study directors, administrators, and our universities. Program activities support REE Action Plan Goal 1. Funding for the program is maintained at the enacted FY 2012 level.

b. An increase of $97,000 for Agroclimatology (formerly Global Change, UV-B Monitoring) ($1,308,000 available in 2013) as follows:

The climatological network includes 38 climatological sites: 35 in the U.S., two in Canada, and one in New Zealand. The program supports action items for informing decisions and modeling efforts as outlined in the U.S. Global Change Research Program strategic plan.

Outcomes

Base funding will support the climatological network. Increased funding will continue to provide support for these activities. This work provides the only source of data directly tied to agricultural production systems. Data is used to support climate forecasting models. Program activities support REE Action Plan Goal 2.

c. A decrease of $3,941,000 to consolidate funding for Integrated Pest Management Programs ($3,941,000 available in 2013) as follows:

| | FY 2013 ( $000 ) | Increase or Decrease ( $000 ) | FY 2014 ( $000 ) |
|---|---|---|---|
| Expert IPM Decision Support System | $154 | -$154 | 0 |
| Integrated Pest Management & Biological Control | 2,376 | -2,376 | 0 |
| Pest Management Alternatives | 1,411 | -1,411 | 0 |
| Total | 3,941 | -3,941 | 0 |

A decrease is proposed to direct funding to support a new consolidated program on pest management activities under the Integrated Activities Account. The new program, called Crop Protection/Pest Management, will provide a more comprehensive approach to developing alternatives for crop pest management. The consolidation will enhance NIFA's ability to support research, education, and extension activities needed to ensure global food security and respond to other major societal challenges.

6. A decrease of $24,000 for Aquaculture Centers ($3,944,000 available in 2013) as follows:

Outcomes

Base funding will support aquaculture research, development, demonstration, and extension education to enhance viable and profitable U.S. aquaculture production to benefit consumers, producers, service

industries, and the American economy. Program activities support REE Action Plan Goal 1. Funding for the program is maintained at the enacted FY 2012 level.

7. An increase of $8,107,000 for Sustainable Agriculture Research and Education (SARE) Program ($14,560,000 available in 2013) as follows:

The SARE program currently receives funding under both a research and education program and an extension program. The specific activities funded under research and education are authorized in 7 U.S.C. 5811, and specific activities funded under extension are authorized under 7 U.S.C. 5831 and 5832 in accordance with the general authorities in 7 U.S.C. 343(d). The requested change consolidates funding for these two programs into one unified program. This allows for enhanced efficiency in managing the program.

Outcomes

Base funding will be used to increase knowledge of and help farmers and ranchers to adopt practices that are profitable, environmentally sound, and good to communities. Grants awarded by the four regional administrative councils will support projects that address crop and livestock production and marketing, stewardship of soil and other natural resources, economics and quality of life. Increased funding will support development of technical guides and handbooks and education and training for Cooperative Extension System agents, and other agricultural professionals in the university system, the private sector, or other government agencies, involved in the education and transfer of technical information concerning sustainable agriculture. Program activities support REE Action Plan Goal 1.

8. A decrease of $11,000 for 1994 Research Grants ($1,812,000 available in 2013) as follows:

Outcomes

This program provides base funding for agricultural research activities at 1994 Land-Grant Institutions (1994 Institutions) to conduct agricultural research that addresses high priority concerns of tribal, national or multi-State priorities. Program focus include: building scientific capacity at 1994 Institutions through collaborative research with 1890 and 1862 Land Grant Institutions; addressing the agricultural, health and environmental concerns of reservation communities through scientific inquiry; and helping American Indians with better prospects for employment and educational achievement by engaging them in laboratory and field research in the agricultural sciences. In addition, funding may be used to conduct investigations to gain insights on the optimal ways to teach and mentor American Indian students as they pursue their goals of research excellence in the sciences. Program activities support all REE Action Plan Goals. Funding for the program is maintained at the enacted FY 2012 level.

9. A net increase of $3,804,000 to Federal Administration ($10,564,000 available in 2013) as follows:

   a. An increase of $602,000 for Other Federal Administration ($5,936,000 available in 2013) as follows:

NIFA's programs are managed at the national level by a staff of about 393 at the end of FY 2012 and with a number of temporary and intermittent employees. Grants management includes developing program regulations, establishing broad program goals, reviewing proposals, preparing grant documents, post-award review of progress, and similar activities necessary to achieve program goals. Between 0 and 4 percent of funds provided for programs may be used to support administration of the programs as established by law.

Outcomes

Funding is provided to support services in connection with the planning and coordination of all research and education programs administered by NIFA. Base funding will provide partial support of pay costs, peer panel, grants administration costs, and grants management systems. NIFA's budget

consists of numerous programs that award thousands of individual grants to colleges and universities and other eligible recipients. Increased funding will continue to support these activities. The pay cost increase is $235,000 which includes $42,000 for annualization of the fiscal year 2013 pay raise and $193,000 for the anticipated fiscal year 2014 pay raise. Program activities support all REE Action Plan Goals.

b. An increase of $7,830,000 for Grants Management Systems ($0 available in 2013) as follows:

In 2013, $4,628,000 under individual grants management systems supported these activities.

NIFA is tasked with reducing the administrative burden of grants processing through modern information technology, providing easy access to all NIFA grant related programmatic and financial information, and providing a reliable, stable, and highly accessible information technology infrastructure. This effort includes support for IT activities that collect, consolidate, and store data on the research, education, and extension programs, projects, and activities of USDA and its partner institutions. This effort integrates the query and reporting capabilities of NIFA business systems into one cohesive system. Increased funding will continue to support the IT modernization of NIFA's grant applications systems and processes.

Outcomes

Base funding supports the maintenance and operational support for NIFA grant applications systems and processes. Base funding includes support for such administrative streamlining activities as virtual panels, improved access to research data, modernization of the financial and budget reconciliation process. Increased funding will continue supporting these activities, and better enable NIFA to capture how its funded programs are leading food and agricultural science.

c. A decrease of $4,628,000 to consolidate Research, Education, and Economics Information System and Electronic Government ($4,628,000 available in 2013) as follows:

| | FY 2013 ( $000 ) | Increase or Decrease ( $000 ) | FY 2014 ( $000 ) |
|---|---|---|---|
| Research, Education, and Economic Information System | $2,616 | -$2,616 | 0 |
| Electronic Government | 2,012 | -2,012 | 0 |
| Total | 4,628 | -4,628 | 0 |

A decrease is proposed to direct funding to support a new program, called Grants Management Systems, to consolidate activities for grants management systems. The consolidation will enhance NIFA's efficiencies in management of the program.

10. A decrease if $22,029,000 to eliminate funding for research programs ($22,029,000 available in 2013) as follows:

| | FY 2013 ( $000 ) | Increase or Decrease ( $000 ) | FY 2014 ( $000 ) |
|---|---|---|---|
| Animal Health and Disease, Section 1433 | $4,204 | -$4,204 | 0 |
| Potato Research | 1,358 | -1,358 | 0 |
| Forest Product Research | 1,358 | -1,358 | 0 |
| Critical Agricultural Materials | 1,088 | -1,088 | 0 |
| Supplemental and Alternative Crops | 830 | -830 | 0 |
| Joe Skeen Institute for Rangeland Restoration | 967 | -967 | 0 |
| Farm Business Management and Benchmarking Program | 1,459 | -1,459 | 0 |

| | | | |
|---|---|---|---|
| Sun Grant Program | 2,213 | -2,213 | 0 |
| Competitive Grants for Policy Research | 4,024 | -4,024 | 0 |
| Capacity Building of Non-Land Grant Colleges | 4,528 | -4,528 | 0 |
| Total | $22,029 | -$22,029 | 0 |

A decrease is proposed to direct funding to higher priority activities, and is consistent with the Administration's policy to redirect available resources, as appropriate, from lower-priority areas to other science and technology activities. Alternative funding from other NIFA programs, State and local governments, and private sources can be used to support aspects of the program deemed to be of priority at State and/or local levels.

11. A net decrease of $10,186,000 for Higher Education programs ($46,920,000 available in 2013) as follows:

a. A decrease of $9,961,000 to transfer from USDA to National Science Foundation and Department of Education ($9,961,000 available in 2013) as follows:

| | FY 2013 ( $000 ) | Increase or Decrease ( $000 ) | FY 2014 ( $000 ) |
|---|---|---|---|
| Institute Challenge, Multicultural Scholars, and Graduate Fellowship Grants | $9,055 | -$9,055 | 0 |
| Secondary/2-year Post Secondary Education Program | 906 | -906 | 0 |
| Total | 9,961 | -9,961 | 0 |

Students today need a strong education in science, technology, engineering, and mathematics (STEM) in order to thrive in the 21st Century economy and drive our Nation’s ability to innovate. To facilitate a cohesive national strategy, the Administration is proposing a comprehensive reorganization of STEM education programs to increase the impact of Federal investments in high-priority areas including K-12 instruction; undergraduate education; and graduate fellowships. The reorganization involves consolidating or restructuring 90 programs across 11 agencies and improving the delivery, impact, and visibility of STEM efforts. The Administration will ensure that all science mission agencies have input into the development and implementation of these initiatives so that they align with agency goals while improving STEM education at all levels in a streamlined way.

Therefore, a decrease is proposed for the transfer of Institute Challenge, Multicultural Scholars, and Graduate Fellowship Grants and the Secondary/2-year Post Secondary Education Program to the National Science Foundation and Department of Education as part of the Presidential Initiative to improve the delivery of STEM programs. Therefore, funding for these programs will no longer be included in the USDA budget.

b. A decrease of $118,000 for 1890 Institution Capacity Building Grants ($19,454,000 available in 2013) as follows:

Outcomes

Base funding will be used to stimulate the development of high quality teaching, research, and extension programs at the designated 1890 Land-Grant Institutions to build their capabilities as full partners in the mission of the Department to provide more, and better trained, professionals for careers in the food and agricultural sciences. The program is designed to strengthen institutional teaching, research, and extension capacities through cooperative programs with Federal and non-Federal entities. Efforts will include curriculum, faculty, scientific instrumentation, instruction delivery systems, student experimental learning, student recruitment and retention, studies and experimentation, centralized research support systems, and technology delivery systems, to respond to identified State, regional, national, or international educational needs in the food and

agricultural sciences. Program activities support REE Action Plan Goal 6. Funding for the program is maintained at the enacted FY 2012 level.

c. A decrease of $56,000 for Hispanic Serving Institutions (HSI) Education Grants Program ($9,275,000 available in 2013) as follows:

Outcomes

Base funding will support USDA efforts to better serve Hispanic Americans and to prepare them for careers in agriscience and agribusiness. Supported activities will expand and strengthen academic programs in the food and agricultural sciences at Hispanic-serving colleges and universities, including two-year HSI's. Program activities support REE Action Plan Goal 6. Funding for the program is maintained at the enacted FY 2012 level.

d. A decrease of $20,000 for Tribal Colleges Education Equity Grants Program ($3,355,000 available in 2013) as follows:

Outcomes

This program provides base funding to eligible 1994 Tribal Colleges to support teaching programs in the food and agricultural sciences in the targeted need areas of: 1) curricula design and instructional materials development; 2) faculty development and preparation for teaching; 3) instruction delivery systems; 4) student experimental learning; 5) equipment and instrumentation for teaching; and 6) student recruitment and retention. Program activities support REE Action Plan Goal 6. Funding for the program is maintained at the enacted FY 2012 level.

e. A decrease of $20,000 for Alaska Native-serving and Native Hawaiian-serving Institutions ($3,214,000 available in 2013) as follows:

Outcomes

This program is aimed at recruiting, supporting and educating minority scientists and professionals, and advancing the educational capacity of Native-serving institutions. Base funds will be used to support projects in the targeted areas of: 1) enhancing educational equity for under-represented students; 2) strengthening educational capacities, including libraries, curriculum, faculty, scientific instrumentation, instruction delivery systems, and student recruitment and retention; 3) attraction and retention of undergraduate and graduate students; and 4) cooperative initiatives to maximize the development of resources such as faculty, facilities and equipment to improve teaching programs. Program activities support REE Action Plan Goal 6. Funding for the program is maintained at the enacted FY 2012 level.

f. A decrease of $11,000 to consolidate Resident Instruction Grants for Insular Areas and Distance Education Grants for Insular Areas in a single program ($1,661,000 available in 2013) as follows:

In 2013, $1,661,000 under the individual insular area programs supported these activities as shown below.

In 2014, NIFA proposes to consolidate the Resident Instruction Grants for Insular Areas and Distance Education Grants for Insular Areas programs into a single program to support activities in insular areas of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, the Northern Mariana Islands, Micronesia, the Marshall Islands, or the Republic of Palau. This action streamlines the NIFA budget portfolio and achieves efficiencies in management of the program.

Outcomes

Funding will promote local student enrollment and graduation in the food and agricultural sciences. The funding also will enhance resident instruction, curriculum, and teaching programs in food and agricultural sciences that are located in insular areas. It also will support activities to strengthen the capacity of institutions in insular areas to carry out collaborative distance food and agricultural education programs using digital network technologies. Program activities support REE Action Plan Goal 6.

| | FY 2013 ( $000 ) | Increase or Decrease ( $000 ) | FY 2014 ( $000 ) |
|---|---|---|---|
| Resident Instruction for Grants for Insular Areas | $906 | -$906 | 0 |
| Distance Education Grants for Insular Areas | 755 | -755 | 0 |
| Total | $1,661 | -$1,661 | 0 |

12. An increase of $10,000,000 for the Hispanic-Serving Agricultural Colleges and Universities Endowment Fund ($0 available in 2013) as follows:

Section 7129 of the Food, Conservation, and Energy Act 2008, provides for the establishment of an endowment fund for Hispanic-Serving Agricultural Colleges and Universities (HSACU). The Hispanic/Latino community is the fastest growing sector of the American population.

Outcomes

This investment in the Hispanic-Serving Agricultural Colleges and Universities is needed to ensure the institutions can effectively compete for NIFA competitive grants. This endowment fund for HSACU's will assist in the development of a skilled and marketable student population for employment in the food and agriculture sector from the HSACU. The $10 million will remain at Treasury and be invested in Treasury securities, with the cumulative interest provided to the program. Program activities support REE Action Plan Goal 6.

13. A decrease of $29,000 for Veterinary Medical Services Act ($4,819,000 available in 2013) as follows:

Outcomes

Base funding helps to defray qualifying educational loans of veterinarians in geographical areas that have a shortage of veterinarians; or who are in an area of veterinary practice that the Secretary determines have a shortage of veterinarians, such as food animal medicine, public health, epidemiology, and food safety. Program activities support REE Action Plan Goals 1 and 6. Funding for the program is maintained at the enacted FY 2012 level.

## SMALL BUSINESS INNOVATION RESEARCH PROGRAM

The Small Business Innovation Development Act (SBIR), Public Law 97-219, July 22, 1982, as amended by Public Law 99-443, October 6, 1986, was designed to strengthen the role of small, innovative firms in Federally funded research and development. Under this program, small firms receive at least a fixed minimum percentage of research and development awards made by Federal agencies with sizable research and development budgets. The Small Business Research and Development Enhancement Act of 1992 (Public Law 102-564, October 28, 1991) as amended mandates that 2.6 percent for FY 2012; 2.7 percent for FY 2013 and 2..8 percent for FY 2014 for extramural research and development funds within the Department are set-aside and used to fund the SBIR program.

| Agency | FY 2012 Actual | FY 2013 Budget | FY 2014 Estimate |
|---|---|---|---|
| Agricultural Research Service ..... | $ 811,416 | $ 1,030,709 | $ 801,427 |
| Animal and Plant Health Inspection Service ..... | 24,401 | 24,401 | 23,095 |
| National Institute of Food and Agriculture. | 17,390,021 | 17,084,457 | 20,500,143 |
| Economic Research Service..... | 108,654 | 117,396 | 155,372 |
| Foreign Agricultural Service ……. | 3,959 | 4,459 | 4,624 |
| Forest Service ..... | 1,053,841 | 850,090 | 980,000 |
| National Agricultural Statistics Service ..... | 15,030 | 17,232 | 16,800 |
| Total ..... | $19,407,322 | $19,128,744 | $22,481,461 |

The staff functions of USDA's SBIR program (solicitation, review and evaluation of proposals) have been centralized in NIFA in order to serve the SBIR community most effectively and efficiently. Nine research topic areas have been established:

1. Forests and Related Resources. Research proposals are solicited to develop environmentally sound techniques to increase productivity of forest land and to increase the utilization of materials and resources from forest lands.

2. Plant Production and Protection. Research proposals are solicited that employ either biological or engineering approaches to examine means of enhancing crop production by reducing the impact of destructive agents, developing effective crop systems that are economically and environmentally sound, enhancing the impact of new methods of plant manipulation, and developing new crop
plants and new uses for existing crops.

3. Animal Production and Protection. Research proposals are solicited to find ways to enable producers of food animals to increase production efficiency and to assure a reliable and safe supply of animal protein and other animal products while conserving resources and reducing production costs.

4. Air, Water and Soils. Research proposals are solicited to develop technologies for conserving air, water and soil resources while sustaining agricultural productivity.

5. Food Science and Nutrition. Research proposals are solicited to develop new knowledge and a better understanding of the characteristics of foods and their nutritional impact; to apply new knowledge to improve our foods and diets; and to apply new knowledge to the production of useful new food products, processes, materials, and systems, including the application of nutritional information to consumer foods and food service systems.

6. Rural and Community Development. Research proposals are solicited to develop knowledge and technology that will promote, foster, or improve the well-being of rural Americans.

7. Aquaculture. Research proposals are solicited to develop new technologies to promote the aquaculture production of animal and plant species in both freshwater and marine environments.

8. Biofuels and Biobased Products. Research proposals are solicited to develop new or improved technologies that will lead to increased production of industrial products from agricultural materials.

9. Small and Mid-Size Farms. Research proposals are solicited that will promote and improve the sustainability and profitability of small and mid-sized farms and ranches.

**TABLE 1 - FISCAL YEAR 2012**
**DISTRIBUTION OF FEDERAL PAYMENTS FOR RESEARCH AT STATE AGRIC EXPERIMENT STATIONS & OTHER STATE INSTITUTIONS**

| | HATCH ACT AS AMENDED | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STATE | HATCH FORMULA | REGIONAL RESEARCH | TOTAL | COOP FORESTRY RSH (MS) | 1890 UNIV & TUSK UNIV (EA) | ANIMAL HEALTH & DIS RSCH | SPECIAL AND OTHER GRANTS | COMPETITIVE RESEARCH GRANTS | HIGHER EDUCATION GRANTS | FED ADMIN DIRECT APPROP | TOTAL FEDERAL FUNDS |
| ALABAMA | 3,878,506 | 1,139,052 | 5,017,558 | 1,041,064 | 5,229,374 | 74,386 | 139,810 | 2,071,274 | 3,095,449 | 0 | 16,668,915 |
| ALASKA | 1,057,896 | 184,704 | 1,242,600 | 642,342 | 0 | 0 | 0 | 374,888 | 1,636,325 | 0 | 3,896,155 |
| AMER SAMOA | 876,336 | 28,039 | 904,375 | 44,257 | 0 | 0 | 0 | 0 | 0 | 0 | 948,632 |
| ARIZONA | 1,496,706 | 976,611 | 2,473,317 | 442,980 | | 39,353 | 259,858 | 1,978,353 | 510,160 | 0 | 5,704,021 |
| ARKANSAS | 3,288,043 | 941,304 | 4,229,347 | 921,447 | 2,252,073 | 77,375 | 385,767 | 1,730,772 | 1,782,695 | 0 | 11,379,476 |
| CALIFORNIA | 4,611,322 | 2,109,226 | 6,720,548 | 821,766 | 0 | 238,743 | 4,295,256 | 14,371,890 | 1,727,486 | 0 | 28,175,689 |
| COLORADO | 2,101,066 | 1,295,942 | 3,397,008 | 403,107 | 0 | 300,875 | 1,376,085 | 8,938,674 | 0 | 0 | 14,415,749 |
| CONNECTICUT | 1,575,250 | 637,386 | 2,212,636 | 363,235 | 0 | 24,999 | 161,985 | 2,776,780 | 0 | 0 | 5,539,635 |
| DELAWARE | 1,127,951 | 476,792 | 1,604,743 | 163,874 | 1,225,169 | 15,477 | 0 | 1,958,679 | 981,690 | 0 | 5,949,632 |
| DISTRICT OF COLUMBIA | 748,570 | 137,652 | 886,222 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 886,222 |
| FLORIDA | 2,968,878 | 943,773 | 3,912,651 | 861,638 | 2,078,987 | 57,505 | 2,245,095 | 1,286,314 | 2,819,058 | 0 | 13,261,248 |
| GEORGIA | 4,402,142 | 1,603,404 | 6,005,546 | 1,100,873 | 3,001,892 | 118,758 | 3,232,749 | 6,687,208 | 491,015 | 0 | 20,638,041 |
| GUAM | 918,682 | 158,151 | 1,076,833 | 44,257 | 0 | 0 | 0 | 0 | 0 | 0 | 1,121,090 |
| HAWAII | 1,107,548 | 495,231 | 1,602,779 | 243,618 | 0 | 1,492 | 733,071 | 705,000 | 1,528,746 | 0 | 4,814,706 |
| IDAHO | 1,915,885 | 769,976 | 2,685,861 | 642,342 | 0 | 49,312 | 163,766 | 2,101,916 | 313,944 | 0 | 5,957,141 |
| ILLINOIS | 5,434,451 | 1,361,598 | 6,796,049 | 522,725 | 0 | 54,753 | 20,220 | 5,962,770 | 269,504 | 0 | 13,626,021 |
| INDIANA | 5,152,832 | 1,105,415 | 6,258,247 | 562,597 | 0 | 61,011 | 195,730 | 2,282,790 | 441,000 | 0 | 9,801,375 |
| IOWA | 5,405,348 | 2,191,323 | 7,596,671 | 462,916 | 0 | 141,114 | 1,576,291 | 6,218,723 | 1,161,867 | 0 | 17,157,582 |
| KANSAS | 3,295,620 | 1,016,287 | 4,311,907 | 303,426 | 0 | 105,083 | 464,719 | 3,469,125 | 1,734,944 | 0 | 10,389,204 |
| KENTUCKY | 5,177,240 | 1,315,559 | 6,492,799 | 682,213 | 3,586,600 | 64,409 | 136,138 | 2,081,829 | 1,198,614 | 0 | 14,242,602 |
| LOUISIANA | 2,979,963 | 888,505 | 3,868,468 | 961,321 | 1,996,178 | 44,254 | 0 | 1,349,787 | 1,879,940 | 0 | 10,099,948 |
| MAINE | 1,675,858 | 664,317 | 2,340,175 | 841,703 | 0 | 8,372 | 249,600 | 647,023 | 22,242 | 0 | 4,109,115 |
| MARYLAND | 2,196,546 | 835,878 | 3,032,424 | 383,171 | 1,505,898 | 25,123 | 1,511,749 | 1,665,856 | 1,699,160 | 0 | 9,823,381 |
| MASSACHUSETTS | 1,845,148 | 815,932 | 2,661,080 | 442,980 | 0 | 69,973 | 0 | 1,944,822 | 238,500 | 0 | 5,357,355 |
| MICHIGAN | 5,182,935 | 1,253,943 | 6,436,878 | 941,384 | 0 | 91,998 | 2,343,071 | 7,721,014 | 453,660 | 0 | 17,988,005 |
| MICRONESIA | 947,963 | 0 | 947,963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 947,963 |
| MINNESOTA | 5,107,266 | 1,159,955 | 6,267,221 | 761,958 | 0 | 165,457 | 4,090,424 | 6,708,081 | 706,049 | 0 | 18,699,190 |
| MISSISSIPPI | 3,777,239 | 1,086,120 | 4,863,359 | 1,021,128 | 2,484,459 | 71,251 | 733,072 | 19,330 | 1,385,703 | 0 | 10,578,302 |
| MISSOURI | 5,014,401 | 1,036,245 | 6,050,646 | 702,149 | 3,538,975 | 138,625 | 579,487 | 3,298,001 | 917,702 | 0 | 15,225,585 |
| MONTANA | 1,839,509 | 862,326 | 2,701,835 | 662,278 | 0 | 45,533 | 869,217 | 650,000 | 874,689 | 0 | 5,803,552 |
| NEBRASKA | 3,056,139 | 1,175,917 | 4,232,056 | 323,363 | 0 | 121,650 | 966,166 | 12,016,433 | 215,160 | 0 | 17,874,828 |
| NEVADA | 1,054,390 | 472,145 | 1,526,535 | 124,002 | 0 | 6,132 | 0 | 0 | 0 | 0 | 1,656,669 |
| NEW HAMPSHIRE | 1,351,580 | 477,786 | 1,829,366 | 482,852 | 0 | 3,060 | 0 | 0 | 0 | 0 | 2,315,278 |
| NEW JERSEY | 1,835,570 | 1,496,735 | 3,332,305 | 343,299 | 0 | 13,346 | 3,148,618 | 904,963 | 0 | 0 | 7,742,531 |
| NEW MEXICO | 1,529,356 | 519,473 | 2,048,829 | 303,426 | 0 | 26,818 | 135,000 | 0 | 1,768,036 | 0 | 4,282,109 |
| NEW YORK | 4,797,370 | 2,079,988 | 6,877,358 | 961,320 | 0 | 135,081 | 1,579,498 | 10,400,067 | 1,394,748 | 0 | 21,348,072 |
| NORTH CAROLINA | 6,356,663 | 1,555,179 | 7,911,842 | 1,080,936 | 4,127,678 | 122,115 | 659,211 | 7,049,087 | 2,149,659 | 0 | 23,100,528 |
| NORTH DAKOTA | 2,161,576 | 780,842 | 2,942,418 | 203,746 | 0 | 22,480 | 1,668,271 | 2,105,122 | 537,900 | 0 | 7,479,937 |
| NORTHERN MARIANAS | 867,330 | 0 | 867,330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 867,330 |
| OHIO | 6,217,924 | 1,257,061 | 7,474,985 | 602,469 | 0 | 65,241 | 818,520 | 2,770,266 | 0 | 0 | 11,731,481 |
| OKLAHOMA | 3,229,322 | 772,354 | 4,001,676 | 582,533 | 2,305,151 | 68,719 | 631,891 | 804,530 | 1,030,587 | 0 | 9,425,087 |
| OREGON | 2,479,560 | 1,221,341 | 3,700,901 | 1,061,001 | 0 | 63,491 | 1,332,660 | 3,953,075 | 376,020 | 0 | 10,487,148 |

**TABLE 1 - FISCAL YEAR 2012**
**DISTRIBUTION OF FEDERAL PAYMENTS FOR RESEARCH AT STATE AGRIC EXPERIMENT STATIONS & OTHER STATE INSTITUTIONS**

| STATE | HATCH ACT AS AMENDED | | | COOP | 1890 UNIV | ANIMAL | SPECIAL | COMPETITIVE | HIGHER | FED ADMIN | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | HATCH FORMULA | REGIONAL RESEARCH | TOTAL | FORESTRY RSH (MS) | & TUSK UNIV (EA) | HEALTH & DIS RSCH | AND OTHER GRANTS | RESEARCH GRANTS | EDUCATION GRANTS | DIRECT APPROP | FEDERAL FUNDS |
| PENNSYLVANIA | 5,893,355 | 1,611,804 | 7,505,159 | 722,085 | 0 | 122,443 | 1,564,747 | 15,954,472 | 236,419 | 0 | 26,105,325 |
| PUERTO RICO | 3,392,756 | 956,387 | 4,349,143 | 104,065 | 0 | 7,996 | 0 | 130,000 | 1,991,079 | 0 | 6,582,283 |
| RHODE ISLAND | 1,021,128 | 494,743 | 1,515,871 | 143,938 | 0 | 4,575 | 59,975 | 40,400 | 0 | 0 | 1,764,759 |
| SOUTH CAROLINA | 3,324,357 | 887,000 | 4,211,357 | 821,766 | 2,235,141 | 23,458 | 0 | 921,433 | 1,156,069 | 0 | 9,369,224 |
| SOUTH DAKOTA | 2,318,369 | 787,493 | 3,105,862 | 223,683 | 0 | 47,548 | 592,400 | 1,974,117 | 322,740 | 0 | 6,266,350 |
| TENNESSEE | 4,856,551 | 1,099,696 | 5,956,247 | 781,894 | 3,270,242 | 57,675 | 422,400 | 1,365,174 | 1,841,618 | 0 | 13,695,250 |
| TEXAS | 6,903,400 | 1,564,315 | 8,467,715 | 881,575 | 4,874,894 | 218,949 | 2,715,205 | 9,086,261 | 4,607,834 | 0 | 30,852,433 |
| UTAH | 1,325,129 | 955,030 | 2,280,159 | 243,618 | 0 | 20,637 | 3,203,563 | 1,670,142 | 0 | 0 | 7,418,119 |
| VERMONT | 1,403,550 | 418,939 | 1,822,489 | 502,788 | 0 | 9,531 | 3,144,481 | 75,000 | 200,000 | 0 | 5,754,289 |
| VIRGIN ISLANDS | 893,815 | 153,867 | 1,047,682 | 44,257 | 0 | 0 | 0 | 0 | 717,945 | 0 | 1,809,884 |
| VIRGINIA | 4,144,338 | 1,006,169 | 5,150,507 | 901,511 | 2,787,918 | 52,069 | 300,616 | 6,042,177 | 1,539,847 | 0 | 16,774,645 |
| WASHINGTON | 2,707,392 | 1,543,514 | 4,250,906 | 1,001,192 | 0 | 111,447 | 1,806,491 | 9,488,186 | 548,580 | 0 | 17,206,802 |
| WEST VIRGINIA | 2,536,292 | 696,232 | 3,232,524 | 622,405 | 1,476,423 | 13,279 | 0 | 1,072,003 | 1,291,914 | 0 | 7,708,548 |
| WISCONSIN | 5,130,171 | 1,254,087 | 6,384,258 | 742,022 | 0 | 62,209 | 1,098,050 | 5,317,010 | 734,922 | 0 | 14,338,471 |
| WYOMING | 1,259,223 | 688,013 | 1,947,236 | 283,490 | 0 | 234,000 | 0 | 1,495,733 | 0 | 0 | 3,960,459 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 | 66,282 | 2,141,631 | 141,762 | 0 | 2,349,675 |
| SBIR | 4,534,521 | 1,431,948 | 5,966,469 | 830,595 | 1,283,648 | 99,840 | 1,070,512 | 9,485,662 | 160,876 | 0 | 18,897,602 |
| FEDERAL ADMIN | 5,209,351 | 1,645,058 | 6,854,409 | 988,020 | 1,526,940 | 160,000 | 2,201,560 | 10,578,800 | 2,210,960 | 10,500,000 | 35,020,689 |
| SUBTOTAL | 178,897,578 | 56,493,762 | 235,391,340 | 32,896,600 | 50,787,640 | 3,979,020 | 54,949,277 | 205,842,643 | 53,044,817 | 10,500,000 | 647,391,337 |
| UNOBLIG BAL | 0 | 0 | 0 | 0 | 0 | 0 | 1,564,624 | 173,496,026 | 5,147,194 | 0 | 180,207,844 |
| SUBTOTAL | 178,897,578 | 56,493,762 | 235,391,340 | 32,896,600 | 50,787,640 | 3,979,020 | 56,513,901 | 379,338,669 | 58,192,011 | 10,500,000 | 862,619,870 |
| TRIBAL ENDOWMENT | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11,880,000 | 0 | 11,880,000 |
| BIOTECH RISK ASSESSMENT | 716,422 | 226,238 | 942,660 | 37,400 | 110,360 | 20,980 | 101,458 | 1,141,638 | 39,280 | 0 | 2,393,776 |
| TOTAL | **179,614,000** | **56,720,000** | **236,334,000** | **32,934,000** | **50,898,000** | **4,000,000** | **56,615,359** | **380,480,307** | **70,111,291** | **10,500,000** | **876,893,646** |

***Data may include 2012 obligations posted in 2013***

**TABLE 2 - FISCAL YEAR 2013**
**DISTRIBUTION OF FEDERAL PAYMENTS FOR RESEARCH AT STATE AGRIC EXPERIMENT STATIONS & OTHER STATE INSTITUTIONS**

| STATE | HATCH ACT | COOP FORESTRY RSH (MS) | 1890 UNIV & TUSK UNIV (EA) | ANIMAL HEALTH & DIS RSCH | SPECIAL AND OTHER GRANTS | COMPETITIVE RESEARCH GRANTS | HIGHER EDUCATION GRANTS | FED ADMIN DIRECT APPROP | TOTAL FEDERAL FUNDS |
|---|---|---|---|---|---|---|---|---|---|
| FEDERAL ADMIN | 6,897,800 | 994,080 | 1,536,270 | 160,960 | 2,215,040 | 10,643,560 | 2,224,500 | 10,564,000 | 35,236,210 |
| SUBTOTAL, OBLIGATIONS | 6,897,800 | 994,080 | 1,536,270 | 160,960 | 2,215,040 | 10,643,560 | 2,224,500 | 10,564,000 | 35,236,210 |
| UNOBLIGATED BALANCE | 230,882,200 | 32,141,920 | 49,672,730 | 3,863,040 | 53,160,960 | 255,445,440 | 49,514,500 | 0 | 674,680,790 |
| TOTAL | 237,780,000 | 33,136,000 | 51,209,000 | 4,024,000 | 55,376,000 | 266,089,000 | 51,739,000 | 10,564,000 | 709,917,000 |



**TABLE 3 - FISCAL YEAR 2014**
**DISTRIBUTION OF FEDERAL PAYMENTS FOR RESEARCH AT STATE AGRIC EXPERIMENT STATIONS & OTHER STATE INSTITUTIONS**

| STATE | HATCH ACT | COOP FORESTRY RSH (MS) | 1890 UNIV & TUSK UNIV (EA) | ANIMAL HEALTH & DIS RSCH | SPECIAL AND OTHER GRANTS | COMPETITIVE RESEARCH GRANTS | HIGHER EDUCATION GRANTS | FED ADMIN DIRECT APPROP | TOTAL FEDERAL FUNDS |
|---|---|---|---|---|---|---|---|---|---|
| FEDERAL ADMIN | 6,854,000 | 988,000 | 1,527,000 | 0 | 1,596,000 | 15,335,000 | 1,815,000 | 14,368,000 | 42,483,000 |
| SUBTOTAL, OBLIGATIONS | 6,854,000 | 988,000 | 1,527,000 | 0 | 1,596,000 | 15,335,000 | 1,815,000 | 14,368,000 | 42,483,000 |
| UNOBLIGATED BALANCE | 229,480,000 | 31,946,000 | 49,371,000 | 0 | 40,110,000 | 368,041,000 | 39,709,000 | 0 | 758,657,000 |
| TOTAL | 236,334,000 | 32,934,000 | 50,898,000 | 0 | 41,706,000 | 383,376,000 | 41,524,000 | 14,368,000 | 801,140,000 |

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE
RESEARCH AND EDUCATION ACTIVITIES

Classification by Objects
(Dollars in thousands)

| Personnel Compensation: | 2011 Actual | 2012 Actual | 2013 Estimate | 2014 Estimate |
|---|---|---|---|---|
| Washington D.C. | $21,836 | $20,927 | $20,960 | $21,112 |
| 11.1 - Full-time employees | 21,836 | 20,927 | 20,960 | 21,112 |
| 12.0 - Personnel Benefits | 5,039 | 5,529 | 5,538 | 5,578 |
| 13.0 - Benefits for former personnel | 4 | 177 | 177 | 177 |
| Total, personnel comp. and benefits | 26,879 | 26,633 | 26,675 | 26,867 |
| Other Objects: | | | | |
| 21.0 - Travel & Transportation of Persons | 1,670 | 379 | 732 | 732 |
| 22.0 - Transportation of Things | 35 | - | 6 | 6 |
| 23.1 - Rent to GSA | 5 | 4 | 8 | 8 |
| 23.2 - Rent Paid to Others | 1 | - | 41 | 41 |
| 23.3 - Comm., Util., Misc. Charges | 343 | 658 | 658 | 658 |
| 24.0 - Printing and Reproduction | 231 | 185 | 207 | 207 |
| 25.1 - Advisory and Assistance Services | 5 | 165 | 165 | 165 |
| 25.2 - Other Services from non-Federal sources | 4,416 | 4,271 | 4,271 | 4,271 |
| 25.3 - Purchases of Goods and Services | 140 | 97 | 97 | 97 |
| 25.4 - Oper & Maintenance of Facilities | 102 | - | - | - |
| 25.5 - Research & Development Contracts | 4,052 | 9,288 | 9,288 | 9,288 |
| 25.6 - Medical Care | 10 | 49 | 49 | 49 |
| 25.7 - Operation & Maint. of Equipment | 618 | 92 | 92 | 92 |
| 25.8 - Subsistence & Support of Persons | 65 | 82 | 82 | 82 |
| 26.0 - Supplies and Materials | 118 | 153 | 223 | 223 |
| 31.0 - Equipment | 191 | 34 | 175 | 175 |
| 41.0 - Grants, Subsidies & Contributions | 730,970 | 677,962 | 869,960 | 763,516 |
| Total, Other Objects | 742,972 | 693,419 | 886,054 | 779,610 |
| 99.9 Total, new obligations | 769,851 | 720,052 | 912,729 | 806,477 |
| Position Data: | | | | |
| Average Salary (dollars), ES positions | $170,866 | $164,627 | $165,450 | $167,105 |
| Average Salary (dollars), GS positions | $94,404 | $91,979 | $92,439 | $93,363 |
| Average Grade, GS positions | 11.3 | 11.4 | 11.4 | 11.4 |

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE
BIOMASS RESEARCH AND DEVELOPMENT INITIATIVE

Classification by Objects
(Dollars in thousands)

| Personnel Compensation: | 2011 Actual | 2012 Actual | 2013 Estimate | 2014 Estimate a/ |
|---|---|---|---|---|
| Washington D.C. | $264 | $1,059 | $124 | $842 |
| 11.1 - Full-time employees | 264 | 1,059 | 124 | 842 |
| 12.0 - Personnel Benefits | 68 | 246 | 29 | 198 |
| 13.0 - Benefits for former personnel | - | 15 | - | - |
| Total, personnel comp. and benefits | 332 | 1,320 | 153 | 1,040 |
| Other Objects: | | | | |
| 21.0 - Travel & Transportation of Persons | 21 | 49 | - | 49 |
| 22.0 - Transportation of Things | - | - | - | - |
| 23.1 - Rent to GSA | - | - | - | - |
| 23.2 - Rent Paid to Others | - | - | - | - |
| 23.3 - Comm., Util., Misc. Charges | 4 | 13 | - | - |
| 24.0 - Printing and Reproduction | 1 | 2 | - | - |
| 25.1 - Advisory and assistance services | - | 2 | - | 2 |
| 25.2 - Other services from non-Federal sources | 62 | 190 | - | - |
| 25.3 - Purchases of Goods and Services | 1 | - | - | - |
| 25.4 - Oper & Maintenance of Facilities | 40 | 157 | - | - |
| 25.5 - Research & Development Contracts | 36 | 135 | 572 | - |
| 25.6 - Medical Care | - | - | - | - |
| 25.7 - Operation & Maint. of Equipment | - | - | - | - |
| 25.8 - Subsistence & Support of Persons | - | - | - | - |
| 26.0 - Supplies and Materials | 2 | 7 | - | 7 |
| 31.0 - Equipment | 2 | 4 | - | - |
| 41.0 - Grants, Subsidies & Contributions | 1,574 | 70,045 | 65 | 24,902 |
| Total, Other Objects | 1,743 | 70,604 | 637 | 24,960 |
| Total, new obligations | 2,075 | 71,924 | 790 | 26,000 |
| Position Data: | | | | |
| Average Salary (dollars), ES positions | $170,866 | $164,627 | $165,450 | $167,105 |
| Average Salary (dollars), GS positions | $94,404 | $91,979 | $92,439 | $93,363 |
| Average Grade, GS positions | 11.3 | 11.4 | 11.4 | 11.4 |

a/ Budget includes $26 million under CCC funding proposals.

**RESEARCH AND EDUCATION ACTIVITIES:**

**Current Activities:**

1. Hatch Act. The Hatch Act provides formula funds to support research at the State Agricultural Experiment Stations which improves production, marketing, distribution, and utilization of crops and livestock for the food supply, health, and welfare of the American people, while conserving resources, enhancing nutrition and sustaining rural living conditions. Students are provided training opportunities to assist in scientific research projects conducted at the stations. Hatch Act formula funds are matched by non-Federal funds and are used to support research in forest and natural resources; crop resources; animal resources; people, communities, and institutions; competition, trade adjustment, price, and income policy; and food science and human nutrition. As a result of provisions contained in the Agricultural Research, Extension, and Education Reform Act of 1998 (AREERA), at least 25 percent of available Hatch funding must be used to support multi-State research; States must expend 25 percent, or two times the level spent in fiscal year (FY) 1997 (whichever is less), on integrated research and extension activities.

2. McIntire-Stennis Cooperative Forestry Research. The McIntire-Stennis Cooperative Forestry Research program provides formula funds to support research related to use of the Nation's forest resources. Timber production, forest land management, wood utilization, and the associated development of new products and distribution systems are some of the topics of this research. Additional areas of investigation include wildlife, recreation, water, range, and environmental quality, which are essential to the long-term productivity and profitability of the integrated system of forest resources.

3. Evans-Allen Program. The Evans-Allen formula funds research program for the 1890 Colleges and Tuskegee University was established in the Food and Agriculture Act of 1977, as amended. Beginning in FY 1979 annual appropriations have been used to support continuing agricultural research at the 1890 Colleges and Tuskegee University. The general provisions section 753 of Public Law 107-76 makes West Virginia State University eligible to receive funds under this program. Appropriations under this authority are the primary source of support for the food and agricultural research programs at the 1890 Colleges, Tuskegee University and West Virginia State University. Section 1445(a)(2) of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA) (7 U.S.C. 3222(a)(2)), as amended by section 7122 of the Food, Conservation, and Energy Act of 2008 (FCEA), requires that funds appropriated for this program be not less than 30 percent of the Hatch Act appropriation. Evans-Allen funds require a 100 percent non-Federal match. These programs place emphasis on small-scale agriculture, human nutrition, rural development and quality of living, crop resources, and animal resources. In addition, this program supports the development of agricultural expertise by providing training opportunities for students to assist in the research projects being conducted at these institutions.

4. Animal Health and Disease Research. The Animal Health and Disease Research formula program provides funding to accredited schools or colleges of veterinary medicine and/or State Agricultural Experiment Stations that conduct animal health and disease research. State Comprehensive Plans for animal health research, approved by NIFA, are being followed by the eligible institutions. Provisions of Section 1433 of NARETPA permit selection of studies within each State based on the highest-priority needs and the capabilities of the institutions to conduct the needed research.

5. Special Research Grants. The Special Research Grants Program concentrates on problems of national, regional, and local interest beyond the normal emphasis in the formula programs. Program objectives are to facilitate or expand promising breakthroughs of importance to the Nation in areas of food and agricultural sciences and to facilitate or expand ongoing State-Federal food and agricultural research programs. Generally, funding requested in the President’s budget is for projects that have regional and/or national impact, such as those

projects addressing global change, pest control issues, aquaculture centers, sustainable agriculture, critical agricultural materials, potato, forest products, supplemental and alternative crops, and rangeland research.

6. Agriculture and Food Research Initiative (AFRI). AFRI supports fundamental and applied research, extension, and education to address food and agricultural sciences (as defined under section 1404 of NARETPA). Competitive awards are made to eligible recipients to address critical issues in U.S. agriculture in the areas of global food security and hunger, climate change, sustainable bioenergy, childhood obesity, and food safety. Addressing these critical issues will engage scientists and educators with expertise in plant health and production and plant products; animal health and production and animal products; food safety, nutrition, and health; renewable energy, natural resources, and environment; agriculture systems and technology; and agriculture economics and rural communities. Of the amount of funds made available for research, not less than 60 percent is used for fundamental research and not less than 40 percent is used for applied research. No less than 30 percent of the amount allocated for fundamental research is available for research conducted by multidisciplinary teams and no more than 2 percent to be used for equipment grants. In addition, no less than 30 percent of AFRI funding may be used to carry out integrated research, education, and extension activities such as those provided for in section 406 of AREERA (7 U.S.C. 7626).

7. Small Business Innovation Research (SBIR) Program. The Small Business Innovation Development Act was designed to strengthen the role of small, innovative firms in Federally funded research and development. Under the SBIR program, between 2.6 to 3.2 percent of appropriations for extramural research and development is set aside for awards to eligible small firms. The SBIR Program is a three-phased effort, but only Phase I and Phase II, the feasibility and follow-on research and development phases respectively, are eligible for support with USDA funds. Firms are encouraged to secure Phase III funding for the commercialization phase from other public or private sources. The research areas supported under the SBIR program address critical issues in U.S. agriculture in the areas of global food security and hunger, climate change, sustainable bioenergy, childhood obesity, and food safety. Addressing these critical issues will engage small businesses with expertise in a number of areas including plant and animal production and protection, forests and related resource sciences, soil and water resources, food and nutrition sciences, rural development, biofuels and biobased products, aquaculture, and small and mid-sized farms. NIFA administers the SBIR program for USDA, including the funds set aside for SBIR from other USDA agencies.

8. Tribal Colleges Research Grants Program. The Tribal Colleges Research Grants Program (authorized under the Equity in Educational Land-Grant Status Act of 1994, Public Law 103-382, as amended) is a competitive program for conducting agricultural research activities that address tribal, National, or multi-State priorities.

9. Farm Business Management and Benchmarking Program. The Farm Business Management and Benchmarking Program provides support to improve the farm management knowledge and skills of agricultural producers, and establish and maintain a national, publicly available farm financial management database to support improved farm management. Funds are awarded on a competitive basis under the program.

10. Sun Grant Program. The Sun Grant Program funds six sun grant centers that award subgrants to enhance national energy through the development, distribution, and implementation of biobased energy technologies. Through biobased energy and product technologies, activities are supported that promote diversification, and the environmental sustainability of, agricultural production in the U.S., and economic diversification in rural areas of the U.S. Funds are also used to enhance the efficiency of bioenergy and biomass research and development programs through improved coordination and collaboration among USDA, Department of Energy, and land-grant colleges and universities.

11. Capacity Building for Non-Land Grant Colleges of Agriculture. The Capacity Building for Non-Land Grant Colleges of Agriculture (NLGCA) Program competitively awards grants to assist the institutions in maintaining and expanding the capacity of the NLGCA Institutions to conduct education, research, and outreach activities relating to agriculture, renewable resources, and other similar disciplines.

12. Policy Research Centers. The Policy Research Centers Program is a competitive program for centers to conduct research and education programs that are objective, operationally independent, and external to the Federal Government and that concern the effect of public policies and trade agreements on the farm and agricultural

sectors including commodities, livestock, dairy, and specialty crops; environment; rural families, households, and economies; and consumers, food, and nutrition.

13. Higher Education Programs. The competitive Institution Challenge, Multicultural Scholars, and Graduate Fellowship Grants Program supports challenge grants to stimulate and enable colleges and universities to provide the quality of education necessary to produce graduates capable of strengthening the Nation's food and agricultural scientific and professional workforce. Institutions match USDA funds on a dollar-for-dollar basis. The program provides funding for multicultural scholars grants to institutions for scholarships to attract and educate more students from groups currently underrepresented in the food and agricultural sciences for careers in agriscience and agribusiness. Institutions must provide 25 percent in matching funds. Also supported are fellowship grants to colleges and universities to stimulate the development of food and agricultural scientific expertise in targeted areas of national need specifically to the recruitment and training of doctoral students for critical food and agricultural scientific positions. The competitive Secondary Education, Two-year Postsecondary Education, and Agriculture in the K-12 Classroom Program promotes and strengthens the ability of public secondary schools' education in agribusiness and agriscience and increases the number and/or diversity of young Americans pursuing college degrees in the food and agricultural sciences. The competitive 1890 Institution Capacity Building Grants Program is one of the Department's high-priority initiatives to advance the teaching and research capacity, and expand the competitiveness of the 1890 Land-Grant Institutions and Tuskegee University. The competitive Hispanic-Serving Institutions Education Grants Program promotes and strengthens the ability of Hispanic-Serving Institutions to carry out higher education teaching programs in the food and agricultural sciences. The Tribal Colleges Endowment Fund distributes interest earned by an endowment established for the 1994 Land-Grant Institutions (34 Tribally controlled colleges) as authorized in the Equity in Education Land-Grant Status Act of 1994, P.L. 103-382, as amended. The Endowment Fund enhances education in agricultural sciences and related areas for Native Americans by building education capacity at these institutions. The Tribal Colleges Education Equity Grants Program is a formula program designed to enhance educational opportunities for Native Americans by strengthening instructional programs in food and agriculture. The Alaska Native Serving and Native Hawaiian-Serving Institutions Education Grants Program is designed to recruit, support and educate minority scientists and professionals, and advance the educational capacity of these Native-serving institutions. The Resident Instruction Grants for Insular Areas Program is designed to enhance teaching programs at higher education institutions located in U.S. insular areas that focus on agriculture, natural resources, forestry, veterinary medicine, home economics, and disciplines closely allied to food and agriculture production and delivery systems. The Distance Education Grants for Insular Areas Program strengthens the capability of higher education institutions located in U.S. insular areas to carry out collaborative distance food and agricultural education programs using digital network technologies. The Veterinary Medicine Loan Repayment Program provides for a loan repayment program for a specified payment amount of qualifying educational loans of veterinarians for geographical areas that have a shortage of veterinarians; and areas of veterinary practice that the Secretary determines have a shortage of veterinarians, such as food animal medicine, public health, epidemiology, and food safety.

Selected Examples of Recent Progress:

1. Hatch Act. Concentrated animal feeding operations (CAFOs) are an important economic force in rural areas, bringing an estimated $1.1 billion annually to northwest Missouri. However, odor from these facilities has a significant negative impact on neighboring property owners and residents. University of Missouri researchers are working to develop effective biofilters for producers to break down compounds that create pungent odors. The scientists also are developing a computer model that allows large producers to inexpensively estimate the extent of their emission problem based on simple information about their operations. Development of technologies that reduce the negative externalities of CAFOs will allow rural regions in northwest Missouri to benefit from this source of economic opportunity without sacrificing air quality.

2. McIntire-Stennis Cooperative Forestry Research. The threat of costly injury from invasive insects underscores the need for improved survey methodology and better understanding of pest biology. A Connecticut researcher found that 70 percent ethyl alcohol in the collection cup of Lindgren funnels increased the catch of bark, longhorned, and predatory checkered beetles in a pine forest. In experiments with four different killing agents, the funnels with 70 percent ethyl alcohol in the collection cup caught on average 2.9 times more bark beetles, 2.5 times more longhorned beetles, and 2.4 times more predatory checkered beetles than did funnels with

vapona, soapy water, or anti-freeze in the cup. This new biological information is useful in developing effective management programs for pestiferous longhorned beetles. Findings are expected to contribute to better forest health in the Northeast.

3. Evans-Allen Program. Precision agriculture adoption in Alabama continues to increase, with technology being implemented on nearly 70 percent of the crop able land. Researchers at Auburn University, Alabama A&M University and Tuskegee University estimate a 10 percent reduction on applied nutrients and pesticides when state farmers adopt these modern tools. This reduction enhances environmental stewardship at the farm level and provides savings to the farmers. In 2011, Alabama farmers saved over $22,000,000 on inputs through the adoption of guidance systems, variable-rate technology and automatic section controls.

4. Animal Health and Disease Program. South Dakota and Florida research showed that grape seed and grape pomace (a byproduct of the wine industry) has a protective effect in cell culture on the effects of E. coli heat labile toxin (LT) in swine. The results of this study suggest that by-products of the wine-making industry may have a beneficial effect in reducing the effects of enterotoxigenic E. coli in weaned pigs thereby improving their health.

5. Agriculture and Food Research Initiative (AFRI). The Climate and Corn-based Cropping Systems Coordinated Agricultural Project (CAP) led by Iowa State University includes partnerships with Missouri, Michigan, Ohio, Indiana, South Dakota, Illinois, Minnesota, and Wisconsin scientists. The CAP seeks to increase the resilience and adaptability of Midwest agriculture to more volatile weather patterns. This will be accomplished by identifying farmer practices and policies that increase sustainability while meeting crop demand. The 136 person team of scientists, graduate students, and topic-based specialists established an expansive network with 55 treatments and 80 types of measurements across eight states to measure the carbon, nitrogen, and water footprints of corn-based cropping systems. In addition, the scientists developed the methodology and instrument to assess farmers' social and economic beliefs, concerns, and management practices; recruited and trained 35 graduate students, six postdoctoral students, and 24 undergraduates to perform research, extension and education work in a transdisciplinary manner. The team has leveraged more than $730,000 in monetary and personnel resources to support this effort.

   Current technologies achieve about 99 percent reduction in spinach and lettuce contaminated by E. coli 0157:H7. The produce industry is looking for improved ways to kill the bacteria in processing fresh fruits and vegetables, including salads. University of Illinois scientists combined ultrasound and chlorine washing treatments to reduce the number of E. coli 0157:H7 in spinach to 99.99 percent. This approach reduces pathogen loads and enhances the safety while preserving the freshness of the produce.

   Latino children experience higher overweight prevalence compared to non-Latino white children. California researchers are studying the issue and conducting field training to address this epidemic. The project expects to decrease the rate of weight gain among children of Mexican-heritage; identify mediating factors influencing the effect of economic and educational interventions in children weight gain; adapt and implement nutrition and physical activity curricula to counter childhood overweight/obesity; and increase cultural awareness of undergraduate, and graduate degree students in nutrition, agricultural economics, education and allied health.

6. Institution Challenge, Multicultural Scholars and Graduate Fellowship Program. The University of Nebraska, Lincoln (UNL), received funding to train three doctoral fellows in its Doctor of Plant Health Program. The program's mission is to produce plant practitioners with broad training in the disciplines that impact plant health and management. These practitioners will use the knowledge gained to diagnose and solve plant health problems. Additionally, they will be able to develop plant management systems that maximize the system's economic, environmental and social sustainability.

7. Hispanic Serving Institutions Education Grants Program. The Laredo Community College created a consortium among the 38 Hispanic-serving public and private institutions in the state of Texas. The consortium aims to increase Hispanic student enrollment in higher education, particularly in math and science, as a means for preparing future agricultural employees. The group created a sharing and learning venue for the consortium members to address the problems Hispanic students face in higher education. The consortium also is looking at

ways to increase the enrollment of underrepresented students in the sciences through faculty development and collaboration.

8. 1890 Institutions Capacity Building Grants Program. Educators at Fort Valley State University (Georgia) are recruiting new students, upgrading instructional facilities, and conducting workshops for students and high school teachers. The University's Strengthening Food Technology program provides financial assistance for education opportunities to rural students who are traditionally underrepresented. Under the program, six students have initiated work study activities and graduate assistantships and three graduate students began food products research activities towards their degree.

9. Tribal Colleges Education Equity Grants Program. To reduce the incidence of diabetes, obesity and heart disease in the Omaha and Santee Sioux Nations, Nebraska Indian Community College (NICC) is strengthening specific instructional programs in the food, natural resources, native foods and agricultural sciences area. NICC offers early language and literacy classes that incorporate science and agriscience related reading materials to introduce science to young children. As a result of NICC efforts, business students were immersed in aspects of agri-business, and a local company expanded its marketing plan to include chain stores and marketing material based on NICC's design and packaging recommendation.

Extension Activities

The estimates include appropriation language for this item as follows:

Extension Activities

*For payments to States, the District of Columbia, Puerto Rico, Guam, the Virgin Islands, Micronesia, the Northern Marianas, and American Samoa, $459,037,000, as follows: payments for cooperative extension work under the Smith-Lever Act, to be distributed under sections 3(b) and 3(c) of said Act, and under section 208(c) of Public Law 93–471, for retirement and employees' compensation costs for extension agents, $294,000,000; payments for extension work at the 1994 Institutions under the Smith-Lever Act (7 U.S.C. 343(b)(3)), $4,312,000; payments for the nutrition and family education program for low-income areas under section 3(d) of the Act, $67,934,000; payments for the farm safety program and youth farm safety education and certification extension grants under section 3(d) of the Act, $4,610,000; payments for New Technologies for Agriculture Extension under section 3(d) of the Act, $1,750,000; payments to upgrade research, extension, and teaching facilities at institutions eligible to receive funds under 7 U.S.C. 3221 and 3222, $19,730,000, to remain available until expended; payments for youth-at-risk programs under section 3(d) of the Smith-Lever Act, $8,395,000; payments for carrying out the provisions of the Renewable Resources Extension Act of 1978 (16 U.S.C. 1671 et seq.), $4,060,000; payments for the federally recognized Tribes Extension Program under section 3(d) of the Smith-Lever Act, $3,039,000; payments for cooperative extension work by eligible institutions (7 U.S.C. 3221), $42,592,000, provided that each institution receives no less than $1,000,000; and for necessary expenses of Extension Activities, $8,615,000.*

EXTENSION ACTIVITIES
Lead-Off Tabular Statement

| | |
|---|---|
| 2013 Estimate | $478,091,000 |
| Budget Estimate, 2014 | 459,037,000 |
| Change in Appropriation | -19,054,000 |

EXTENSION ACTIVITIES
Summary of Increases and Decreases
(Dollars in thousands)

| | 2011 Actual | 2012 Change | 2013 Change | 2014 Change | 2014 Estimate |
|---|---|---|---|---|---|
| Extension Activities: | | | | | |
| Smith-Lever Sections 3(b) and 3'(c)…….. | $293,911 | +$89 | +$1,799 | -1,799 | +$294,000 |
| 1890 Colleges, Tuskegee Univ. & WV State Univ……. | 42,592 | - | +261 | -261 | +42,592 |
| Smith-Lever 3 (d): | | | | | |
| AgAbility/Farm Safety……. | 4,853 | -4,853 | - | - | - |
| Expanded Food and Nutrition Education Program… | 67,934 | - | +416 | -416 | +67,934 |
| Federally Recognized Tribes Extension…… | 3,039 | - | +19 | -19 | +3,039 |
| New Technologies for Ag Extension……. | 1,747 | -197 | +9 | +191 | +1,750 |
| Pest Management …… | 9,918 | - | +61 | -9,979 | - |
| Sustainable Agriculture……. | 4,696 | - | +29 | -4,725 | - |
| Youth at Risk …… | 8,395 | -795 | +46 | +749 | +8,395 |
| Youth Farm Safety Education and Certification | 485 | -485 | - | - | - |
| Farm Safety and Youth Farm Safety Education Cert…. | - | +4,610 | +28 | -28 | +4,610 |
| Federal Administration…….. | 8,548 | -696 | +48 | +715 | +8,615 |
| Subtotal……. | 446,118 | -2,327 | +2,716 | -15,572 | +430,935 |
| 1890 Facilities Grants (Sec. 1447)…….. | 19,730 | - | +121 | -121 | +19,730 |
| Extension Services at the 1994 Institutions…….. | 4,312 | - | +26 | -26 | +4,312 |
| Food Animal Residue Avoidance Database (FARAD)…. | 998 | +2 | +6 | -1,006 | - |
| Grants to Youth Organizations…… | 1,780 | -1,030 | +5 | -755 | - |
| Renewable Resources Extension Act (RREA)……... | 4,060 | -360 | +23 | +337 | +4,060 |
| Rural Health and Safety Education…….. | 1,735 | -235 | +9 | -1,509 | - |
| Women and Minorities in STEM Fields…….. | 399 | +1 | +2 | -402 | - |
| Total Available or Estimate……..…. | 479,132 | -3,949 | +2,908 | -19,054 | +459,037 |

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE
EXTENSION ACTIVITIES
Project Statement by Program
Adjusted Appropriations Detail and Staff Years (SY)
(Dollars in thousands)

| Program | 2011 Actual Amount | SY | 2012 Actual Amount | SY | 2013 Estimate† Amount | SY | Inc. or Dec. Amount | SY | 2014 Estimate Amount | SY |
|---|---|---|---|---|---|---|---|---|---|---|
| **Discretionay Appropriations:** | | | | | | | | | | |
| Smith-Lever Sections 3(b) and 3(c) | $293,911 | | $294,000 | | $295,799 | | -$1,799 | | $294,000 | |
| 1890 Colleges, Tuskegee Univ. & WV State Univ. | 42,592 | | 42,592 | | 42,853 | | -261 | | 42,592 | |
| Smith-Lever, Section 3d Programs: | | | | | | | | | | |
| Farm Safety and Youth Farm Safety Education and Certification | - | | 4,610 | | 4,638 | | -28 | | 4,610 | |
| Farm Safety | 4,853 | | a/ | | a/ | | a/ | | a/ | |
| Expanded Food and Nutrition Education Program | 67,934 | | 67,934 | | 68,350 | | -416 | | 67,934 | |
| Federally Recognized Tribes Extension | 3,039 | | 3,039 | | 3,058 | | -19 | | 3,039 | |
| New Technologies for Ag Extension | 1,747 | | 1,550 | | 1,559 | | 191 | | 1,750 | |
| Pest Management | 9,918 | | 9,918 | | 9,979 | | -9,979 | | - b/ | |
| Sustainable Agriculture | 4,696 | | 4,696 | | 4,725 | | -4,725 | | - c/ | |
| Youth at Risk | 8,395 | | 7,600 | | 7,646 | | 749 | | 8,395 | |
| Youth Farm Safety Education and Certification | 485 | | a/ | | a/ | | a/ | | - a/ | |
| Total Section 3d Programs | 101,067 | | 99,347 | | 99,955 | | -14,227 | | 85,728 | |
| Rural Health and Safety Education | 1,735 | | 1,500 | | 1,509 | | -1,509 | | - | |
| 1890 Facilities Grants (Sec. 1447) | 19,730 | | 19,730 | | 19,851 | | -121 | | 19,730 | |
| Grants to Youth Organizations | 1,780 | | 750 | | 755 | | -755 | | - | |
| Renewable Resources Extension Act (RREA) | 4,060 | | 3,700 | | 3,723 | | 337 | | 4,060 | |
| Extension Services at the 1994 Institutions | 4,312 | | 4,312 | | 4,338 | | -26 | | 4,312 | |
| Food Animal Residue Avoidance Database (FARAD) | 998 | | 1,000 | | 1,006 | | -1,006 | | - | |
| Women and Minorities in STEM Fields | 399 | | 400 | | 402 | | -402 | | - | |
| Federal Administration (direct approp.) | | | | | | | | | | |
| General Administration | 7,996 | | 7,300 | | 7,345 | | +1,270 | | 8,615 | |
| Ag in the Classroom | 552 | | 552 | | 555 | | -555 | | - | |
| Total Federal Administration | 8,548 | | 7,852 | | 7,900 | | +715 | | 8,615 | |
| Subtotal | 479,132 | | 475,183 | | 478,091 | | -19,054 | | 459,037 | |
| **Mandatory Appropriations:** | | | | | | | | | | |
| Risk Management Education Program | 5,000 | | 5,000 | | 5,000 | | - | | 5,000 | |
| Healthy Urban Food Enterprise | 1,000 | | - | | - | | - | | - d/ | |
| Beginning Farmers and Ranchers | 19,000 | | 19,000 | | - | | - | | - d/ | |
| Total Adjusted Appropriation | 504,132 | 155 | 499,183 | 155 | 483,091 | 157 | -19,054 | -3 | 464,037 | 154 |
| Rescissions and Transfers (Net) | 960 | | - | | - | | - | | - | |
| Total Appropriation | 505,092 | 155 | 499,183 | 155 | 483,091 | 157 | -19,054 | -3 | 464,037 | 154 |
| **Transfers In:** | | | | | | | | | | |
| Congressional Relations | 61 | | 52 | | - | | - | | - | |
| Rescissions | -960 | | - | | - | | - | | - | |
| Balance Availabe, SOY | 1,040 | | 9,150 | | 5,135 | | -5,135 | | - | |
| Recoveries, Other (Net) | 4,854 | | - | | - | | - | | - | |
| Total Available | 510,088 | 155 | 508,385 | 155 | 488,226 | 157 | -24,189 | -3 | 464,037 | 154 |
| Lapsing Balances | -10,609 | | -70 | | - | | - | | - | |
| Balance Available, EOY | -9,150 | | -5,135 | | - | | - | | - | |
| Total Obligations | 490,329 | 155 | 503,179 | 155 | 488,226 | 157 | -24,189 | -3 | 464,037 | 154 |

a/ 2012 enacted appropriations language combined funding for Youth Farm Safety and Farm Safety programs. 2013 and 2014 proposed appropriations language would maintain 2012 enacted language
b/ This program is consolidated under Integrated Activities, Crop Protection/Pest Management Program.
c/ Programs on sustainable ag are merged into a single program under the research account.
d/ Funding for this Farm Bill mandatory program is subject to reauthorization.
† FY 2013 Estimates are based on the annualized Continuing Resolution levels and are not based on actual full year appropriations.

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE
EXTENSION ACTIVITIES
Project Statement by Program
Obligations Detail and Staff Years (SY)
(Dollars in thousands)

| Program | 2011 Actual Amount | SY | 2012 Actual Amount | SY | 2013 Estimate Amount | SY | Inc. or Dec. Amount | SY | 2014 Estimate Amount | SY |
|---|---|---|---|---|---|---|---|---|---|---|
| **Discretionay Obligations:** | | | | | | | | | | |
| Smith-Lever Sections 3(b) and 3(c) | $283,302 | | $293,930 | | $295,799 | | -$1,799 | | $294,000 | |
| 1890 Colleges, Tuskegee Univ. & WV State Univ | 42,592 | | 42,592 | | 42,853 | | -261 | | 42,592 | |
| Smith-Lever, Section 3d Programs: | | | | | | | | | | |
| Farm Safety and Youth Farm Safety Education and Certif | - | | 4,610 | | 4,638 | | -28 | | 4,610 | |
| Farm Safety | 4,853 | | a/ | | a/ | | a/ | | a/ | |
| Expanded Food and Nutrition Education Program | 67,934 | | 67,934 | | 68,350 | | -416 | | 67,934 | |
| Federally Recognized Tribes Extension | 3,039 | | 3,039 | | 3,058 | | -19 | | 3,039 | |
| New Technologies for Ag Extension | 1,747 | | 1,550 | | 1,559 | | 191 | | 1,750 | |
| Pest Management | 9,918 | | 9,918 | | 9,979 | | -9,979 | | - b/ | |
| Sustainable Agriculture | 4,696 | | 4,696 | | 4,725 | | -4,725 | | - c/ | |
| Youth at Risk | 8,395 | | 7,600 | | 7,646 | | 749 | | 8,395 | |
| Youth Farm Safety Education and Certification | 485 | | a/ | | a/ | | a/ | | a/ | |
| Total Section 3d Programs | 101,067 | | 99,347 | | 99,955 | | -14,227 | | 85,728 | |
| Rural Health and Safety Education | 1,735 | | 1,500 | | 1,509 | | -1,509 | | - | |
| 1890 Facilities Grants (Sec. 1447) | 16,736 | | 23,744 | | 24,786 | | -5,056 | | 19,730 | |
| Grants to Youth Organizations | 1,780 | | 750 | | 755 | | -755 | | - | |
| Renewable Resources Extension Act (RREA) | 4,060 | | 3,700 | | 3,723 | | 337 | | 4,060 | |
| Extension Services at the 1994 Institutions | 4,312 | | 4,312 | | 4,338 | | -26 | | 4,312 | |
| Food Animal Residue Avoidance Database (FARAD) | 998 | | 1,000 | | 1,006 | | -1,006 | | - | |
| Women and Minorities in STEM Fields | 399 | | 400 | | 402 | | -402 | | - | |
| Federal Administration (direct approp.) | | | | | | | | | | |
| General Administration | 7,996 | | 7,353 | | 7,345 | | 1,270 | | 8,615 | |
| Ag in the Classroom | 552 | | 552 | | 555 | | -555 | | - | |
| Total Federal Administration | 8,548 | | 7,905 | | 7,900 | | 715 | | 8,615 | |
| Subtotal | 465,529 | | 479,180 | | 483,026 | | -23,989 | | 459,037 | |
| **Mandatory Obligations:** | | | | | | | | | | |
| Risk Management Education Program | 4,800 | | 5,000 | | 5,200 | | -200 | | 5,000 | |
| Healthy Urban Food Enterprise | 1,000 | | - | | - | | - | | - d/ | |
| Beginning Farmers And Ranchers | 19,000 | | 19,000 | | - | | - | | - d/ | |
| Subtotal | 24,800 | | 24,000 | | 5,200 | | -200 | | 5,000 | |
| Total Obligations | 490,329 | 155 | 503,179 | 155 | 488,226 | 157 | -24,189 | -3 | 464,037 | 154 |
| Lapsing Balances | 10,609 | | 70 | | - | | - | | - | |
| Balance Available, EOY | 9,150 | | 5,135 | | - | | - | | - | |
| Total Available | 510,088 | 155 | 508,385 | 155 | 488,226 | 157 | -24,189 | -3 | 464,037 | 154 |
| **Transfers In:** | | | | | | | | | | |
| Cong. Relations | -61 | | -52 | | - | | - | | - | |
| Rescissions | 960 | | - | | - | | - | | - | |
| Balance Available, SOY | -1,040 | | -9,150 | | -5,135 | | - | | - | |
| Recoveries, Other (Net) | -4,854 | | - | | - | | - | | - | |
| Total Appropriation | 505,092 | 155 | 499,183 | 155 | 483,091 | 157 | -24,189 | -3 | 464,037 | 154 |

a/ 2012 enacted appropriations language combined funding for Youth Farm Safety and Farm Safety programs. 2013 and 2014 proposed appropriations language would maintain 2012 enacted language.
b/ This program is consolidated under Integrated Activities, Crop Protection/Pest Management Program.
c/ Programs on sustainable ag are merged into a single program under the research account.
d/ Funding for this Farm Bill mandatory program is subject to reauthorization.
FY 2013 Estimates are based on the Annualized Continuing Resolution levels and are not based on actual full year appropriations.

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Justification of Increases and Decreases

EXTENSION ACTIVITIES

1. A decrease of $1,799,000 for Smith-Lever 3(b) and (c) ($295,799,000 available in 2013) as follows:

   Outcomes

   Base funding under this program supports agricultural extension programs at 1862 Land-Grant Universities that develop practical applications of research knowledge and that give instruction and practical demonstrations of existing or improved practices or technologies in agriculture. Activities will focus on educational efforts that are central to the mission of the Cooperative Extension System (CES) and common to most extension units, such as agricultural production; nutrition, diet, and health; natural resources and environmental management; community resources and economic development; family development and resource management; 4-H and youth development; and leadership and volunteer development. Program activities support all REE Action Plan Goals. Funding for the program is maintained at the enacted FY 2012 level.

2. A decrease of $261,000 for 1890 Institutions ($42,853,000 available in 2013) as follows:

   Outcomes

   Base funding for this program provides support agricultural and forestry extension activities at 1890 Land-Grant Institutions. The extension activities foster, develop, implement and improve extension educational programs to benefit their institution's clientele. Program activities support all REE Action Plan Goals. Funding for the program is maintained at the enacted FY 2012 level.

3. A net decrease of $14,227,000 to Smith-Lever 3(d) ($99,955,000 available in 2013) as follows:

   a. A decrease of $416,000 for Expanded Food and Nutrition Education Program ($68,350,000 available in 2013) as follows:

      Outcomes

      The Expanded Food and Nutrition Education Program (EFNEP) program continues to be highly effective in changing participants' behaviors, resulting in significant improvements in daily living skills. Ninety-four percent of adults reported improvements in their diets including consuming the equivalent of nearly one additional cup of fruits and vegetables, 84 percent of recent graduates improved food management practices, 89 percent improved nutrition practices, and 67 percent improved food safety practices. Multiple cost-benefit studies in past years show that every dollar invested in EFNEP results in $3.63 to $10.64 in saved health care costs and $2.48 saved in food expenditures.

      Base funding is used to provide low-income youth and families with information to increase nutrition knowledge and improve nutritional practices. In particular, the program is designed to assist limited resource audiences in acquiring the knowledge, skills, attitudes, and changed behavior necessary for nutritionally sounds diets, and to contribute to their personal development and the improvement of the total family diet and nutritional well-being. Program activities support REE Action Plan Goal 4. Funding for the program is maintained at the enacted FY 2012 level.

   b. A decrease of $9,979,000 to consolidate Pest Management Program into a new program ($9,979,000 available in 2013) as follows:

A decrease is proposed to direct funding to support a new program to consolidate integrated pest management activities. The consolidation will enhance NIFA's ability to support research, education, and extension activities needed to ensure a global food security and respond to other major societal challenges. Activities to support a comprehensive strategy in pest management are funded under the Crop Protection/Pest Management program under Integrated Activities.

c. A decrease of $28,000 for AgrAbility/Farm Safety (formerly Farm Safety and Youth Farm Safety Education and Certification) ($4,638,000 available in 2013) as follows:

Outcomes

Base funding will be used for competitively awarded projects to Extension working with non-profit disability organizations in conducting AgrAbility projects. The projects are designed to assist farmers and ranchers with disabilities to stay in agricultural production. Also the program provides funding to states to conduct training and certification needs of youth working in agriculture. Program activities support REE Action Plan Goal 6 and 7. Funding for the program is maintained at the enacted FY 2012 level.

d. An increase of $191,000 for New Technologies for Agricultural Extension ($1,559,000 available in 2013) as follows:

The New Technologies for Agricultural Extension Program functions to increase the capacity of each State to contribute expertise and content to the development of eXtension, a national web-based information and education delivery system. This initiative is intended to support CES with better communication with its customers and the general public. By creating web-based access to high quality, non-duplicative, research-based information, CES can better serve the needs of their anywhere-anytime generation of users and reach new audiences.

Outcomes

This program utilizes base funds to support an Internet-based tool that provides fast and convenient access to objective, peer-reviewed, and researched-based information, education, and guidance on subjects that include food safety, homeland security, natural resources and environment, youth development, families, nutrition and health, and other agricultural related topics. Program activities support all REE Action Plan Goals.

e. An increase of $748,000 for Children, Youth, and Families at Risk ($7,647,000 available in 2013) as follows:

The program is designed to marshal resources of the Land-Grant and CES to develop and deliver educational programs that equip limited resource youth and families who are at-risk for not meeting basic human needs with the skills they need to lead positive, productive, contributing lives.

Outcomes

Base funding supports America's children, youth and families to help promote and provide positive, productive, secure environments and contributions to communities and the Nation. Projects focus on the following national outcomes for youth and families: early childhood, school age youth, teen, and family outcomes with emphasis on science and reading literacy, and building youth and family program and community capacity. Program activities support REE Action Plan Goal 6 and 7.

f. A decrease of $4,725,000 to consolidate Sustainable Agriculture ($4,725,000 available in 2013) as follows:

The SARE program currently receives funding under both a research and education program and an extension program. The specific activities funded under research and education are authorized in 7 U.S.C. 5811, and specific activities funded under extension are authorized in 7 U.S.C. 343(d). The requested change consolidates funding for these two programs into one unified program under the Research and Education Activities Account. This will allow for enhanced efficiency in managing the program.

g. A decrease of $19,000 for Federally-Recognized Tribes Extension Program ($3,058,000 available in 2013) as follows:

Outcomes

Base funding supports projects to State Extension Services are implemented by Federally Recognized Tribes to provide assistance and educational programs in agriculture, community development, youth development, and other societal issues facing Native Americans on reservations. Program activities support REE Action Plan Goal 6 and 7. Funding for the program is maintained at the enacted FY 2012 level.

4. A decrease of $26,000 for Extension Services at 1994 Institutions ($4,338,000 available in 2013) as follows:

Outcomes

Base funding for this program provides funding to expand Extension program capacity at 1994 Land-Grant Institutions. Funding for the institutions also supports activities that address special needs, takes advantage of important opportunities, and/or demonstrates long-term sustained benefits of Extension projects at 1994 Land-Grant Institutions. Program activities support REE Action Plan Goal 6 and 7. Funding for the program is maintained at the enacted FY 2012 level.

5. An increase of $337,000 for Renewable Resources Extension Act ($3,723,000 available in 2013) as follows:

The program assists States in carrying out an extension program designed to help forest and range landowners and managers in making resource management decisions based on research findings. Forest and rangeland resources include vegetation, water, fisheries and wildlife, soil, and recreation.

Outcomes

Base funding is used for expanded natural resources education programs. Funds are distributed to 1862 and 1890 Land-Grant Institutions for educational programs, and a limited number of special emphasis national programs. Increased funding will continue to provide support for these activities. Program activities support REE Action Plan Goal 3.

6. A decrease of $121,000 for 1890 Facilities ($19,851,000 available in 2013) as follows:

Outcomes

Base funds are used to upgrade research, extension, and teaching facilities at the 1890 Institutions. Specifically, funds are intended for the acquisition and improvement of agricultural and food sciences facilities and equipment, including libraries, so that the 1890 Institutions may participate fully in the development of human capital in the food and agricultural sciences. Program activities support REE Action Plan Goal 6. Funding for the program is maintained at the enacted FY 2012 level.

7. A decrease of $402,000 to transfer from USDA to National Science Foundation and Department of Education ($402,000 available in 2013) as follows:

Students today need a strong education in science, technology, engineering, and mathematics (STEM) in order to thrive in the 21st Century economy and drive our Nation's ability to innovate. To facilitate a cohesive national strategy, the Administration is proposing a comprehensive reorganization of STEM education programs to increase the impact of Federal investments in high-priority areas including K-12 instruction; undergraduate education; and graduate fellowships. The reorganization involves consolidating or restructuring 90 programs across 11 agencies and improving the delivery, impact, and visibility of STEM efforts. The Administration will ensure that all science mission agencies have input into the development and implementation of these initiatives so that they align with agency goals while improving STEM education at all levels in a streamlined way.

Therefore, a decrease is proposed for the transfer of Women and Minorities in STEM Fields to the National Science Foundation and Department of Education as part of the Presidential Initiative to improve the delivery of STEM programs. Therefore, funding for this program will no longer be included in the USDA budget.

8. A net increase of $715,000 for Federal Administration ($7,900,000 available in 2013) as follows:

   a. An increase of $500,000 for Risk Management Education ($0 available in FY 2013) as follows:

      With these additional annual resources NIFA would augment the Agriculture Risk management Education Competitive Grants Program award to the Center for Farm Financial Management, also known as the Digital Center, at the University of Minnesota.

      Outcomes

      Funding will be used to: 1) conduct an inventory of available assessment tools for nontraditional farm businesses; 2) identify gaps in that inventory; 3) solicit competitive proposals through the Extension Risk Management Education network to develop tools to fill those gaps; and, 4) solicit competitive proposals through that network to develop curricula and deliver training via webinar to Farm Service Agency (FSA) loan officers and others. These activities would be done in an effort to assist FSA and other loan officers in working with local and regional food producers, especially young, beginning, specialty crop, and local food producers. As with all other risk management education tools and resources, this inventory will be made publicly available online at no charge through the Ag Risk Library. Additionally, the inventory will be provided to the FSA to be tailored for easy and immediate access by FSA and other loan officers in the farm credit system.

   b. An increase of $770,000 for Other Federal Administration ($7,345,000 available in FY 2013) as follows:

      NIFA's programs are managed at the national level by a staff of about 393 at the end of FY 2012 and with a number of temporary and intermittent employees. Grants management includes developing program regulations, establishing broad program goals, reviewing proposals, preparing grant documents, post-award review of progress, and similar activities necessary to achieve program goals. Between 0 and 4 percent of funds provided for programs may be used to support administration of the programs as established by law.

      Outcomes

      Funding is provided to support services in connection with the planning and coordination of all research and education programs administered by NIFA. Base funding will provide partial support of pay costs for the staff necessary to administer a portfolio of research, education, and extension programs. NIFA's budget consists of numerous programs that award thousands of individual grants to colleges and universities and other eligible recipients. Increased funding will continue to support these

activities. The pay cost increase is $208,000 which includes $38,000 for annualization of the fiscal year 2013 pay raise and $170,000 for the anticipated fiscal year 2014 pay raise. Program activities support all REE Action Plan Goals.

c. A decrease of $555,000 to transfer from USDA to National Science Foundation and Department of Education ($555,000 available in FY 2013) as follows:

Students today need a strong education in science, technology, engineering, and mathematics (STEM) in order to thrive in the 21st Century economy and drive our Nation's ability to innovate. To facilitate a cohesive national strategy, the Administration is proposing a comprehensive reorganization of STEM education programs to increase the impact of Federal investments in high-priority areas including K-12 instruction; undergraduate education; and graduate fellowships. The reorganization involves consolidating or restructuring 90 programs across 11 agencies and improving the delivery, impact, and visibility of STEM efforts. The Administration will ensure that all science mission agencies have input into the development and implementation of these initiatives so that they align with agency goals while improving STEM education at all levels in a streamlined way.

Therefore, a decrease is proposed for the transfer of Agriculture in the Classroom to the National Science Foundation and Department of Education as part of the Presidential Initiative to improve the delivery of STEM programs. Therefore, funding for this program will no longer be included in the USDA budget.

9. A decrease of $3,270,000 to eliminate funding for certain extension programs ($3,270,000 available in FY 2013) as follows:

| | FY 2013 ( $000 ) | Increase or Decrease ( $000 ) | FY 2014 ( $000 ) |
|---|---|---|---|
| Rural Health and Safety | $1,509 | -$1,509 | 0 |
| Grants for Youth Serving Institutions | 755 | -755 | 0 |
| Food Animal Residue Avoidance Database | 1,006 | -1,006 | 0 |
| Total | $3,270 | -$3,270 | 0 |

A decrease is proposed to direct funding to higher priority activities, and is consistent with the Administration's policy to redirect available resources, as appropriate, from lower-priority areas to other science and technology activities. Alternative funding from other NIFA programs, State and local governments, and private sources can be used to support aspects of the program deemed to be of priority at State and/or local levels.

**Table 1A for FY 2012**
**Distribution of Federal Payments for Extension Activities**

| STATE | SMITH-LEVER FORMULA | PEST MGMT | FARM SAFETY | YOUTH FARM SAFETY | 1890's UNIV & TUSK UNIV | FEDERALLY-RECOGNIZED TRIBES | EFNEP | YOUTH AT RISK | NEW TECHNOL O-GIES AT AG EXT | 1890 FACILITIES | RENEWABLE RESOURCES | INDIAN TRIBAL 1994 COLLEGES | SUSTAINABLE AGRICULTURE | OTHER | TOTAL FEDERAL FUNDS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALABAMA | 7,219,909 | 307,120 | - | - | 4,222,070 | - | 2,217,003 | 384,000 | - | 2,093,762 | 113,069 | - | - | 675,491 | 17,232,424 |
| ALASKA | 1,171,027 | 63,116 | - | - | - | 99,860 | 263,933 | 128,000 | - | - | 76,669 | 85,000 | - | - | 1,887,605 |
| AMERICAN SAMOA | 929,445 | - | - | - | - | - | 104,448 | - | - | - | - | - | - | - | 1,033,893 |
| ARIZONA | 2,148,487 | 202,760 | - | - | - | 648,022 | 700,955 | 728,500 | - | - | 107,802 | 175,000 | - | - | 4,711,526 |
| ARKANSAS | 5,992,806 | 243,815 | 161,978 | - | 1,850,681 | - | 1,417,193 | - | - | 970,227 | 90,436 | - | - | 1,168,912 | 11,896,048 |
| CALIFORNIA | 7,679,293 | 340,986 | 162,000 | - | - | 49,000 | 3,679,442 | 256,000 | - | - | 90,603 | - | - | 1,545,017 | 13,802,341 |
| COLORADO | 3,353,084 | 114,259 | 162,000 | - | - | - | 651,362 | - | - | - | 58,934 | - | - | 552,675 | 4,892,314 |
| CONNECTICUT | 2,145,240 | 87,802 | - | - | - | - | 539,432 | 207,982 | - | - | 46,267 | - | - | 520,026 | 3,546,749 |
| DELAWARE | 1,305,086 | 111,070 | 162,000 | - | 1,161,672 | - | 411,419 | - | - | 743,075 | 58,767 | - | - | 895,337 | 4,848,426 |
| DISTRICT OF COLUMB | 1,165,360 | - | - | - | - | - | 114,425 | - | - | - | 12,500 | - | - | - | 1,292,285 |
| FLORIDA | 4,771,051 | 244,105 | - | - | 1,810,533 | 80,000 | 2,372,413 | 374,860 | - | 980,534 | 91,703 | - | - | 192,000 | 10,917,199 |
| GEORGIA | 7,942,197 | 419,295 | 162,000 | - | 2,523,434 | - | 2,336,283 | 128,000 | - | 1,103,523 | 141,836 | - | 1,065,657 | - | 15,822,225 |
| GUAM | 993,766 | 22,180 | - | - | - | - | 104,687 | - | - | - | 12,500 | - | - | - | 1,133,133 |
| HAWAII | 1,337,693 | 73,818 | - | - | - | - | 349,889 | 128,000 | - | - | 46,267 | - | - | 758,002 | 2,693,669 |
| IDAHO | 2,859,555 | 138,361 | - | - | - | 258,444 | 384,608 | 128,000 | - | - | 52,601 | - | - | - | 3,821,569 |
| ILLINOIS | 9,688,622 | 145,178 | - | - | - | - | 2,186,557 | - | - | - | 53,867 | - | - | 2,446,827 | 14,521,051 |
| INDIANA | 8,947,625 | 240,249 | 644,713 | - | - | - | 1,266,902 | 128,000 | - | - | 51,334 | - | - | 1,525,207 | 12,804,030 |
| IOWA | 9,615,540 | 341,986 | - | - | - | - | 957,743 | 42,850 | - | - | 46,267 | - | - | 570,132 | 11,574,518 |
| KANSAS | 5,784,839 | 93,603 | 162,000 | - | - | - | 761,491 | 568,789 | - | - | 46,267 | 80,000 | - | 192,000 | 7,688,989 |
| KENTUCKY | 9,682,991 | 93,645 | 162,000 | - | 3,155,733 | - | 1,815,212 | 352,850 | - | 1,217,841 | 77,768 | - | - | - | 16,558,040 |
| LOUISIANA | 5,520,189 | 200,000 | - | - | 1,656,301 | - | 2,029,849 | - | - | 910,847 | 87,902 | - | - | 50,000 | 10,455,088 |
| MAINE | 2,324,572 | 218,678 | 149,144 | - | - | - | 500,375 | 128,000 | - | - | 62,735 | - | - | - | 3,383,504 |
| MARYLAND | 3,375,285 | 193,143 | - | - | 1,313,743 | - | 1,031,864 | - | - | 848,249 | 58,767 | - | 227,765 | 958,812 | 8,007,628 |
| MASSACHUSETTS | 2,652,472 | 159,865 | - | - | - | - | 1,044,930 | 109,910 | - | - | 46,267 | - | - | 65,594 | 4,079,038 |
| MICHIGAN | 9,107,734 | 206,009 | - | - | - | 90,000 | 1,849,010 | - | - | - | 74,135 | 195,000 | - | 415,888 | 11,937,776 |
| MICRONESIA | 1,040,166 | - | - | - | - | - | 108,355 | - | - | - | - | - | - | - | 1,148,521 |
| MINNESOTA | 9,415,848 | 292,609 | 161,815 | - | - | 96,000 | 1,052,131 | 388,000 | - | - | 57,668 | 365,183 | 1,065,657 | 2,255,789 | 15,150,700 |
| MISSISSIPPI | 6,917,698 | 87,500 | - | - | 1,975,787 | 79,000 | 1,847,004 | - | - | 975,594 | 98,036 | - | - | 228,488 | 12,209,107 |
| MISSOURI | 8,950,571 | 175,902 | 162,000 | - | 3,184,452 | - | 1,716,641 | - | - | 1,241,078 | 79,035 | - | - | 389,670 | 15,899,349 |
| MONTANA | 2,702,330 | 171,630 | - | - | - | 460,750 | 385,134 | 128,000 | - | - | 60,201 | 847,921 | - | 145,970 | 4,901,936 |
| NEBRASKA | 5,219,404 | 223,305 | 162,000 | - | - | - | 610,251 | 128,000 | 1,488,000 | - | 46,267 | 190,000 | - | 1,703,366 | 9,770,593 |
| NEVADA | 1,274,463 | 131,337 | - | - | - | 97,000 | 282,307 | 128,000 | - | - | 47,534 | - | - | 164,994 | 2,125,635 |
| NEW HAMPSHIRE | 1,748,424 | 167,237 | - | - | - | - | 324,859 | - | - | - | 46,267 | - | - | 358,484 | 2,645,271 |
| NEW JERSEY | 2,774,650 | 151,243 | - | - | - | - | 1,146,959 | 256,000 | - | - | 46,267 | - | - | - | 4,375,119 |
| NEW MEXICO | 2,200,158 | 66,853 | - | - | - | 79,244 | 601,380 | - | - | - | 64,001 | 465,000 | - | 1,198,510 | 4,675,146 |
| NEW YORK | 8,431,852 | 344,633 | - | - | - | - | 3,479,449 | 170,850 | - | - | 84,269 | - | - | 711,971 | 13,223,024 |
| NORTH CAROLINA | 11,898,146 | 330,548 | 161,978 | - | 3,576,796 | 96,000 | 2,670,086 | 256,000 | - | 1,233,345 | 99,302 | - | - | 192,000 | 20,514,201 |
| NORTH DAKOTA | 3,587,176 | 114,758 | - | - | - | 95,000 | 422,480 | 128,000 | - | - | 46,267 | 836,416 | - | - | 5,230,097 |
| NORTHERN MARIANAS | 913,295 | - | - | - | - | - | 104,259 | 76,700 | - | - | - | - | - | - | 1,094,254 |
| OHIO | 10,801,701 | 255,436 | 162,000 | - | - | - | 2,236,377 | - | - | - | 61,468 | - | - | 738,838 | 14,255,820 |
| OKLAHOMA | 5,652,716 | 216,658 | 162,000 | - | 1,950,723 | 95,000 | 1,235,620 | - | - | 1,030,806 | 67,634 | - | - | 67,500 | 10,478,657 |
| OREGON | 3,940,200 | 172,022 | - | - | - | 88,000 | 593,789 | 128,000 | - | - | 83,003 | - | - | 405,450 | 5,410,464 |
| PENNSYLVANIA | 10,256,552 | 417,009 | - | 110,310 | - | - | 2,708,148 | 128,000 | - | - | 80,469 | - | - | 570,249 | 14,270,737 |
| PUERTO RICO | 6,329,018 | - | - | - | - | - | 1,502,903 | - | - | - | 12,500 | - | - | - | 7,844,421 |
| RHODE ISLAND | 1,099,420 | 67,070 | - | - | - | - | 388,621 | 128,000 | - | - | 46,267 | - | - | - | 1,729,378 |
| SOUTH CAROLINA | 5,742,339 | 220,549 | - | - | 1,815,101 | - | 1,865,001 | 170,850 | - | 965,253 | 81,568 | - | 17,767 | 196,487 | 11,074,915 |
| SOUTH DAKOTA | 3,604,037 | 179,003 | - | - | - | 215,000 | 465,308 | 164,000 | - | - | 46,267 | 285,000 | - | 135,690 | 5,094,305 |
| TENNESSEE | 9,061,897 | 185,962 | 162,000 | - | 2,801,842 | - | 2,126,530 | 80,000 | - | 1,150,411 | 82,835 | - | - | - | 15,651,477 |
| TEXAS | 13,137,015 | 343,000 | 160,202 | - | 4,184,310 | - | 4,539,956 | 128,000 | - | 1,543,693 | 104,370 | - | - | 1,110,087 | 25,250,633 |
| UTAH | 1,836,350 | 66,615 | 162,000 | - | - | - | 404,734 | - | - | - | 48,800 | - | 1,065,657 | - | 3,584,156 |
| VERMONT | 1,858,516 | 189,506 | 162,000 | 42,447 | - | - | 320,178 | - | - | - | 46,267 | - | 1,065,657 | - | 3,684,571 |
| VIRGIN ISLANDS | 960,736 | - | - | - | - | - | 104,549 | 102,000 | - | - | 12,500 | - | - | - | 1,179,785 |
| VIRGINIA | 7,236,861 | 201,734 | 162,000 | 85,595 | 2,364,266 | - | 1,849,464 | 128,000 | - | 1,063,747 | 94,236 | - | - | - | 13,185,903 |
| WASHINGTON | 4,315,700 | 137,082 | - | - | - | 145,120 | 790,839 | 170,850 | - | - | 72,869 | 340,000 | - | 2,516,756 | 8,489,216 |
| WEST VIRGINIA | 4,196,278 | 38,209 | 162,000 | - | 1,340,876 | - | 1,141,081 | 383,500 | - | 867,023 | 68,901 | - | - | - | 8,197,868 |
| WISCONSIN | 8,909,619 | 249,284 | 162,000 | - | - | 49,000 | 1,024,088 | 128,000 | - | - | 71,602 | 275,000 | - | 798,684 | 11,667,277 |
| WYOMING | 1,636,607 | 60,481 | 154,743 | - | - | 97,000 | 277,414 | - | - | - | 90,067 | - | - | - | 2,316,312 |
| PEER PANEL/CSAA | - | 3,062 | 675 | - | - | - | - | 3,509 | - | 1,792 | - | - | - | 123,097 | 132,135 |
| SUBTOTAL | 285,363,611 | 9,521,280 | 4,187,248 | 238,352 | 40,888,320 | 2,917,440 | 67,417,320 | 7,296,000 | 1,488,000 | 18,940,800 | 3,552,000 | 4,139,520 | 4,508,160 | 26,544,000 | 477,002,051 |
| FEDERAL ADMINISTRATION | 7,987,500 | 396,720 | 184,400 | - | 1,703,680 | 121,560 | 516,680 | 304,000 | 62,000 | 789,200 | 148,000 | 172,480 | 187,840 | 8,958,000 | 21,532,060 |
| SUBTOTAL OBLIGATIONS | 293,351,111 | 9,918,000 | 4,371,648 | 238,352 | 42,592,000 | 3,039,000 | 67,934,000 | 7,600,000 | 1,550,000 | 19,730,000 | 3,700,000 | 4,312,000 | 4,696,000 | 35,502,000 | 498,534,111 |
| UNOBLIGATED BALANCE | 648,889 | - | - | - | - | - | - | - | - | - | - | - | - | - | 648,889 |
| TOTAL | 294,000,000 | 9,918,000 | 4,371,648 | 238,352 | 42,592,000 | 3,039,000 | 67,934,000 | 7,600,000 | 1,550,000 | 19,730,000 | 3,700,000 | 4,312,000 | 4,696,000 | 35,502,000 | 499,183,000 |

OTHER

| STATE | GRANTS TO YOUTH SERVING INSTITUTIONS | RURAL HEALTH & SAFETY | FEDERAL ADMINISTRATION | FOOD ANIMAL RESIDUE AVOIDANCE DATABASE | WOMEN AND MINORITIES IN STEM FIELDS | MANDATORY PROGRAMS | OTHER |
|---|---|---|---|---|---|---|---|
| ALABAMA | - | - | - | - | - | 675,491 | 675,491 |
| ALASKA | - | - | - | - | - | - | - |
| AMERICAN SAMOA | - | - | - | - | - | - | - |
| ARIZONA | - | - | - | - | - | - | - |
| ARKANSAS | - | - | - | - | - | 1,168,912 | 1,168,912 |
| CALIFORNIA | - | - | - | 384,000 | - | 1,161,017 | 1,545,017 |
| COLORADO | - | - | - | - | - | 552,675 | 552,675 |
| CONNECTICUT | - | - | - | - | - | 520,026 | 520,026 |
| DELAWARE | - | - | - | - | - | 895,337 | 895,337 |
| DISTRICT OF COLUMBIA | - | - | - | - | - | - | - |
| FLORIDA | - | - | - | 192,000 | - | - | 192,000 |
| GEORGIA | - | - | - | - | - | - | - |
| GUAM | - | - | - | - | - | - | - |
| HAWAII | - | - | - | - | - | 758,002 | 758,002 |
| IDAHO | - | - | - | - | - | - | - |
| ILLINOIS | - | - | - | - | - | 2,446,827 | 2,446,827 |
| INDIANA | 288,000 | - | - | - | 149,997 | 1,087,210 | 1,525,207 |
| IOWA | - | 168,330 | - | - | - | 401,802 | 570,132 |
| KANSAS | - | - | - | 192,000 | - | - | 192,000 |
| KENTUCKY | - | - | - | - | - | - | - |
| LOUISIANA | - | - | - | - | - | 50,000 | 50,000 |
| MAINE | - | - | - | - | - | - | - |
| MARYLAND | 282,132 | - | - | - | - | 676,680 | 958,812 |
| MASSACHUSETTS | - | - | - | - | - | 65,594 | 65,594 |
| MICHIGAN | - | - | - | - | - | 415,888 | 415,888 |
| MICRONESIA | - | - | - | - | - | - | - |
| MINNESOTA | - | 103,080 | - | - | - | 2,152,709 | 2,255,789 |
| MISSISSIPPI | - | 158,338 | - | - | - | 70,150 | 228,488 |
| MISSOURI | - | - | - | - | - | 389,670 | 389,670 |
| MONTANA | - | 145,970 | - | - | - | - | 145,970 |
| NEBRASKA | - | - | - | - | - | 1,703,366 | 1,703,366 |
| NEVADA | - | 164,994 | - | - | - | - | 164,994 |
| NEW HAMPSHIRE | - | - | - | - | - | 358,484 | 358,484 |
| NEW JERSEY | - | - | - | - | - | - | - |
| NEW MEXICO | - | - | - | - | - | 1,198,510 | 1,198,510 |
| NEW YORK | 149,868 | - | - | - | - | 562,103 | 711,971 |
| NORTH CAROLINA | - | - | - | 192,000 | - | - | 192,000 |
| NORTH DAKOTA | - | - | - | - | - | - | - |
| NORTHERN MARIANAS | - | - | - | - | - | - | - |
| OHIO | - | 191,209 | - | - | - | 547,629 | 738,838 |
| OKLAHOMA | - | - | - | - | - | 67,500 | 67,500 |
| OREGON | - | - | - | - | - | 405,450 | 405,450 |
| PENNSYLVANIA | - | - | - | - | - | 570,249 | 570,249 |
| PUERTO RICO | - | - | - | - | - | - | - |
| RHODE ISLAND | - | - | - | - | - | - | - |
| SOUTH CAROLINA | - | 196,487 | - | - | - | - | 196,487 |
| SOUTH DAKOTA | - | - | - | - | - | 135,690 | 135,690 |
| TENNESSEE | - | - | - | - | - | - | - |
| TEXAS | - | 198,747 | - | - | 233,324 | 678,016 | 1,110,087 |
| UTAH | - | - | - | - | - | - | - |
| VERMONT | - | - | - | - | - | - | - |
| VIRGIN ISLANDS | - | - | - | - | - | - | - |
| VIRGINIA | - | - | - | - | - | - | - |
| WASHINGTON | - | 109,595 | - | - | - | 2,407,161 | 2,516,756 |
| WEST VIRGINIA | - | - | - | - | - | - | - |
| WISCONSIN | - | - | - | - | - | 798,684 | 798,684 |
| WYOMING | - | - | - | - | - | - | - |
| PEER PANEL/CSAA | - | 3,250 | - | - | 679 | 119,168 | 123,097 |
| SUBTOTAL | 720,000 | 1,440,000 | - | 960,000 | 384,000 | 23,040,000 | 26,544,000 |
| FEDERAL ADMINISTRATION | 30,000 | 60,000 | 7,852,000 | 40,000 | 16,000 | 960,000 | 8,958,000 |
| SUBTOTAL OBLIGATIONS | 750,000 | 1,500,000 | 7,852,000 | 1,000,000 | 400,000 | 24,000,000 | 35,502,000 |
| UNOBLIGATED BALANCE | - | - | - | - | - | - | - |
| TOTAL | 750,000 | 1,500,000 | 7,852,000 | 1,000,000 | 400,000 | 24,000,000 | 35,502,000 |

**Table 2A for FY 2013**
**Distribution of Federal Payments for Extension Activities**

| STATE | SMITH-LEVER FORMULA | PEST MGMT | FARM SAFETY YOUTH FARM SAFETY EDUCATION AND CERTIFICATION | 1890's UNIV & TUSKEGEE UNIV | FEDERALLY-RECOGNIZED TRIBES | EFNEP | YOUTH AT RISK | NEW TECHNOLOGIES AT AG EXT | 1890 FACILITIES |
|---|---|---|---|---|---|---|---|---|---|
| FEDERAL ADMINISTRATION | 8,089 | 399 | 186 | 1,714 | 122 | 533 | 306 | 62 | 794 |
| SUBTOTAL OBLIGATIONS | 8,089 | 399 | 186 | 1,714 | 122 | 533 | 306 | 62 | 794 |
| UNOBLIGATED BALANCE | 287,710 | 9,580 | 4,452 | 41,139 | 2,936 | 67,817 | 7,341 | 1,497 | 19,057 |
| TOTAL | 295,799 | 9,979 | 4,638 | 42,853 | 3,058 | 68,350 | 7,647 | 1,559 | 19,851 |

| | RENEWABLE RESOURCES | Grants to Youth Serving Organizations | SUSTAINABLE AGRICULTURE | RURAL HEALTH & SAFETY | FEDERAL ADM-SPECIAL PROJECTS | Extension Service at 1994 Colleges | Food Animal Residue Avoidance Database | Women and Minorities in STEM Fields | Mandatory Programs a/ | TOTAL FEDERAL FUNDS |
|---|---|---|---|---|---|---|---|---|---|---|
| FEDERAL ADMINISTRATION | 149 | 30 | 189 | 60 | 7,900 | 174 | 40 | 16 | 200 | 20,963 |
| SUBTOTAL OBLIGATIONS | 149 | 30 | 189 | 60 | 7,900 | 174 | 40 | 16 | 200 | 20,963 |
| UNOBLIGATED BALANCE | 3,574 | 725 | 4,536 | 1,449 | 0 | 4,164 | 966 | 386 | 4,800 | 462,129 |
| TOTAL | 3,723 | 755 | 4,725 | 1,509 | 7,900 | 4,338 | 1,006 | 402 | 5,000 | 483,092 |

*a/ Mandatory Programs includes: Beginning Farmer and Ranchers Development, Risk Management*



**Table 3A for FY 2014**
**Distribution of Federal Payments for Extension Activities**

| STATE | SMITH-LEVER FORMULA | 1890's UNIV & TUSKEGEE UNIV | FARM SAFETY YOUTH FARM SAFETY EDUCATION AND CERTIFICATION | FEDERALLY-RECOGNIZED TRIBES | EFNEP | YOUTH AT RISK | NEW TECHNOLOGIES AT AG EXT |
|---|---|---|---|---|---|---|---|
| FEDERAL ADMINISTRATION | 8,017 | 1,704 | 184 | 121 | 517 | 336 | 70 |
| SUBTOTAL OBLIGATIONS | 8,017 | 1,704 | 184 | 122 | 517 | 336 | 70 |
| UNOBLIGATED BALANCE | 285,983 | 40,888 | 4,426 | 2,917 | 67,417 | 8,059 | 1,680 |
| TOTAL | 294,000 | 42,592 | 4,610 | 3,039 | 67,934 | 8,395 | 1,750 |

| | 1890 FACILITIES | RENEWABLE RESOURCES | SUSTAINABLE AGRICULTURE | FEDERAL ADM-SPECIAL PROJECTS | INDIAN TRIBAL 1994 COLLEGES | omen and Minorities in STEM Fields | landatory Programs a | TOTAL FEDERAL FUNDS |
|---|---|---|---|---|---|---|---|---|
| FEDERAL ADMINISTRATION | 789 | 162 | 0 | 8,615 | 172 | 0 | 200 | 20,887 |
| SUBTOTAL OBLIGATIONS | 789 | 162 | 0 | 8,615 | 172 | 0 | 200 | 20,887 |
| UNOBLIGATED BALANCE | 18,941 | 3,898 | 0 | 0 | 4,140 | 0 | 4,800 | 443,149 |
| TOTAL | 19,730 | 4,060 | 0 | 8,615 | 4,312 | 0 | 5,000 | 464,036 |

*a/ Mandatory Programs includes: Risk Management*

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE
EXTENSION ACTIVITIES

Classification by Objects

(Dollars in thousands)

| Personnel Compensation: | 2011 Actual | 2012 Actual | 2013 Estimate | 2014 Estimate |
|---|---|---|---|---|
| Washington D.C. | $12,810 | $11,564 | $11,594 | $11,729 |
| 11.1 - Full-time employees | 12,810 | 11,564 | 11,594 | 11,729 |
| 12.0 - Personnel Benefits | 3,113 | 3,072 | 3,080 | 3,115 |
| 13.0 - Benefits for former personnel | - | 241 | 241 | 241 |
| Total, personnel comp. and benefits | 15,923 | 14,877 | 14,915 | 15,085 |
| Other Objects: | | | | |
| 21.0 - Travel & Transportation of Persons | 973 | 691 | 1,335 | 1,335 |
| 22.0 - Transportation of Things | 1 | - | - | - |
| 23.1 - Rent to GSA | 1 | - | - | - |
| 23.2 - Rent Paid to Others | - | - | - | - |
| 23.3 - Comm., Util., Misc. Charges | 528 | 178 | 178 | 178 |
| 24.0 - Printing and Reproduction | 61 | 25 | 28 | 28 |
| 25.1 - Advisory and Assistance Services | 69 | 25 | 25 | 25 |
| 25.2 - Other Services from non-Federal sources | 2,456 | 2,421 | 2,421 | 2,421 |
| 25.3 - Purchases of Goods and Services | 14 | - | - | - |
| 25.4 - Oper & Maintenance of Facilities | 986 | 1,672 | 1,672 | 1,672 |
| 25.5 - Research & Development Contracts | 790 | 1,389 | 1,389 | 1,389 |
| 25.6 - Medical Care | - | 2 | 2 | 2 |
| 25.7 - Operation & Maint. of Equipment | - | - | - | - |
| 25.8 - Subsistence & Support of Persons | - | - | - | - |
| 26.0 - Supplies and Materials | 130 | 86 | 125 | 125 |
| 31.0 - Equipment | 69 | 48 | 48 | 48 |
| 41.0 - Grants, Subsidies & Contributions | 468,328 | 481,765 | 466,088 | 441,729 |
| Total, Other Objects | 474,406 | 488,302 | 473,311 | 448,952 |
| 99.9 - Total, new obligations | 490,329 | 503,179 | 488,226 | 464,037 |
| Position Data: | | | | |
| Average Salary (dollars), ES positions | $170,866 | $164,627 | $165,450 | $167,105 |
| Average Salary (dollars), GS positions | $94,404 | $91,979 | $92,439 | $93,363 |
| Average Grade, GS positions | 11.3 | 11.4 | 11.4 | 11.4 |

**EXTENSION ACTIVITIES:**

**Current Activities:**

1. Smith-Lever 3(b) and (c). Federal contributions for cooperative extension work are primarily derived from Section 3(b) and (c) formula funds appropriated under the Smith-Lever Act of 1914. These funds comprise about two-thirds of the total Federal funding for extension activities. Federal funds are matched by non-Federal sources, primarily States and counties, and support the major educational efforts that are central to the mission of the Cooperative Extension System and common to most extension units, such as agricultural production; nutrition, diet, and health; natural resources and environmental management; community resources and economic development; family development and resource management; 4-H and youth development; and leadership and volunteer development. Smith-Lever 3(b) and (c) funds must be matched by non-Federal funds. As a result of provisions contained in AREERA, States must expend 25 percent, or two times the level spent in FY 1997 (whichever is less), on cooperative extension activities in which two or more States cooperate to solve problems that concern more than one State. This also applies to activities that integrate cooperative research and extension.

2. Smith-Lever 3(d). Other sources of Federal funding for extension activities include the Smith-Lever section 3(d) or targeted funds, which are provided to the States to address special programs or concerns of regional and national importance and are distributed through administrative or non-statutory formulas and merit-reviewed projects. The following extension programs are funded under the Smith-Lever 3(d) funding mechanism: Expanded Food and Nutrition Education Program (EFNEP); Pest Management; Farm Safety and Youth Farm Safety Education and Certification; Children, Youth, and Families At Risk; Federally-Recognized Tribes Extension Program; Sustainable Agriculture; and New Technologies for Agricultural Extension. EFNEP funds are distributed on a formula basis and are not required to be matched. Funds under other Smith-Lever 3(d) programs are distributed on a competitive process.

3. Payments to the 1890 Land-Grant Institutions and Tuskegee University and West Virginia State University. Federal funding provides the primary support for the extension programs at the 1890 Land-Grant Institutions and Tuskegee University. The general provisions section 753 of Public Law 107-76 makes West Virginia State University eligible to receive funds under this program. This program primarily addresses the needs of small-scale and minority agricultural producers and other limited-resource audiences. Section 1444 of the 1977 Farm Bill provides that the funds made available to the 1890's for extension programs be distributed on the basis of a formula identical to the Smith-Lever 3 (b) & (c) formula. Section 7121of FCEA amended section 1444(a)(2) to require that funds appropriated for this program shall be not less than 20 percent of the Smith-Lever Act appropriation. The payment of funds under this program requires a 100 percent non-Federal match. These funds are used to maintain the extension infrastructure at the 1890 institutions and the partnership with the Cooperative Extension System.

4. 1890 Facilities Program. Federal funds provide the primary support for enhanced extension, research, and teaching facilities at all of the 1890 Land-Grant Institutions. Some examples of the use of funds include the renovation of office space and laboratories; much needed computer and equipment purchases; the acquisition of satellite downlinking and distance learning capabilities; and the construction of joint research and extension multi-purpose/conference centers. The 1890 Facilities Program enables the 1890 Land-Grant Institutions to improve their capacity and better address the needs of students, farmers, and rural populations with limited resources.

5. Renewable Resources Extension Act (RREA). RREA provides funding for expanded natural resource education programs. Funds are distributed primarily by an administratively-derived formula to all States for educational programs and projects and a limited number of special emphasis national programs. The

Cooperative Extension System provides research-based education about renewable natural resources. Extension education enables the management of renewable natural resources in a way that better serves individual land owners, local communities, and the Nation.

6. Rural Health and Safety Education. The program helps rural residents avoid the numerous obstacles to maintaining their health status. The program focuses on training health care professionals in rural areas.

7. Agriculture in the Classroom. The program helps advance agricultural literacy through a grassroots network of State coordinators, school teachers, agribusiness leaders, and other educators by supporting initiatives that include expanding outreach to underrepresented populations; regional demonstration projects; integration of information technology to reduce program delivery costs; and outstanding teacher recognition initiatives.

8. Extension Services at 1994 Institutions. The program provides funding for Native American communities and Tribal Colleges for extension activities as set forth in the Smith Lever Act. Funding is awarded on a competitive basis.

9. Food Animal Residue Avoidance Database Program. The program is a computer-based decision support system designed to provide livestock producers, extension specialists, and veterinarians with practical information on how to avoid drug, pesticide, and environmental contaminant residue problems.

10. Grants to Youth Serving Institutions. The program provides grants to the Girl Scouts of the United States of America, Boy Scouts of America, National 4-H Council, and the National Future Farmers of America Organization to expand the programs carried out by the organizations in rural areas and small towns.

11. Women and Minorities in Science, Technology, Engineering, and Mathematics (STEM) Fields. The program supports projects to increase the participation of women and underrepresented minorities from rural areas in STEM fields that are relevant to USDA. Priorities identified include: promotion of a safe, sufficient, and nutritious food supply for all Americans and for people around the world; sustainable agricultural policies that foster economic viability for small and mid-sized farms and rural businesses, protect natural resources, and promote value-added agriculture; national leadership in climate change mitigation and adaptation; building a modern workplace with a modern workforce; and support for 21st century rural communities.

Selected Examples of Recent Progress:

1. Smith-Lever 3(b) and (c). Beef producers are facing continually rising feed costs which represents 50 to 80 percent of production cost for livestock producers. Thus, tools to lower feed cost while meeting nutritional requirements are needed. Kansas State University and Iowa State University researchers created a beef ration formulation package and made it available to all extension agents in Kansas. The extension agents are using the tool to help beef producers lower feed costs with prudent, effective supplementation programs and forage management systems. Several producers were able to incorporate wet distillers dried grains with solubles into their operation to save $1,200 and $10,000 on their feed costs.

2. Smith-Lever 3(d). The Expanded Food and Nutrition Education Program (EFNEP) continues to be highly effective in changing participants' behaviors, resulting in significant improvements in daily living skills. Each year EFNEP enrolls more than half a million new program participants. Last year, 94 percent of adults reported improvements in their diets including consuming the equivalent of nearly one additional cup of fruits and vegetables, 83 percent of recent graduates improved food management practices, 89 percent improved nutrition practices, and 66 percent improved food safety practices. Multiple cost-benefit studies in past years show that every dollar invested in EFNEP results in from $3.63 to $10.64 in saved health care costs and $2.48 saved in food expenditures. State success examples include: the University of Wyoming reporting 90 percent, Alabama A&M University reporting 96 percent, and American Samoa reporting 99 percent of its EFNEP families improving in one or more nutritional practices.

3. Federally-Recognized Tribes Extension Program. The University of Nevada Cooperative Extension (UNCE) provided education and training in agricultural planning, management, and production, natural resource

conservation, food security, alternative energy, and 4-H youth development to Washoe, Shoshone, and Paiute tribal residents of the Duck Valley Shoshone-Paiute, Walker River Paiute, and the Pyramid Lake Paiute reservations located in Northern Nevada. UNCE efforts resulted in 911 acres being improved through land leveling and pipeline cost share practices on the reservations.

4. 1890 Institutions. The rising cost of feed has dramatically increased the cost of catfish production. It is difficult to pass these cost increases through to end consumers, given market structures and conditions. Because of this, farm-level profits have decreased. A financial management program that focuses on financial analysis and management of catfish farms was initiated in Arkansas. One-on-one assistance to develop a long-term business plan was offered to the farmers. More than 119 long-term business plans were developed by program participants. They learned how to prepare and analyze financial analyses and indicators to set specific goals for the coming year and how to project likely outcomes from any implemented changes. Many participants identified ways to either better pay their debt or how to increase revenue.

5. Women and Minorities in Science, Technology, Engineering and Mathematics (STEM) Fields. Minnesota's SciGirls STEM Network program encourages girls to consider careers in STEM fields. Educators who used the network material reported improvements in their students which includes: learning to collaborate, asking questions, gaining confidence in presenting their work, taking leadership when working with boys, sharing lessons with their family, and expressing greater interest in science and health careers. In addition, educators appreciated the hands-on and user-friendly nature of the activities, the activities' inquiry learning value and cultural appropriateness, and the connections the students were able to make between the activities and other aspects of their school, community, and home life.

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Integrated Activities

The estimates include appropriation language for this item as follows:

Integrated Activities

*For the integrated research, education, and extension grants programs, including necessary administrative expenses, $28,129,000, as follows: for competitive grants programs authorized under section 406 of the Agricultural Research, Extension, and Education Reform Act of 1998 (7 U.S.C. 7626), $21,143,000, including $4,000,000 for the organic transition program and $17,143,000 for crop protection; $998,000 for the regional rural development centers program; and $5,988,000 for the Food and Agriculture Defense Initiative authorized under section 1484 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977, to remain available until September 30, 2015.*

INTEGRATED ACTIVITIES
Lead-Off Tabular Statement

| | |
|---|---|
| 2013 Estimate | $21,613,000 |
| Budget Estimate, 2014 | 28,129,000 |
| Change in Appropriation | 6,516,000 |

Summary of Increases and Decreases
(Dollars in thousands)

| Item of Change | 2011 Actual | 2012 Change | 2013 Change | 2014 Change | 2014 Estimate |
|---|---|---|---|---|---|
| Discretionary Appropriations: | | | | | |
| Water Quality | $8,982 | -$4,482 | $28 | -$4,528 | - |
| International Science and Education Grants Program | 998 | -998 | - | - | - |
| Crop Protection/Pest Management | - | - | - | 17,143 | 17,143 |
| Food Safety | 10,978 | -10,978 | - | - | - |
| Regional Pest Management Centers | 2,994 | 1,006 | 24 | -4,024 | - |
| Regional Rural Development Centers Program | 998 | - | 6 | -6 | 998 |
| Food and Agriculture Defense Initiative (Homeland Security) | 5,988 | - | 37 | -37 | 5,988 |
| Methyl Bromide Transition Program | 1,996 | - | 12 | -2,008 | - |
| Organic Transition Program | 3,992 | 8 | 24 | -24 | 4,000 |
| Total, Appropriation or Change | 36,926 | -15,444 | 131 | +6,516 | 28,129 |

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INTEGRATED ACTIVITIES
Project Statement
Adjusted Appropriations Detail and Staff Years (SY)
(Dollars in thousands)

| Program | 2011 Actual | | 2012 Actual | | 2013 Estimate | | Inc. or Dec. | | 2014 Estimate | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Amount | SY | Amount | SY | Amount | SY | Amount | SY | Amount | SY |
| Discretionary Appropriations: | | | | | | | | | | |
| Food Agriculture Defense Initiative (Homeland Security)…… | $5,988 | | $5,988 | | $6,025 | | -$37 | | $5,988 | |
| Water Quality…… | 8,982 | | 4,500 | | 4,528 | | -4,528 | | - | |
| Crop Protection/Pest Management…….. | - | | - | | - | | +17,143 | | 17,143 | |
| Food Safety……. | 10,978 | | - | | - | | - | | - | |
| Regional Pest Management Centers…… | 2,994 | | 4,000 | | 4,024 | | -4,024 | | - | |
| Organic Transition Program…….. | 3,992 | | 4,000 | | 4,024 | | -24 | | 4,000 | |
| Methyl Bromide Transition Program….. | 1,996 | | 1,996 | | 2,008 | | -2,008 | | - | |
| Regional Rural Development Centers Program…… | 998 | | 998 | | 1,004 | | -6 | | 998 | |
| International Science and Education Grants Program……. | 998 | | - | | - | | - | | - | |
| Subtotal | 36,926 | - | 21,482 | - | 21,613 | - | +6,516 | - | 28,129 | - |
| Mandatory Appropriations: | | | | | | | | | | |
| Specialty Crop Grant Programs Sec. 7311……. | 50,000 | | 50,000 | | - | | - | - | - | |
| Organic Research Initiative Sec. 7206…… | 20,000 | | 20,000 | | - | | - | - | | |
| Subtotal | 70,000 | - | 70,000 | - | - | - | - | - | - | - |
| Total Adjusted Approp | 106,926 | 8 | 91,482 | 8 | 21,613 | 8 | +6,516 | 1 | 28,129 | 9 |
| Recissions and Transfers (Net) | 74 | | - | | - | | - | | - | |
| Total Appropriation | 107,000 | 8 | 91,482 | 8 | 21,613 | 8 | +6,516 | 1 | 28,129 | 9 |
| Rescission | -74 | | - | | - | | - | | - | |
| Bal. Available, SOY | 1,160 | | 416 | | 494 | | -494 | | - | |
| Recoveries, Other(Net) | 88 | | 644 | | - | | - | | - | |
| Total Available | 108,174 | 8 | 92,542 | 8 | 22,107 | 8 | +6,022 | 1 | 28,129 | 9 |
| Lapsing Balances | - | | -482 | | - | | - | | - | |
| Bal. Available, EOY | -416 | | -494 | | - | | - | | - | |
| Total Obligations | 107,758 | 8 | 91,566 | 8 | 22,107 | 8 | +6,022 | 1 | 28,129 | 9 |

INTEGRATED ACTIVITIES
NATIONAL INSTITUTE OF FOOD AND AGRICULTURE
Project Statement
Obligations Detail and Staff Years (SY)
(Dollars in thousands)

| Programs | 2011 Actual Amount | SY | 2012 Actual Amount | SY | 2013 Estimate Amount | SY | Inc. or Dec. Amount | SY | 2014 Estimate Amount | SY |
|---|---|---|---|---|---|---|---|---|---|---|
| Discretionary Obligations: | | | | | | | | | | |
| Food and Agriculture Defense Initiative (Homeland Security)…….. | $5,898 | - | $5,838 | - | $6,265 | - | -277 | - | $5,988 | - |
| Water Quality……. | 8,982 | - | 4,488 | - | 4,528 | - | -4,528 | - | - | - |
| Crop Protection/Pest Management…….. | - | - | - | - | - | - | +17,143 | - | 17,143 | - |
| Food Safety……. | 10,978 | - | - | - | - | - | - | - | - | - |
| Regional Pest Management Centers…… | 2,994 | - | 4,000 | - | 4,024 | - | -4,024 | - | - | - |
| Organic Transition Program…….. | 3,992 | - | 4,000 | - | 4,024 | - | -24 | - | 4,000 | - |
| Methyl Bromide Transition Program……. | 1,996 | - | 1,996 | - | 2,008 | - | -2,008 | - | - | - |
| Critical Issues Program…….. | 679 | - | - | - | - | - | - | - | - | - |
| Regional Rural Development Centers Program……. | 998 | - | 998 | - | 1,004 | - | -6 | - | 998 | - |
| International Science and Education Grants Program…… | 1,240 | - | 246 | - | 255 | - | -255 | - | - | - |
| Subtotal…… | 37,758 | - | 21,566 | - | 22,107 | - | +6,022 | - | 28,129 | - |
| Mandatory Obligations: | | | | | | | | | | |
| Specialty Crop Grant Program…. | 50,000 | - | 50,000 | - | - | - | - | - | - | - |
| Organic Research Initiative…… | 20,000 | - | 20,000 | - | - | - | - | - | - | - |
| Subtotal……. | 70,000 | - | 70,000 | - | - | - | - | - | - | - |
| Total Obligations……. | 107,758 | 8 | 91,566 | 8 | 22,107 | 8 | +6,022 | 1 | 28,129 | 9 |
| Lapsing Balances……. | - | - | 482 | - | - | - | - | - | - | - |
| Balance Available, EOY…….. | 416 | - | 494 | - | - | - | - | - | - | - |
| Total Available……. | 108,174 | 8 | 92,542 | 8 | 22,107 | 8 | +6,022 | 1 | 28,129 | 9 |
| Transfers In……. | - | - | - | - | - | - | - | - | - | - |
| Transfers Out…….. | - | - | - | - | - | - | - | - | - | - |
| Recoveries, Other (Net)…… | -88 | - | -644 | - | - | - | - | - | - | - |
| Rescission……. | 74 | - | - | - | - | - | - | - | - | - |
| Balance Available, SOY…….. | -1,160 | - | -416 | - | -494 | - | 494 | - | - | - |
| Total Appropriations…….. | 107,000 | 8 | 91,482 | 8 | 21,613 | 8 | +6,516 | 1 | 28,129 | 9 |

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Justification of Increases and Decreases

INTEGRATED ACTIVITIES

1. A decrease of $4,528,000 to eliminate Water Quality ($4,528,000 available in 2013) as follows:

   In 2014, NIFA proposes that the competitive grants formerly supported under the Water Quality program be supported under AFRI's new Water and Water Resources challenge area. This will allow efficiency in management and alignment of medium to long-term research goals with scientific opportunities and directions. The administration of the program activities under AFRI is a means to streamline the NIFA budget portfolio. This approach will facilitate the linking of agricultural science with broad biological science opportunities.

2. A decrease of $2,008,000 to eliminate Methyl Bromide Transition Program ($2,008,000 available in 2013) as follows:

   A decrease is proposed so funding can be directed to support higher priority activities, and is consistent with the Administration's policy to redirect available resources, as appropriate, and consistent with the agency mission, from lower-priority areas to other science and technology activities. Alternative funding from other NIFA programs, State and local governments, and private sources can be used to support aspects of the program deemed to be of priority at State and/or local levels. Alternatives to methyl bromide research may be addressed through the Research and Education Activities' Minor Crop Pest Management, IR-4 program and a comprehensive integrated pest management strategy funded under the Integrated Activities' Crop Protection/Pest Management program. In addition to these funding options through NIFA grants, the Agricultural Research Service conducts in-house research to find solutions.

3. A decrease of $4,024,000 to consolidate Regional Pest Management Centers in a new program ($4,024,000 available in 2013) as follows:

   A decrease is proposed to direct funding to support a new program, called Crop Protection/Pest Management, to consolidate integrated pest management activities. The consolidation will enhance NIFA's ability to support research, education, and extension activities needed to ensure a global food security and respond to other major societal challenges.

4. A decrease of $24,000 for Organic Transition Program ($4,024,000 available in 2013) as follows:

   Outcomes

   Base funding supports the development and implementation of biologically based pest management practices that mitigate the ecological, agronomic and economic risks associated with a transition from conventional to organic agricultural production systems. Program activities support REE Action Plan Goal 1. Funding for the program is maintained at the enacted FY 2012 level.

5. An increase of $17,143,000 for Crop Protection/Pest Management (CP/PM) ($0 available in 2013) as follows:

   In 2013, $17,944,000 under the individual integrated pest management (IPM) programs supported these activities.

   Over the past 40 years, NIFA and its predecessor agencies have made key investments in research and extension efforts that resulted in the development and implementation of IPM strategies that revolutionized the way agricultural pests are managed in the United States. IPM strategies provide a holistic approach to managing pests that may include cultural, genetic, biological, chemical, and other methods applied as a

suite of tactics that together minimize losses due to pests. The result is a reduction in chemical inputs leading to improved economics for the user as a result of reduced costs due to pest control and reduced risk to the environment and human health due to chemical exposure. Previously, these programs have provided fragmented support to address these as separate efforts. The budget consolidation is proposed in response to portfolio reviews, stakeholder input and community feedback that identified a need for a more integrated and strategic approach to the development of pest management strategies needed to ensure global food security and effectively respond to other major societal challenges. By consolidating the Expert IPM Decision Support System, IPM and Biological Control, Pest Management Alternatives, Smith-Lever 3(d) Pest Management, and Regional Pest Management Centers programs into a single program, NIFA will enhance its ability to support the synergistic research, education and extension activities needed to ensure global food security.

Outcomes

The CP/PM Program will develop and help end-users discover and implement effective, affordable, and environmentally-sound IPM strategies to reduce economic, environmental, and societal losses caused by diseases, insects, weeds, and other pests that affect crops and livestock and pests that affect human well-being and community vitality. The IPM strategies developed by the program will identify new science-based knowledge and optimize its use so that cultural methods, biological control, host plant resistance, and chemical control can be used affordably, effectively, and safely. A variety of tactics will be employed in an integrated strategy, including early detection, identification, monitoring, and implementation of biologically-based and area-wide approaches to manage key native and invasive species and postharvest pests that cost Americans hundreds of millions of dollars annually in control costs and lost productivity. The CP/PM Program will provide support for projects that respond to pest management challenges with coordinated state-based, region-wide and national research, education and extension programs, and will serve as a catalyst for promoting further development and use of IPM approaches. The result will be regional and national team building efforts, communication networks, and enhanced stakeholder participation.

The CP/PM Program will provide support for research, extension and education addressing five program areas and funded through a mixture of national and regional competitive grant competitions:

A. Plant Protection Tactics and Tools. This program area will support the discovery, development and introduction of new pest management tactics for use in integrated pest management systems. In some cases, the program will facilitate development of new tactics that provide the breakthrough needed to fundamentally change a pest management system, resulting in greater profitability and smaller environmental and health risks. In other cases, the program will support the introduction of a new replacement tactic when a critical tactic is no longer available due to development of resistance to pesticides, regulatory action or marketing decisions of manufacturers. The loss of a key management tactic can have devastating impacts on productivity, product quality and profitability. Single tactics can be critical to a pest control system. Often one tactic provides the majority of the control and other methods slightly increase response while protecting the longevity of the efficacy of the tactic. Examples of key single tactics that may no longer be available to agricultural producers are methyl bromide fumigation, which is targeted for discontinuation by international agreement; glyphosate weed control, which is losing efficacy due to the development of resistant weed populations; and a large number of highly effective herbicides (such as 2,4-D and atrazine), insecticides (such as carbaryl and malathion), and fungicides (such as mancozeb and triadimefon) that are under registration review since they may serve as endocrine disruptors posing a risk to people and the environment through food, water, residential use, or occupational use pathways.

B. Diversified IPM Systems. Diversified IPM systems represent the long-term sustainable solution to many pest management problems. This program area will support long-term projects focused on the development and implementation of innovative IPM systems on an area or landscape basis. Diversified IPM systems incorporate multiple tactics and take into account all factors relevant to entire production systems, including the effect of cropping sequences, livestock production, and the

influence of external factors on the system. The outcomes associated with IPM systems projects will be reduced reliance on single pest management tactics, the reduction of potential risks to human health and the environment caused by pests or the use of pest management practices, and increased economic benefits of adopting IPM practices. IPM systems projects will often be multi-state or regional in scale and will involve multiple managed ecosystems with emphasis on enhanced stability and sustainability of IPM systems. The projects supported will be broad and systems-oriented efforts, with involvement of relevant disciplinary and subject matter experts in plant and animal sciences, water quality, food safety, and other relevant areas.

C. Enhancing Agricultural Biosecurity. This program area will support the development and maintenance of key information systems, networks, and decision support tools that provide the knowledge infrastructure needed for early detection and the application of science-based IPM systems for invasive, emerging and high-consequence pests that threaten U.S. agriculture. Early warning and decision support systems such as the Pest Information Platform for Extension and Education (ipmPIPE) have had a direct effect in biosecurity. This program will support formal and informal education/training programs, and the development of pest management data and information needed by pest managers, regulatory agencies and policy makers to improve their ability to respond appropriately to endemic and exotic pests and diseases. Agricultural Biosecurity could include development of new methods or the implementation of proven research in preparation for or a strategy against a known or expected threat.

D. IPM for Sustainable Communities. Much of the IPM knowledge and expertise developed for agricultural systems has direct application in non-traditional settings. As IPM becomes more relevant in the areas that are fringe to agricultural crop production, much of what is learned can be applied to less traditional areas of food production and quality of life on the rural-urban interface. In recent years, interest has grown in local foods, organics, and urban food production in community supported agriculture, rooftop and neighborhood gardens, and high tunnel production in and around urban areas. IPM discoveries have application for urban pests (including Asian long-horned beetle, emerald ash borer, brown marmorated stinkbug, and laurel wilt) and in community gardens. In addition, knowledge gained from IPM research focused on crop protection can be applied to pest management efforts in structures and within living spaces in schools and homes.

E. Development of the Next Generation of IPM Scientists. This program area will support predoctoral and post doctoral education programs needed to prepare the next generation of IPM scientists. The IPM workforce is aging and students are challenged to find all of the appropriate training at any one given institution. The CP/PM Program will support training programs for interdisciplinary IPM scientists and IPM discipline experts such as molecular systematists who are able to link to traditional methods. Support also will be provided for curriculum development, including distance education approaches to deliver web-based courses that address the intent of this program area.

Stakeholder -Guidance

NIFA solicited formal comment from the public in the spring of 2012 and received feedback from universities, commodity groups, grower associations, industry and individuals. During the comment period and before, NIFA heard many comments encouraging the consolidation of lines that had related, similar or overlapping purposes. Among the many comments received about the FY2013 proposal, a substantial number advised against the inclusion of the Minor Crops/IR-4 program in the consolidation. The consensus was that the program was sufficiently unique that it should stand alone. Comments were very favorable for the identification of the program functions defined under outcomes. As such, those areas are retained with additional explanation. Of particular note were favorable comments on the acknowledgement that IPM is a principle that can and should be explored throughout society, with application in cities, schools, housing and structures and that inclusion of these programs brings the expertise available in the university system to bear against societal problems that affect human health and food security. Stakeholders were encouraged by the scope of the CP/PM program to develop new tactics and tools for application in IPM systems; integrating old and new tactics into diversified IPM systems; address

agrosecurity issues and invasive pests that threaten our food security and way of life and the importance of cities as a reservoir for pests of broader concern and recognizing pest issues that are unique to where much of our population resides; and improving on the training for the next generation of scientists that will lead us forward in dealing with inevitable pest introductions that will limit food production and our quality of life in the future. NIFA was encouraged to continue to offer opportunities for the same kinds of research and extension that have been served by existing programs. NIFA will consider additional comments as they are received, using that guidance for the final structure of the Crop Protection/Pest Management program and the design of the associated Requests for Applications (RFAs).

Program activities support REE Action Plan Goal 1.

6. A decrease of $6,000 for Regional Rural Development Centers ($1,004,000 available in 2013) as follows:

Outcomes

Base funding provides support to four regional centers in Pennsylvania, Mississippi, Utah, and Michigan. Programs are designed to improve the social and economic well-being of rural communities in their respective regions. These funds are distributed according to the extent of the problem that requires attention in each state. Program activities support REE Action Plan Goal 7. Funding for the program is maintained at the enacted FY 2012 level.

7. A decrease of $37,000 for Food and Agriculture Defense Initiative ($6,025,000 available in 2013) as follows:

Outcomes

Base funding supports the National Plant Diagnostic Network and the National Animal Health Laboratory Network to identify and respond to high risk biological pathogens in the food and agricultural system. The networks will be used to increase the ability to protect the Nation from plant and animal disease threats by surveillance, early detection, mitigation, and recovery functions that serve to minimize the threats. The Extension Disaster Education Network (EDEN) also is supported under this program. EDEN is a national effort led by state Cooperative Extension Service (CES) to provide disaster education resources for CES educators to assist farmers and other public sectors in the event of disasters, including agricultural disasters. Program activities support REE Action Plan Goal 1. Funding for the program is maintained at the enacted FY 2012 level.

**NATIONAL INSTITUTE OF FOOD AND AGRICULTURE**
**INTEGRATED PROGRAMS**

**TABLE 1B - FISCAL YEAR 2012**

| STATE | HOMELAND SECURITY | ORGANIC RESEARCH AND EXTENSION INITIATIVE | METHYL BROMIDE | ORGANIC TRANSITION RISK ASSESSMENT | REGIONAL PEST MANAGEMENT CENTERS | RURAL DEVELOPMENT CENTERS | WATER QUALITY | SPECIALITY CROP RESEARCH INITIATIVE | TOTAL FEDERAL FUNDS |
|---|---|---|---|---|---|---|---|---|---|
| ALABAMA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALASKA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AMERICAN SAMOA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARIZONA | 182,000 | 1,072,766 | 0 | 0 | 0 | 0 | 0 | 0 | 1,254,766 |
| ARKANSAS | 0 | 586,235 | 0 | 0 | 0 | 0 | 0 | 827,745 | 1,413,980 |
| CALIFORNIA | 682,000 | 0 | 455,000 | 0 | 951,455 | 0 | 0 | 4,281,321 | 6,369,776 |
| COLORADO | 182,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 182,000 |
| CONNECTICUT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| DELAWARE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,573,112 | 1,573,112 |
| DISTRICT OF COLUMBIA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FLORIDA | 682,000 | 0 | 360,185 | 0 | 0 | 0 | 0 | 9,465,453 | 10,507,638 |
| GEORGIA | 182,000 | 0 | 0 | 0 | 0 | 0 | 0 | 1,335,515 | 1,517,515 |
| GUAM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HAWAII | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IDAHO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ILLINOIS | 0 | 0 | 0 | 0 | 951,455 | 0 | 0 | 0 | 951,455 |
| INDIANA | 511,000 | 0 | 0 | 0 | 0 | 0 | 0 | 3,027,747 | 3,538,747 |
| IOWA | 182,000 | 0 | 0 | 0 | 0 | 0 | 621,000 | 1,582,002 | 2,385,002 |
| KANSAS | 531,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 531,000 |
| KENTUCKY | 31,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31,000 |
| LOUISIANA | 182,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 182,000 |
| MAINE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MARYLAND | 0 | 0 | 0 | 1,049,489 | 0 | 0 | 631,500 | 3,696,865 | 5,377,854 |
| MASSACHUSETTS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MICHIGAN | 606,940 | 0 | 181,403 | 0 | 0 | 237,445 | 0 | 3,210,129 | 4,235,917 |
| MICRONESIA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MINNESOTA | 31,000 | 2,994,692 | 0 | 0 | 0 | 0 | 314,000 | 2,136,489 | 5,476,181 |
| MISSISSIPPI | 31,000 | 0 | 0 | 0 | 0 | 237,444 | 0 | 0 | 268,444 |
| MISSOURI | 0 | 0 | 0 | 0 | 0 | 0 | 414,000 | 0 | 414,000 |
| MONTANA | 0 | 1,499,815 | 0 | 0 | 0 | 0 | 0 | 0 | 1,499,815 |
| NEBRASKA | 31,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31,000 |
| NEVADA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NEW HAMPSHIRE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NEW JERSEY | 31,000 | 2,672,327 | 0 | 0 | 0 | 0 | 0 | 0 | 2,703,327 |
| NEW MEXICO | 31,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31,000 |
| NEW YORK | 682,000 | 1,962,562 | 0 | 676,385 | 951,455 | 0 | 0 | 2,471,807 | 6,744,209 |
| NORTH CAROLINA | 182,000 | 1,262,855 | 0 | 371,834 | 951,455 | 0 | 0 | 1,298,023 | 4,066,167 |
| NORTH DAKOTA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NORTHERN MARIANAS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OHIO | 31,000 | 420,636 | 0 | 749,170 | 0 | 0 | 660,000 | 0 | 1,860,806 |
| OKLAHOMA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OREGON | 31,000 | 539,344 | 0 | 0 | 0 | 0 | 588,229 | 0 | 1,158,573 |
| PENNSYLVANIA | 31,000 | 659,220 | 477,265 | 0 | 0 | 237,444 | 0 | 1,442,481 | 2,847,410 |
| PUERTO RICO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RHODE ISLAND | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SOUTH CAROLINA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SOUTH DAKOTA | 31,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31,000 |
| TENNESSEE | 31,000 | 1,990,879 | 0 | 0 | 0 | 0 | 633,400 | 0 | 2,655,279 |
| TEXAS | 182,000 | 0 | 421,084 | 255,004 | 0 | 0 | 0 | 2,822,422 | 3,680,510 |
| UTAH | 31,000 | 0 | 0 | 0 | 0 | 237,444 | 0 | 0 | 268,444 |
| VERMONT | 0 | 0 | 0 | 0 | 0 | 0 | 394,000 | 0 | 394,000 |
| VIRGIN ISLANDS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VIRGINIA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WASHINGTON | 182,000 | 1,603,653 | 0 | 695,078 | 0 | 0 | 0 | 1,288,691 | 3,769,422 |
| WEST VIRGINIA | 0 | 1,850,360 | 0 | 0 | 0 | 0 | 0 | 0 | 1,850,360 |
| WISCONSIN | 182,000 | 0 | 0 | 0 | 0 | 0 | 0 | 5,979,385 | 6,161,385 |
| WYOMING | 31,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31,000 |
| BIOTECH | 12,540 | 11,460 | 0 | 760 | 0 | 0 | 0 | 203,580 | 228,340 |
| SBIR | 0 | 0 | 16,607 | 33,280 | 33,280 | 8,303 | 37,440 | 1,248,000 | 1,376,910 |
| PEER PANEL | 0 | 73,196 | 4,616 | 9,000 | 900 | 0 | 26,431 | 109,233 | 223,376 |
| FED ADMIN | 0 | 800,000 | 79,840 | 160,000 | 160,000 | 39,920 | 180,000 | 2,000,000 | 3,419,760 |
| SUBTOTAL | 5,748,480 | 20,000,000 | 1,996,000 | 4,000,000 | 4,000,000 | 998,000 | 4,500,000 | 50,000,000 | 91,242,480 |
| UNOBLIGATED BALANCE | 239,520 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 239,520 |
| TOTAL | 5,988,000 | 20,000,000 | 1,996,000 | 4,000,000 | 4,000,000 | 998,000 | 4,500,000 | 50,000,000 | 91,482,000 |

*Data may include 2012 obligations posted in 2013.*

**NATIONAL INSTITUTE OF FOOD AND AGRICULTURE**

**INTEGRATED PROGRAMS**

**TABLE 2B - FISCAL YEAR 2013**

| STATE | Methyl Bromide | Organic Transistion Risk Assessment | Regional Pest Management Center | Rural Development Centers | Water Quality | Homeland Security | TOTAL FEDERAL FUNDS |
|---|---|---|---|---|---|---|---|
| SBIR | 17,349 | 34,767 | 34,767 | 8,675 | 39,122 | 0 | 134,680 |
| BIOTECH RISK | 0 | 760 | 0 | 0 | 0 | 12,540 | 13,300 |
| FEDERAL ADMIN OBLIGATED | 80,320 | 169,960 | 160,960 | 40,160 | 181,120 | 241,000 | 873,520 |
| UNOBLIGATED | 1,910,331 | 3,818,513 | 3,828,273 | 955,165 | 4,307,758 | 5,771,460 | 20,591,500 |
| TOTAL | 2,008,000 | 4,024,000 | 4,024,000 | 1,004,000 | 4,528,000 | 6,025,000 | 21,613,000 |

**TABLE 3B - FISCAL YEAR 2014**
**INTEGRATED ACTIVITIES**

**INTEGRATED PROGRAMS**

| STATE | Crop Protection/Pest Management | OrganicTransistion Risk Assessment | Homeland Security | Rural Devlopment Centers | TOTAL FEDERAL FUNDS |
|---|---|---|---|---|---|
| SBIR | 153,601 | 35,840 | 0 | 8,942 | 198,383 |
| BIOTECH RISK | 0 | 760 | 0 | 0 | 760 |
| FEDERAL ADMIN OBLIGATED | 685,720 | 160,000 | 239,520 | 39,920 | 1,125,160 |
| UNOBLIGATED | 16,303,679 | 3,803,400 | 5,748,480 | 949,138 | 26,804,697 |
| TOTAL | 17,143,000 | 4,000,000 | 5,988,000 | 998,000 | 28,129,000 |

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE
INTEGRATED ACTIVITIES

Classification by Objects
(Dollars in thousands)

| Personnel Compensation: | 2011 Actual | 2012 Actual | 2013 Estimate | 2014 Estimate |
|---|---|---|---|---|
| Washington D.C. | $2,500 | $2,009 | $2,029 | 2,029 |
| 11.1 - Full-time employees | 2,500 | 2,009 | 2,029 | 2,029 |
| 12.0 - Personnel Benefits | 620 | 542 | 548 | 548 |
| 13.0 - Benefits for former personnel | - | 32 | 32 | 32 |
| Total, personnel comp. and benefits | 3,120 | 2,583 | 2,609 | 2,609 |
| Other Objects: | | | | |
| 21.0 - Travel & Transportation of Persons | 203 | 107 | 207 | 207 |
| 22.0 - Transportation of Things | 0 | - | - | - |
| 23.1 - Rent to GSA | 0 | - | - | - |
| 23.2 - Rent Paid to Others | - | - | - | - |
| 23.3 - Comm., Util., Misc. Charges | 55 | 27 | 27 | 27 |
| 24.0 - Printing and Reproduction | 7 | 4 | 4 | 4 |
| 25.1 - Advisory and Assistance Services | 10 | 4 | 4 | 4 |
| 25.2 - Other services from non-Federal sources. | 625 | 381 | 381 | 381 |
| 25.3 - Purchases of Goods and Services | 1 | 0 | 0 | 0 |
| 25.4 - Oper & Maintenance of Facilities | 347 | 325 | 324 | 324 |
| 25.5 - Research & Development Contracts | 308 | 279 | 279 | 279 |
| 25.6 - Medical Care | 22 | - | - | - |
| 25.7 - Operation & Maint. of Equipment | - | - | - | - |
| 25.8 - Subsistence & Support of Persons | - | - | - | - |
| 26.0 - Supplies and Materials | - | 15 | 22 | 22 |
| 31.0 - Equipment | 17 | 9 | 9 | 9 |
| 41.0 - Grants, Subsidies & Contributions | 103,043 | 87,832 | 18,241 | 24,263 |
| Total, Other Objects | 104,638 | 88,983 | 19,498 | 25,520 |
| 99.9 - Total, new obligations | 107,758 | 91,566 | 22,107 | 28,129 |
| Position Data: | | | | |
| Average Salary (dollars), ES positions | $170,866 | $164,627 | $165,450 | $167,105 |
| Average Salary (dollars), GS positions | $94,404 | $91,979 | $92,439 | $93,363 |
| Average Grade, GS positions | 11.3 | 11.4 | 11.4 | 11.4 |

**INTEGRATED ACTIVITIES:**

**Current Activities:**

1. Programs currently funded under the Integrated Activities account are Water Quality, Regional Pest Management Centers (formerly Pesticide Impact Assessment), Methyl Bromide Transition Program, and Organic Transition Program. Per Section 406 of AREERA, grants are awarded on a competitive basis to support integrated, multifunctional agricultural research, extension, and education activities. The Regional Rural Development Centers program is administered under this account. The Regional Rural Development Centers programs are conducted under the authority of Section 2(c)(1)(B) of Public Law 89-106, as amended (7 U.S.C. 450i(c)), which enables the agency to support research, extension or education activities.

2. Food and Agriculture Defense Initiative (FADI). The FADI Program under the authority of Section 1484 of the Farm Security and Rural Investment Act of 2002 also is funded under this account. This program provides support for the National Plant Diagnostic Network and the National Animal Health Laboratory Network to identify and respond to high risk biological pathogens in the food and agricultural system. The network is used to increase the ability to protect the Nation from plant and animal disease threats by providing surveillance, early detection, mitigation, and recovery functions that serve to minimize the threats. The funds also are used to support the Extension Disaster Education Network.

Selected Examples of Recent Progress:

1. Water Quality Program. The Heartland Regional Water Coordination Initiative is a collaborative effort among land grant universities in Iowa, Kansas, Missouri and Nebraska that works to increase the integration of research, education, and extension into the efforts of those who implement, assist and regulate agricultural water quality and quantity programs in the region. The Initiative creates multi-state, multi-institutional partnerships and implements roundtables, workshops and publications focused on the regional priority issues of on-farm nutrient management, bioenergy and water resources, watershed management education, and the application of social science knowledge to solving water resource problems. Recent activities have focused on increasing communication between the four states.

2. Regional Pest Management Centers. Over the past four years the Northeast Region Integrated Pest Management (IPM) Center in Pennsylvania trained 832 people in IPM at 34 Public Housing Authorities (PHAs), distributed 1,703 IPM kits to residents as incentives for attending briefings on IPM, and provided assistance to PHA pilot sites encompassing 8,007 units that committed to implement IPM for one year. After implementing IPM, PHAs report increased communication and cooperation among staff, contractors, and residents; a decrease in pesticides being applied; and fewer pests. Other outreach to underserved audiences included Center-funded training in rodent-infested, low-income housing in upper Manhattan, which led to a significant reduction in building code violations over the course of the year-long project. The Center also prepared and launched the StopBMSB.org website, the primary tool for reaching audiences nationwide about the Brown Marmorated Stink Bug. In the first five weeks, the site attracted 6,471 visitors. In addition, last year the Center potentially reached 39,900 individuals utilizing twitter outreach.

3. Methyl Bromide Transition Program. California and Florida account for 78 percent of methyl bromide use in the U.S. University of California researchers are testing anaerobic soil disinfestations (ASD) as an ecological alternative to methyl bromide for U.S. growers. They are using strawberries in coastal California and a pepper/eggplant double crop in southeast Florida as model production systems. Data from these crops show that the control of pests was equal to that of methyl bromide and that total yields of marketable fruit harvested from the bell pepper crop and the eggplant double crop were unaffected by applied initial irrigation and, in most

cases equaled or exceeded the methyl bromide standard. These results will significantly impact the use of ASD as an ecologically and economically effective pest management strategy.

4. Organic Transition Program. At the University of Maine, scientists are improving crop production through a combination of sustainable practices promoting soil regeneration, reduction of disease pressure, and enhancement of plant growth. They also are establishing better ecological business practices and evaluating the profitability of these systems. Resources gained through this program enabled the researchers to conduct thorough field and laboratory studies. As a result, agricultural scientists and growers have access to improved knowledge on important parameters related to holistic, sustainable approaches to crop production. More organic growers are now expected to use biocontrol and mutualistic microorganisms to improve plant disease management, enhance crop yields, and increase soil fertility. This will lead to an improved abundance of healthier locally grown food for consumers, and higher incomes through higher product value for Maine growers. Additionally, implementation of the systems evaluated in this project is expected to result in a reduced rate of environmental pollution through a decreased use of synthetic agrichemicals.

5. Food and Agriculture Defense Initiative Program. The National Plant Diagnostic Network (NPDN) is a 50 State network of land grant university based plant diagnostic laboratories. The network is led by diagnostic laboratory centers at Cornell University (New York), University of Florida, Kansas State University, Michigan State University, and University of California at Davis. These institutions receive direct funding from NIFA and provide support to the other land grant plant diagnostic laboratories in their region through subcontracts, training, and leadership. Because of this, plant laboratories in every State receive Federal funding and other support from the five NPDN centers. All 50 States and many U.S. territories are connected to the NPDN through digital distance diagnostics, used throughout the Nation to speed early detection of high consequence plant pathogens and solve other agricultural problems. This web-based diagnostics system allows plant diagnosticians in one location to transmit a digital image across the country to someone with special expertise. Plant disease (and insect) detection criteria have been developed for soybean rust, sudden oak death, Ralstonia stem rot, plum pox virus, pink hibiscus mealybug, potato wart, huanglongbing (citrus greening), Potato Cyst Nematode, Late Blight, Beet Curly Top, Citrus Leprosis and Citrus Blackspot. In Fiscal Year 2012, NPDN continued to work on additional disease detection criteria.

   The National Animal Health Laboratory Network (NAHLN) is a national network of non-Federal public animal diagnostic laboratories under the leadership of NIFA, Animal and Plant Health Inspection Service (APHIS), and the American Association of Veterinary Laboratory Diagnosticians. It has 12 core laboratories who receive NIFA support which are located at Cornell University (New York), Louisiana State University, University of Georgia, Texas A&M, University of Wisconsin, Iowa State University, Colorado State University, Washington State University, University of California at Davis, University of Arizona, North Carolina Department of Agriculture and Consumer Services, and Florida Department of Agriculture and Consumer Services. In addition to these core laboratories, NIFA provides a reduced amount of funding for laboratories in 16 other States: Oregon, Utah, New Mexico, Wyoming, South Dakota, Nebraska, Kansas, Minnesota, Mississippi, Tennessee, Indiana, Michigan, Kentucky, Ohio, Pennsylvania, and New Jersey. Animal disease-detection criteria have been developed for the following high-consequence diseases: Foot-and-Mouth Disease, Exotic Newcastle Disease, Classical Swine Fever (or hog cholera), High Pathogen Avian Influenza, Low Pathogen Avian Influenza, Bovine Spongiform Encephalopathy, Scrapie, Chronic Wasting Disease, Rift Valley Fever, African Swine Fever, Swine Influenza Virus and Swine Pseudorabies Virus. Swine Pseudorabies Virus was added in Fiscal Year 2012. NAHLN is part of a national strategy to coordinate the Nation's Federal, State and university laboratory resources.

   The Extension Disaster Education Network (EDEN) is a collaborative multistate effort by extension services across the country to improve the delivery of services to citizens affected by disasters. NIFA leads this effort. For example, a Maryland Extension agent was able to receive help for an area on the Eastern Shore that was hit hard by Hurricane Sandy. The Extension Agent and a volunteer coordinator were able to communicate with a global positioning systems Extension expert in New Hampshire who guided them through creating a website with an embedded map directing volunteers to recovery activities needed in that region of Maryland.

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Summary of Budget and Performance
Statement of Agency Goals and Objectives

The mission of NIFA is to lead food and agricultural sciences to create a better future for the nation and the world. It achieves this mission through two functions:

- •Program leadership to identify, develop, and manage programs to sponsor university-based and other institutional education, research, and extension; and
- •Fair, effective, and efficient administration of Federal assistance implementing education, research, and extension awards and agreements.

NIFA has six strategic goals and fourteen strategic objectives that contribute to the four USDA Strategic Goals and provide research, education, and extension to support the Department in meeting Agency Priority Goals (APGs).

| USDA Strategic Goal | Agency Strategic Goal | Agency Objectives | Programs that Contribute | Key Outcome |
|---|---|---|---|---|
| **USDA Strategic Goal 1:** Assist rural communities to create prosperity so they are self-sustaining, repopulating and economically thriving. | **Agency Goal 2:** Enhance the Competitiveness and Sustainability of Rural and Farm Economies. | Objective 2.1: Provide Research, Education, and Extension to Expand Domestic Market Opportunities | Extension<br>Research<br>Integrated<br>Higher Education | Key Outcome 2.1: Expanded science-based knowledge and technologies to generate high-quality products and processes by: (1) increasing knowledge of bioenergy and biomass conversion, (2) creating new commercially viable and marketable alternative crops, and alternative markets for non-food products from existing crops, and (3) establishing new integrated research and extension programs and multi-disciplinary graduate education training programs. |

| USDA Strategic Goal | Agency Strategic Goal | Agency Objectives | Programs that Contribute | Key Outcome |
|---|---|---|---|---|
| | | Objective 2.2: Provide research, education, and extension to increase the efficiency of agricultural production and marketing systems<br><br>Objective 2.3: Provide Risk Management and Financial Tools to Farmers and Ranchers | Extension<br>Research<br>Integrated<br>Higher Education | Key Outcome 2.2: Increased efficiency of the agricultural production system by: (1) expanding information to model feed utilization for animal species, (2) releasing new or improved varieties or germplasm with enhanced pest or disease resistance, (3) further understanding the biological role of gene sequences in plants, animals, microbes and insects, (4) strengthening masters degree level courses in the food and agricultural sciences, particularly at minority-serving institutions, (5) increasing the number of minority students participating in the workforce by funding minority-serving projects at Hispanic serving institutions, 1890 institutions, 1994 institutions, Alaska-native serving, native-Hawaiian serving institutions, and (6) increasing the number of socially disadvantaged minority farmers and ranchers who are knowledgeable, eligible, and participating in USDA farm programs.<br><br>Key Outcome 2.3: Increased producers' knowledge of principles and techniques of risk management. |

| USDA Strategic Goal | Agency Strategic Goal | Agency Objectives | Programs that Contribute | Key Outcome |
|---|---|---|---|---|
| | **Agency Goal 3:** Support Increased Economic Opportunities and Improved Quality of Life in Rural America. | Objective 3.1: Expand Economic Opportunities in Rural America by Providing Research, Education, and Extension to Create Opportunities for Growth<br><br>Objective 3.2: Provide Research, Education, and Extension to Improve the Quality of Life in Rural Areas | Extension<br>Research<br>Integrated<br>Higher Education | Key Outcome 3.1: Expanded economic opportunities in Rural America and increased knowledge pertaining to economic diversification, community planning, service infrastructure, local government, youth/adult workforce planning, and civic engagement through innovative integrated research and extension projects targeted to regional business, economic and business development.<br><br>Key Outcome 3.2: Increased knowledge among county based staff and community leadership in order to provide research-based practices to encourage appropriate community capitol development which enhances business and economic development, the availability of appropriate education and health services, transportation networks and the vibrant community connections. Electronic deployment of information to increase the social, cultural, human and economic capitol available for more nimble and creative community responses to needs. |

| USDA Strategic Goal | Agency Strategic Goal | Agency Objectives | Programs that Contribute | Key Outcome |
|---|---|---|---|---|
| | **Agency Goal 4:** Enhance Protection and Safety of the Nation's Agriculture and Food Supply. | Objective 4.2: Develop and Deliver Research, Education, and Extension to Reduce the Number and Severity of Agricultural Pest and Disease Outbreaks | Extension<br>Research<br>Integrated<br>Higher Education | Key Outcome 4.2: Expanded science-based information and technologies and reduced number and severity of agricultural pest and disease outbreaks through: (1) connection and data exchange among national plant and animal disease diagnostic networks, (2) increased resource efficiency and decreased economic risk regarding the adoption of sustainable pest management tactics, (3) developed capacity to minimize or mitigate occupational and non-occupational human health risks associated with pest management, and (4) increased capacity in minimizing or mitigating environmental risk associated with pest management. |
| **USDA Strategic 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. | **Agency Goal 6:** Protect and Enhance the Nation's Natural Resource Base and Environment. | Objective 6.1: Ensure Clean, Abundant Water And Clean, Healthy Air<br><br>Objective 6.2: Enhance Soil Quality to Maintain Productive Working Lands<br><br>Objective 6.3: Protect Enhance, and Manage Forests and Rangelands<br><br>Objective 6.4: Protect and Enhance Wildlife Habitat to Benefit Desired, at-Risk and Declining Species | Research<br>Higher Education<br>Extension<br>Integrated | Key Outcome 6: Expanded and disseminated science-based knowledge and information for management of the nation's natural resources and environment, including soil, air and water, in agricultural, forest, and range working lands and ecosystems. |

| USDA Strategic Goal | Agency Strategic Goal | Agency Objectives | Programs that Contribute | Key Outcome |
|---|---|---|---|---|
| **USDA Strategic Goal 3:** Help America promote agricultural production and biotechnology exports as America works to increase food security. | **Agency Goal 1:** Enhance International Competitiveness of American Agriculture. | Objective 1.2: Support International Economic Development and Trade Capacity Building | Extension<br>Research<br>Integrated<br>Higher Education | Key Outcome 1.2: Expanded international economic development and trade capacity building through: (1) partnerships between U.S. and counterpart faculty in developing or transitioning countries to strengthen science applications and (2) technical assistance provided to these countries to support market and agricultural sector development. |
| | **Agency Goal 3:** Support Increased Economic Opportunities and Improved Quality of Life in Rural America. | Objective 3.1: Expand Economic Opportunities in Rural America by Providing Research, Education, and Extension to Create Opportunities for Growth | Extension<br>Research<br>Integrated<br>Higher Education | Key Outcome 3.1: Expanded economic opportunities in Rural America and increased knowledge pertaining to economic diversification, community planning, service infrastructure, local government, youth/adult workforce planning, and civic engagement through innovative integrated research and extension projects targeted to regional business, economic and business development. |
| **USDA Strategic Goal 4:** Ensure that all of America's children have access to safe, nutritious, and balanced meals. | **Agency Goal 2:** Enhance the Competitiveness and Sustainability of Rural and Farm Economies. | Objective 2.1: Provide Research, Education, and Extension to Expand Domestic Market Opportunities | Extension<br>Research<br>Integrated<br>Higher Education | Key Outcome 2.1: Expanded science-based knowledge and technologies to generate high-quality products and processes by: (1) increasing knowledge of bioenergy and biomass conversion, (2) creating new commercially viable and marketable alternative crops, and alternative markets for non-food products from existing crops, and (3) establishing new integrated research and extension programs and multi-disciplinary graduate education training programs. |

| USDA Strategic Goal | Agency Strategic Goal | Agency Objectives | Programs that Contribute | Key Outcome |
|---|---|---|---|---|
| | **Agency Goal 3:** Support Increased Economic Opportunities and Improved Quality of Life in Rural America. | Objective 3.2: Provide Research, Education, and Extension to Improve the Quality of Life in Rural Areas | Extension<br>Research<br>Integrated<br>Higher Education | Key Outcome 3.2: Increased knowledge among county based staff and community leadership in order to provide research-based practices to encourage appropriate community capitol development which enhances business and economic development, the availability of appropriate education and health services, transportation networks and the vibrant community connections. Electronic deployment of information to increase the social, cultural, human and economic capitol available for more nimble and creative community responses to needs. |
| | **Agency Goal 4:** Enhance Protection and Safety of the Nation's Agriculture and Food Supply. | Objective 4.1: Reduce the Incidence of Foodborne Illnesses and Contaminants Through Research, Education, and Extension | Extension<br>Research<br>Integrated<br>Higher Education | Key Outcome 4.1: Reduced incidence or prevalence of food borne illnesses and contaminants through increased knowledge and/or the development of mitigation, intervention, or prevention strategies via research or integrated research, education, and extension projects in the following food safety areas: pre-harvest food production and transportation, post-harvest processing and distribution, retail preparation and distribution, and consumer preparation, consumption, and behavior. |
| | **Agency Goal 5:** Improve the Nation's Nutrition and Health. | Objective 5.1: Ensure Access to Nutritious Food<br><br>Objective 5.2: Promote Healthier Eating Habits and Lifestyles | Extension<br>Research<br>Integrated<br>Higher Education | Key Outcome 5.1: New knowledge that clarifies dietary health relationships in order to support better dietary recommendations and improved food products. |

USDA Strategic Goal 1: Assist rural communities to create prosperity so they are self-sustaining, repopulating and economically thriving.

Key Outcome 2.1: Expanded science-based knowledge and technologies to generate high-quality products and processes by: (1) increasing knowledge of bioenergy and biomass conversion, (2) creating new commercially viable and marketable alternative crops, and alternative markets for non-food products from existing crops, and (3) establishing new integrated research and extension programs and multi-disciplinary graduate education training programs.

Long-term Performance Measure 2.1: Cumulative number of expanded commercially adaptable processes that convert biomass to fuels through the development of cost effective biochemical or thermochemical technologies, and used commercially

Selected Past Accomplishments toward Achievement of the Key Outcome:
North Dakota farmers seek to develop new biofuel industries in the state and diversify their cropping operations while producing fuel with a lower carbon footprint. An energy beet development program has embarked on a $1,000,000 project on which project leaders and collaborators have finalized the work plans and expect to finalize the technological pathway and begin construction of a commercial plant in 2013. This plant will require 30,000 acres of energy beets providing growers with a $200 net income premium over competing crops. Each plant is expected to create 25 new jobs in rural communities. Positive encouragement and private funding support for the project has been received from MonDak sugarbeet growers, Syngenta, Beta Seed, Garrison Diversion, ND Irrigation Association, Green Vision, Great River Energy, Amity, and AgCountry Farm Credit Services.

Energy costs in most rural communities in Alaska are prohibitively expensive, often causing rural families to choose between warmth and other basic necessities. Researchers at the University of Alaska are moving forward with research in biofuels and biomass with the goal to offset some of these high-energy costs. Grass species evaluated were smooth bromegrass, hairgrass, wheatgrass, tufted hairgrass, slender wheatgrass, Siberian wildrye, and reed canarygrass. Woody species evaluated were Salix alaxensis, Populus balsamifera, S. alaxensis. Novel processing of native small diameter biomass by pyrolysis and gasification is helping guide the continuous development of second-generation technologies focused on undervalued wood resources in Alaska, with the broader impacts affecting the nation as a whole. This research is key to addressing fundamental biofuel questions with regards to uses of biomass in nontraditional value added products using small-diameter trees in rural Alaska and potentially throughout the country.

Among renewable energy sources, only biomass can provide fuel and electricity in a form and scale that is compatible with existing transportation and power generation infrastructure. However, there is a lack of information on reliable crop production metrics, in particular, switchgrass. Researchers at Iowa State University (ISU) collected and analyzed data on switchgrass growth, development and yield throughout the 2011 growing season. Analysis showed that switchgrass is best established under a corn canopy, changing the way that Extension agents in the Midwest now recommend planting switchgrass on previously farmed land. Results were disseminated through the U.S. Department of Energy Regional Feedstock Program, resulting in website updates and presentations that increased awareness for about 2,000 stakeholders and lawmakers. Results on plant growth and yield were presented at an international conference, three regional conferences and two field days and included in ISU farm publications. Ultimately, the findings helped farmers make critical production decisions when planting switchgrass.

Selected Accomplishments Expected at the 2014 Proposed Resource Level:
An increase in AFRI will fund agriculturally-relevant discovery and applied research and provide the foundation upon which current and future solutions are built and will sustain the disciplines needed to ensure agricultural science remains vibrant and useful over time. This funding is expected to bring a wide array of agriculturally related disciplines back to international leadership by supporting the high risk, but potentially high reward, research of individual investigators and small teams.

The AFRI Sustainable Energy program will fund grants targeting the development of regional systems for the sustainable production of bioenergy and biobased products that: contribute significantly to reducing dependence on

foreign oil; have net positive social, environmental, and rural economic impacts; and are integrated with existing agricultural systems. Key components of the implementation of these grants are integrated research, education, and extension/technology transfer activities. These grants support the start up and growth of a network of regional bioenergy centers focusing on dedicated energy crops and advanced non-ethanol infrastructure-compatible fuels and biobased products. The long-term outcome for this program is to implement regional systems that materially deliver liquid transportation biofuels to help meet the Energy Independence and Security Act (EISA) of 2007 goal of 36 billion gallons/year of biofuels by 2022 and reduce the National dependence on foreign oil. In order to achieve this outcome, this program will support single-function Research and Education Projects, multi-function Integrated Research, Education, and/or Extension Projects, and Food and Agricultural Science Enhancement (FASE) Grants that address one of the Program Area Priorities.

Efficiency Measure 2.1: Cumulative Dollars Saved for Grant Review.

Key Outcome 2.2: Increased efficiency of the agricultural production system by: (1) expanding information to model feed utilization for animal species, (2) releasing new or improved varieties or germplasm with enhanced pest or disease resistance, (3) further understanding the biological role of gene sequences in plants, animals, microbes and insects, (4) strengthening masters degree level courses in the food and agricultural sciences, particularly at minority-serving institutions, (5) increasing the number of minority students participating in the workforce by funding minority-serving projects at Hispanic serving institutions, 1890 institutions, 1994 institutions, Alaska-native serving, native-Hawaiian serving institutions, and (6) increasing the number of socially disadvantaged minority farmers and ranchers who are knowledgeable, eligible, and participating in USDA farm programs.

Long-term Performance Measure 2.2: Cumulative number of new crops that have been developed and used commercially.

Selected Past Accomplishments toward Achievement of the Key Outcome:
The objectives of a wheat breeding project at Colorado State University (CSU) are to develop wheat cultivars and germplasm having desirable agronomic, disease and insect resistance, and end-use quality characteristics and to conduct research to improve the understanding of genetic and environmental factors that affect wheat yield and end-use quality in Colorado. This research in Colorado is extremely important, as development of improved wheat cultivars serves the wheat industry by reducing wheat production costs, reducing pesticide use, and providing improved marketing options. In 2011, various new cultivars showed improvements such as higher grain yield, exceptional milling and bread baking quality, and a second gene for higher tolerance to the imazamox herbicide. Since inception of the program, average wheat grain yields in Colorado have more than doubled, with at least 50 percent of this increase attributed to improved cultivars. Estimates of economic returns in Colorado from CSU-developed wheat varieties were approximately $43 million for the 2011 crop alone. These estimates include yield increases resulting from improved CSU varieties ($29 million), marketing benefits resulting from CSU varieties with enhanced end-use quality ($9 million), and yield-protection resulting from adoption of CSU varieties carrying herbicide tolerance traits for winter annual grassy weed control ($5 million).

Research conducted as a result of AFRI and other programs led to the development of new hulless barley cultivars. Barley requires less nitrogen to produce, can be harvested earlier in the spring as compared to wheat, and genetic improvements made the crop more resilient to invasive pests and climactic extremes. Further, hulless varieties have opened poultry and beef feed markets for barley producers. Improved markets, decreased inputs, and greater timing flexibility have improved the economics of “barley-followed-by-soybean” double crop systems.

Selected Accomplishments Expected at the 2014 Proposed Resource Level:
An increase in AFRI will fund agriculturally-relevant discovery and applied research and provide the foundation upon which current and future solutions are built and will sustain the disciplines needed to ensure agricultural science remains vibrant and useful over time. This funding is expected to bring a wide array of agriculturally related disciplines back to international leadership by supporting the high risk, but potentially high reward, research of individual investigators and small teams.

The AFRI Global Food Security program will fund grants to address two intertwined areas: food availability and food accessibility. Research, education, and extension focused on food availability will increase food production

and reduce losses from the farm and ranch to the consumer by controlling important animal diseases and plant pests. Research, education and extension focused on food accessibility will address the emerging demand for resilient and secure food systems, resulting in a decrease in the number of food insecure individuals, families, and communities. It is expected that work funded through this program will have relevance for both domestic and international populations. Adequate food availability implies that the population has a reliable source of food from domestic or international production. Domestic and international food security is achieved when food availability and food accessibility goals are met successfully. The long-term outcomes for this program are to increase global food availability through increased sustainable food production and to decrease the number of food insecure individuals, families, and communities by addressing key constraints to food accessibility and implementing solutions that enhance sustainable food systems. To achieve these outcomes, this program will support single-function Extension Projects, multi-function Integrated Research, Education, and/or Extension Projects, and Food and Agricultural Science Enhancement (FASE) Grants that address one of the Program Area Priorities.

Efficiency Measure 2.2: Cumulative Dollars Saved for Grant Review.

Key Outcome 2.3: Increased producers' knowledge of principles and techniques of risk management.

Long-term Performance Measure 2.3: Benefits to farmers changing their risk management behavior per the net dollar cost of the Risk Management Education program.

Selected Past Accomplishments toward Achievement of the Key Outcome:
The North Central Risk Management Education Center continues to deliver educational programs to producers and their families to assist them in their understanding of risk management, and their ability to manage risk. For the 2010 grant year, 4 special emphasis challenge grants and 3 projects were completed with a total of 339 participants and 1,102 expected risk management improvements achieved. In Ohio, 160 women producers learned about developing financial statements, using Quicken Software, managing farm finances and making decisions, and conducting farm financial analysis. A web-based workshop series provided risk management education to 123 women in Indiana. Six months after the workshop new risk management tools were successfully implemented into farm operations.

The Agriculture Risk Education Library(AREL) in Minnesota had more than 1,750,000 individual users since its inception. Over 10,100,000 documents were viewed or downloaded. The number of individual users per month has grown from 3,000 in 2001 to over 21,000 in 2011. During the past year, the Library had over 240,000 individual user sessions. AREL provides a single source of information to producers, educators, media, and other agricultural professionals. Since 2002, more than 2,650 proposals were submitted electronically to the regional centers using the Results Verification System and more than 900 projects were funded using the system.

Research that enhances knowledge and informs risk analysis and management strategies and tactics related to the causes and effects of price, yield, and revenue risk in production agriculture and the costs of alternative strategies is critical to the long-term sustainability of the agrifood industry. At Michigan State University, research to identify high priority areas for research related to Michigan public finance resulted in the publishing of two papers - Property Taxation, Education Finance Reform and Tax Base Growth (Regional Science and Urban Economics), which highlights the importance of jurisdictional competition in determining the pattern of development in southeast Michigan; and a paper on The Causes and Consequences of Fiscal Stress in Michigan Cities (Regional Science and Urban Economics). These papers will be broadly disseminated and will enhance others' knowledge on management strategies and tactics to positively influencing price, yield, and revenue risk in production agriculture. This can have significant effects on national and international trade and export prices.

Selected Accomplishments Expected at the 2014 Proposed Resource Level:
The Agriculture Risk Management Education Competitive Grants Programs will fund four regional Risk Management Education (RME) centers nationwide; and an Electronic Risk Management Education Electronic Support Center (RMEESC). The Regional RME Centers are will address the risk management needs of agricultural producers and their families particularly with regard to the following five risk management categories: 1) production risk; 2) price or marketing risk; 3) human resource risk; 4) legal (including liability and environmental) risk; and 5) financial risk.

Efficiency Measure 2.3: Cumulative Dollars Saved for Grant Review.

Key Outcome 3.1: Expanded economic opportunities in Rural America and increased knowledge pertaining to economic diversification, community planning, service infrastructure, local government, youth/adult workforce planning, and civic engagement through innovative integrated research and extension projects targeted to regional business, economic and business development.

Long-term Performance Measure 3.1: The number of farmers and ranchers that gained an economic, environmental or quality-of-life benefit from a change in practice learned by participating in a Sustainable Agriculture Research and Education project.

Selected Past Accomplishments toward Achievement of the Key Outcome:
Farmers want reliable information before risking change in a risky business, and patient public investment in agricultural science helps generate the information they need. NIFA's Sustainable Agriculture Research and Education (SARE) program's early investment in innovative cover crop research, coupled with sustained educational outreach, is yielding dividends today. The popularity of cover cropping, which improves soil and protects water while reducing irrigation, fertilizer, and herbicide use, increased even before the 2012 drought further demonstrated how this practice can protect farmers' fields and profitability. In 1993, SARE compiled research results into its first book, *Managing Cover Crops Profitably*, which has become the "go to" source for information on cover crops and is still relevant today. To date, more than 30,000 hard copies have been distributed, with a comparable number downloaded from the Internet.

An American Samoa grower demonstrated how small-scale farmers can successfully use pig waste as compost for raising organic vegetables, a technique that promises to improve production and public health. The system, which several producers have adopted, uses portable pigpens to produce raised vegetable beds. Over the course of six months, the pig generates compost and mulch in a single spot. Once the pigpen is moved and the nutrient-rich bed has dried out, a farmer can plant vegetables in it without needing commercial fertilizers. This system is best-suited to helping small-scale pig producers improve the way they raise fruits and vegetables for their families. The system also offers an important alternative waste management system for the territory's 3,050 pig farmers, several of whom have contracted bacterial diseases associated with animal waste in recent years.

Onions are one of New York's most valuable vegetable crops, but growers face a host of challenges. For example, bacterial rot cuts deep into profits, and fragile muck soil, in which most onions are grown, is susceptible to up to one foot of erosion every 10 years. A researcher in New York compared minimum tillage systems that left the residue of fall planted oat and wheat cover crops on the ground to a conventional system that plowed the residue under. As a result the residue left from minimum tillage effectively prevented erosion, and improved net profit by 9 percent compared to the conventional system.

Minority and lower-income farmers often find themselves at a disadvantage in terms of access to agricultural education. The Louisiana Small Farmer Agricultural Leadership Institute offers several programs to socially disadvantaged farmers and ranchers that increases confidence, production, and profits. One participant, a farmer with 400 acres of rich soil being double cropped with soybean and wheat, employed several recommended practices, including precision leveling on more than 50 percent of his acreage. He increased his wheat yield two-fold and his income by $100,000 annually. The farmer now uses his land as a demonstration site for field days and tours to train other socially disadvantaged farmers and ranchers.

Selected Accomplishments Expected at the 2014 Proposed Resource Level:
An increase in the Sustainable Agriculture Research and Education (SARE) grant program will assist in the creation or enhancement of State sustainable agriculture research, extension, and education programs; and will leverage State and/or private money, and build the long-term capacity to guide the evolution of American agriculture to a more highly productive sustainable system. SARE helps farmers and ranchers adopt practices that are profitable, environmentally sound, and good for communities. Much of SARE research has been focused on locally grown products.
Funding will support activities that:

- Integrate sustainable agriculture in all State research, extension, and education projects;

•Support new research at sustainable agriculture centers at the nation's land grant and other colleges and universities;
•Build stronger State-wide farmer-to-farmer networks and outreach and technical assistance strategies;
•Incorporate sustainable agriculture studies and curriculum in undergraduate and graduate degree programs.

Efficiency Measure 3.1: Cumulative Dollars Saved for Grant Review.

Key Outcome 3.2: Increased knowledge among county based staff and community leadership in order to provide research-based practices to encourage appropriate community capitol development which enhances business and economic development, the availability of appropriate education and health services, transportation networks and the vibrant community connections. Electronic deployment of information to increase the social, cultural, human and economic capitol available for more nimble and creative community responses to needs.

Long-term Performance Measure 3.2: The percentage of cooperative extension educators trained and using evidence based programming based on the seven community capitols to facilitate informed decisions that improve quality of life and increase economic viability.

Selected Past Accomplishments toward Achievement of the Key Outcome:
The Working Lands Alliance (WLA) in Connecticut is a coalition that is directed by a steering committee which includes 2 Extension Educators. Among its supporters are more than 600 individuals and 200 businesses and organizations that include farmers, conservationists, anti-hunger groups, planners and local food enthusiasts. This coalition joined together in an effort to halt the loss of Connecticut's remaining farmland. WLA worked closely with partners to ensure that funding provided through the state's Community Investment Act (a law requiring a deed-recording fee be assessed on all property sold or transferred with the proceeds going to a fund for farmland preservation, open space preservation, historic preservation, tourism and affordable housing) was not diverted for competing state budget needs. As a result of the educational work done by the WLA Extension Educators, more than $35 million was distributed in grants and loans that was further leveraged by an additional $76 million. Funds were used for the Connecticut State Department of Agriculture's Farm Enhancement Program to help Connecticut farms diversify and expand through cost-sharing grants.

Louisiana State Univeristy AgCenter faculty developed programs to address persistent poverty conditions in rural Louisiana through the Louisiana Center for Rural Initiatives (LCRI). LCRI faculty collaborated with the Louisiana Division of Administration, Office of Information Technology to provide broadband Internet education reaching 300 people in its first six months across 18 rural parishes primarily in the Louisiana Delta region. These communities are now better educated about the regional and local economic development opportunities of broadband and have improved strategic planning through the Stronger Economies Together (SET) program. Additionally, the SET project was implemented statewide and has played a key role in assisting economic development districts with much needed strategic planning, ensuring that rural communities in the state are better equipped to plan for and respond to further economic development challenges.

Small-scale, limited-resource farmers often produce specialty crops that have broad consumer appeal on regional scales, but they often fail to capitalize on high consumer demand because they lack technical expertise, do not produce enough for commercial outlets, and lack the ability to develop successful business plans. The NIFA-funded North-South Institute (NSI) is a non-profit organization that provides technical advice in collaboration with local Cooperative Extension and develops business tools for small-scale farmers, including "Tech Packs" (production methods for seven high-demand specialty crops), investment profiles (enterprise budgets and pricing methods), and a manual of best handling practices. These materials were delivered to 210 limited-resource farmers in Florida and Alabama. NSI worked with eight lead growers (six in Florida and two in Alabama) to form a "production cluster" and developed marketing arrangements with regional outlets for sales of the crops produced by the cluster. This first cluster will encourage more small-scale, limited-resources farmers to produce high-value specialty crops and will also encourage more commercial outlets to view these growers as a source of products their customers demand.

Selected Accomplishments Expected at the 2014 Proposed Resource Level:
NIFA-sponsored eXtension is an interactive online learning environment which will continue to deliver the best, most researched knowledge from the best land-grant university minds across America. eXtension connects

knowledge consumers with knowledge providers - experts who know their subject matter inside out. eXtension offers:

- Credible expertise
- Reliable answers based upon sound research
- Connections to the best minds in American universities
- Creative solutions to today's complex challenges
- Customized answers to your specific needs
- Trustworthy, field-tested data
- Dynamic, relevant and timely answers

The NIFA-sponsored Cooperative Extension programs at the Land-Grant Universities will provide key leadership and educational offerings and trainings developed and administered through programs to provide local businesses, farmers, governments, community institutions and local residents with access to trusted sources of information. This includes education and technical assistance that will guide them in their broadband and e-commerce adoption decisions. Extension also will support the sustainability and profitability of plant and animal production systems by:

- Preparing youth, families and individuals for success in the global workforce and all aspects of life.
- Creating pathways to energy independence.
- Ensuring an abundant and safe food supply for all.
- Assisting in effective decision-making regarding environmental stewardship.
- Assisting communities in becoming sustainable and resilient to the uncertainties of economics, weather, health, and security.
- Helping families, youth and individuals to become physically, mentally, and emotionally healthy.

Efficiency Measure 3.2: Cumulative Dollars Saved for Grant Review.

Key Outcome 4.2: Expanded science-based information and technologies and reduced number and severity of agricultural pest and disease outbreaks through: (1) connection and data exchange among national plant and animal disease diagnostic networks, (2) increased resource efficiency and decreased economic risk regarding the adoption of sustainable pest management tactics, (3) developed capacity to minimize or mitigate occupational and non-occupational human health risks associated with pest management, and (4) increased capacity in minimizing or mitigating environmental risk associated with pest management.

Long-term Performance Measure 4.2: The number of high-consequence pests, bacterial, parasitic, and vital pathogens, and disease threats detected and diagnosed by integrated the national plant diagnostic network and the national animal health laboratory network diagnostic labs.

Selected Past Accomplishments toward Achievement of the Key Outcome:
The National Plant Diagnostic Network (NPDN) developed links to laboratories in every State. NIFA funding has enabled the NPDN to increase the cumulative number of specific plant diseases labs within the network are prepared to detect from three in 2004 to eleven in 2012.

The University of Delaware Plant Diagnostic Clinic accomplishments and impacts as part of the NPDN in the last reporting year were many. Over 750 samples were processed and over 130 First Detectors have been trained for the state of Delaware. Of note, a new leafspot of soybean was identified as soybean vein necrosis. A pest alert was issued and information placed in the NPDN National Newsletter. Other states then were able to follow Delaware's lead to confirm soybean vein necrosis virus, resulting in significant savings from potentially damaged crops.

NIFA helped fund and provided leadership to establish the National Animal Health Laboratory Network (NAHLN) NIFA funding has helped enable the NAHLN to increase the cumulative number of specific animal diseases labs within the network are prepared to detect from six in 2004 to eleven in 2012.

Selected Accomplishments Expected at the 2014 Proposed Resource Level: In addition to continuing risk reductions and increased efficiencies of traditional NIFA Integrated Pest Management Programs, the National Plant Diagnostic Network expects to make significant progress, which builds on past accomplishments and includes:

- Increasing the ability of laboratories in all 50 States to rapidly and accurately diagnose plant pathogens of regional and national interest through improved diagnostic equipment, training, and methods;
- Improving the biocontainment, biosafety, and biosecurity of regional diagnostic centers and other partner laboratories; and
- Increasing the utilization of non-public National Agricultural Pest Information Systems data for the early detection of bio-terrorism related, accidental, or natural outbreaks that have the potential to threaten the nation's plant resources, trade position, or consumer confidence.

Efficiency Measure 4.2: Cumulative Dollars Saved for Grant Review.

USDA Strategic 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.

Key Outcome 6: Expanded and disseminated science-based knowledge and information for management of the nation's natural resources and environment, including soil, air and water, in agricultural, forest, and range working lands and ecosystems.

Agency Priority Goal: NIFA provides research, extension, and education to support USDA work to accelerate the protection of clean, abundant water resources by implementing high impact targeted practices on 4 million acres of National Forest and private working lands in priority landscapes by September 30, 2013.

Long-term Performance Measure 6: Development and adoption of science-based technologies, education and management procedures such that production of agricultural goods and services are optimized while protecting our natural resources and environment.

Selected Past Accomplishments toward Achievement of the Key Outcome:
The impacts of climate change on Washington State could be significant, with mountain snow melting earlier in the season resulting in spring flooding and low stream flows during the summer and fall months. As a result, new plant and animal pests and diseases are likely to emerge, while some areas may have a longer effective growing season and new opportunities for land managers. Program implementation led by Extension specialists at Washington State University (WSU) utilized local, regional, statewide, and multistate efforts in a coordinated effort that involved workshops, clinics, seminars, print and electronic publications, mass media, social networks, volunteer-based 'train the trainer' programs, and other methods to disseminate research-based knowledge and other relevant information to target audiences. Eighty-five percent of program participants demonstrated increased knowledge and awareness of climate change and the associated issues impacting the state and communities. This knowledge included basic climate change models and their associated predictions, along with steps to adapt to future changes and mitigate trends that are predicted by WSU researchers.

A scientist at University of Nebraska developed a network of farmers over the past 7 years that adopted new technologies for irrigation/water management. As of 2012, this network of over 1,100 farmers and over 1.5 million acres of cropland has reduced the amount of irrigation withdrawals by 114 billion gallons of water annually – enough water to supply a city the size of Tucson, Arizona, for a full year. Next steps include improving nutrient management, soil quality, and cost/benefit analysis to protect the environment and improve the farmer's profitability.

Through Washington State University, extension specialists aim to implement practices for improving range and forestlands, leading to greater biodiversity, reduced wildfire risk, and improved habitat. Extension program implementation in 2011 utilized local, regional, statewide, and multistate efforts in a coordinated effort that involved workshops, clinics, seminars, field days, field demonstrations, print and electronic publications, mass media, social networks, webinars, online learning modules, and other methods to disseminate research-based knowledge and other relevant information to targeted audiences. A comprehensive survey was conducted in 2011 for the program years 2007 through 2011: 652 educational events were delivered to 21,897 participants representing 796,499 acres of forest and range land. In addition to face-to-face assistance, at least 112,000 direct contacts were made to assist clients via email, phone calls, and office visits. Of the 21,897 who attended events, 20,802 families and individuals

we surveyed indicated that they had gained new knowledge of management concepts that will help them to improve forest and rangeland health, reduce risks, and protect their financial investments. Nearly 90 percent, or 19,707 of survey respondents have executed at least two new management practices over 80,000 acres.

Selected Accomplishments Expected at the 2014 Proposed Resource Level:
An increase in AFRI will fund agriculturally-relevant discovery and applied research and provide the foundation upon which current and future solutions are built and will sustain the disciplines needed to ensure agricultural science remains vibrant and useful over time. This funding is expected to bring a wide array of agriculturally related disciplines back to international leadership by supporting the high risk, but potentially high reward, research of individual investigators and small teams.

AFRI research on Water and Watersheds funded by NIFA will seek to protect and enhance the natural resource base and environment by improving and maintaining healthy watershed habitat and water supply protection, and improve the quality of life in rural America through clean irrigation and livestock drinking water supplies. Research will focus on biotechnical improvements in water use efficiency of crop and horticultural plants to yield greater "crop per drop," and probe the human, social, and economic dimensions of agricultural water security with a focus on adoption-outreach.

AFRI research projects on Agriculture and Natural Resources Science for Climate Variability and Change focuses on the societal challenge to adapt agroecosystems and natural resource systems to climate variability and change and implement mitigation strategies in those systems. Specific program areas are designed to achieve the long-term outcome of reducing the use of energy, nitrogen, reducing greenhouse gas emissions from practices, and water in the production of food, feed, fiber, and fuel and increase carbon sequestration. Project types supported by AFRI include multi-function Integrated Research, Education, and/or Extension Projects and Food and Agricultural Science Enhancement (FASE) Grants.

Goals include:

- Develop or improve management options that will mitigate the impacts of agroecosystems on climate variability and change while maintaining or improving agroecosystem productivity.
- Develop or improve management strategies, models and technologies that facilitate adaptation to climate variability and change while maintaining or improving agroecosystem productivity.
- Develop or improve knowledge of how human behavior, decision, and choices affect carbon, nitrogen, water, and energy use and how that behavior may be effectively changed to advance sustainable outcomes.
- Create educational activities that develop human capital relevant to mitigation and adaption goals.
- Develop extension and outreach programs to deliver science-based knowledge and informal educational programs to various communities relevant to mitigation and adaptation goals.

Efficiency Measure 6: Cumulative Dollars Saved for Grant Review.

USDA Strategic Goal 3: Help America promote agricultural production and biotechnology exports as America works to increase food security.

Key Outcome 1.2: Expanded international economic development and trade capacity building through:
(1) partnerships between U.S. and counterpart faculty in developing or transitioning countries to strengthen science applications and (2) technical assistance provided to these countries to support market and agricultural sector development.

Long-term Performance Measure 1.2: Higher participation of faculty, public and private sector professionals in international scientific, cultural and economic forums.

Selected Past Accomplishments toward Achievement of the Key Outcome:
In 2010, U.S. soybean farmers exported more than half of all U.S. soybeans. This makes soybeans the top-valued U.S. agricultural export at $21 billion. Current year exports are expected to be even larger. Results of an annual survey of the quality of U.S. commodity and food soybean crops completed by University of Minnesota soybean agronomists were shared with purchasers in Taipei, Taiwan and Tokyo, Japan. As a result, international purchasers use the soybean quality survey reports to make their buying decisions.

Research that enhances knowledge and informs risk analysis and management strategies and tactics related to the causes and effects of price, yield, and revenue risk in production agriculture and the costs of alternative strategies is critical to the long-term sustainability of the agrifood industry. At Michigan State University, research to identify high priority areas for research related to Michigan public finance resulted in the publishing of two papers - Property Taxation, Education Finance Reform and Tax Base Growth (Regional Science and Urban Economics), which highlights the importance of jurisdictional competition in determining the pattern of development in southeast Michigan; and a paper on The Causes and Consequences of Fiscal Stress in Michigan Cities (Regional Science and Urban Economics). These papers will be broadly disseminated and will enhance others' knowledge on management strategies and tactics to positively influencing price, yield, and revenue risk in production agriculture. This can have significant effects on national and international trade and export prices.

Selected Accomplishments Expected at the 2014 Proposed Resource Level:
Grants to higher education institutions will train students at the baccalaureate, masters and doctorate level to expand human capital development in emerging areas (i.e. biotechnology, food systems, economics and marketing, etc.). As a result, workforce ready graduates with core competencies in sustainable sciences will be able to respond to the national needs in the Economics and Trade arena through the AFRI Program.

Efficiency Measure 1.2: Cumulative Dollars Saved for Grant Review.

USDA Strategic Goal 4: Ensure that all of America's children have access to safe, nutritious, and balanced meals

Key Outcome 4.1: Reduced incidence or prevalence of food borne illnesses and contaminants through increased knowledge and/or the development of mitigation, intervention, or prevention strategies via research or integrated research, education, and extension projects in the following food safety areas: pre-harvest food production and transportation, post-harvest processing and distribution, retail preparation and distribution, and consumer preparation, consumption, and behavior.

Long-term Performance Measure 4.1: The number of methods that reduce food contamination and growth of foodborne organisms.

Selected Past Accomplishments toward Achievement of the Key Outcome:
In recent years there has been an increase in food borne disease outbreaks attributed to fresh produce. As a result, federal and state regulatory agencies have published guidance documents recommending the adoption of Good Agricultural Practices (GAP); and retailers are requiring produce suppliers to adopt GAP and submit to third party audits of their operations. The team-based approach to presenting GAP used by Extension faculty at the University of Connecticut - Storrs has provided a cross-cutting effective means to provide producers with the knowledge and tools needed to create effective plans. Eighty-four percent of producers who participated in food safety training reported an increase in their knowledge of safe food handling practices. Fifty percent responded that they gained critical knowledge necessary for writing a GAP safety plan.

Extension educators in Maryland teach food safety classes and safe food preservation classes. In 2011, over 9 programs were presented that reached over 219 growers to improve their understanding of Good Agricultural Practices (GAP) and the process for certification. In addition, an online food safety course is being used by schools and child-care centers. Research also is being conducted to develop a food defense certification program for professional and academic audiences that will increase the number of government and industry personnel who are trained thoroughly in the use of risk analysis tools and methods for food defense. A majority of respondents in the food safety courses report that they understand food safety concerns, will wash fruits and vegetables before eating and preparing, and intend to store food at the appropriate temperatures.

Selected Accomplishments Expected at the 2014 Proposed Resource Level:
An increase in AFRI will fund agriculturally-relevant discovery and applied research and provide the foundation upon which current and future solutions are built and will sustain the disciplines needed to ensure agricultural science remains vibrant and useful over time. This funding is expected to bring a wide array of agriculturally related disciplines back to international leadership by supporting the high risk, but potentially high reward, research of individual investigators and small teams.

NIFA will sponsor AFRI food safety projects specifically targeting emerging issues in food safety, particularly produce; food and agricultural defense; Goals include:

- Improve the safety of the food supply through developing and implementing effective strategies that prevent or mitigate food-borne contamination, including food processing technologies, resulting in a reduction in the incidence of food-borne illness, while preventing future food-borne outbreaks.
- Promote the development and adoption of detection technologies for food-borne pathogens and other contaminants in foods, which are sensitive, specific, rapid, economical, easily-implemented, and usable under a variety of conditions, including use in the field.
- Reduce negative public health and economic impacts through the development and demonstration of effective traceability systems that track the source, movement, critical tracking events (CTEs), storage, and control of contaminated food and food ingredients from production to consumption.
- Increase the number of food safety scientists, as well as scientists who are cross trained in environmental science, animal science, microbiology, genetics, epidemiology, economics, social science, food science, engineering, and public health, to provide a holistic approach to ensuring the safety of the food supply, from pre-harvest through consumption.

Efficiency Measure 4.2: Cumulative Dollars Saved for Grant Review.

Key Outcome 5.1: New knowledge that clarifies dietary health relationships in order to support better dietary recommendations and improved food products.

Long-term Performance Measure 5.1: Confirmation and/or changes to the existing guidelines to be in the 2010 Dietary Guidelines for America

Selected Past Accomplishments toward Achievement of the Key Outcome:
Rutgers University researchers engaged graduate students and others in a research project to link genetic variation in bitter taste perception to food preferences, dietary habits and body weight. The long-term goals of this project are to better identify individuals, especially women, who may be at risk for excess weight gain and obesity due to dietary causes. Results showed that those with a non-taster phenotype are less responsive to a range of oral sensations (fats, alcohol, bitterness and pungency) and have increased preferences for foods with these qualities, whereas those with the taster phenotype (medium- or super-tasters) show the opposite responses. The data collected in the research helps us to understand the specific dietary patterns that promote obesity in young women and identify those who may be at great risk. This work also leads to the development of improved nutrition intervention that can be targeted to an individual's genetic taste background and therefore optimally promote behavior change in that individual. These innovations are expected to improve the health, nutrition and quality of life for residents of New Jersey and the nation.

Over the past decade, the number of Americans who have been diagnosed with diabetes has increased by 61 percent, and it is expected to more than double by 2050. Added to this alarming picture is that the Center for Disease Control reports that one out of three children who were born in 2000 will be diagnosed with diabetes during their lifetime. The Dining with Diabetes program run through Extension offices at Pennsylvania State University enhances knowledge to empower individuals to self-manage diabetes. Through nutrition education and information about important health numbers, participants applied new facts and meal strategies to improve their health. The program reached 1,180 adults in 52 counties. Data from the program indicated that participants experienced statistically significant decreases in A1C, blood pressures, waist circumference, and triglycerides. Participant's responses showed that 96 percent plan to use heart healthy cooking oil, 95 percent increased their knowledge of how to decrease sodium, 98 percent have a greater understanding of their role of fiber, and 85 percent have increased understanding of the role of calcium in the diet.

The recent discovery that human milk contains bioactive components, including the appetite-regulating peptides leptin and ghrelin, also provides an attractive mechanism that may explain why infants who are exclusively breastfed consume fewer calories than infants who are given infant formula, and are leaner at 8 to 11 months of age. Work in the Nutrition and Exercise Laboratory at the University of Wyoming focused on determining whether the appetite suppressing peptides leptin, peptide YY (PYY) and glucogon like peptide 1 (GLP-1) are present in human

milk and whether their concentrations change across a single feeding along with milk fat, which is known to be lower in foremilk and higher in hindmilk. It was found that leptin composition of the milk varied considerably among individual mothers and was higher in those who were overweight or obese compared to those who were normal weight. These results could have significant impacts on traditional knowledge concerning the benefits of breastfeeding based on the health of the mother and how the amounts of appetite-regulating peptides infants consume could influence them later in life.

Selected Accomplishments Expected at the 2014 Proposed Resource Level:
An increase in AFRI will fund agriculturally-relevant discovery and applied research and provide the foundation upon which current and future solutions are built and will sustain the disciplines needed to ensure agricultural science remains vibrant and useful over time. This funding is expected to bring a wide array of agriculturally related disciplines back to international leadership by supporting the high risk, but potentially high reward, research of individual investigators and small teams.

AFRI projects will focus on identifying the behavioral factors that influence obesity; developing valid behavioral and environmental instruments for measuring progress in obesity prevention efforts; and, nutrition research that leads to the development and evaluation of effective programs to prevent obesity.

AFRI requests for proposals will address the micro-nutrient content of new cultivars. An expansion of plant breeding activities will result in genetically mapping and improving the nutritional value of staple crops, fruits, and vegetables. In addition, plant breeding can expand the availability and potentially reduce the cost of nutrient-dense foods, thus expanding access to healthy diets.

Efficiency Measure 5.2: Cumulative Dollars Saved for Grant Review.

Key Outcome 5.2: Reduced proportion of adult participants age 20 years and older who are obese, and of children and adolescents who are obese and overweight by increasing healthier food choices and lifestyles.

Agency Priority Goal: NIFA provides research, extension, and education to support USDA work to establish national standards that result in improved quality of food sold in schools throughout the day.

Long-term Performance Measure 5.2: Development and use of effective intervention methods and strategies to change behavior and improve diet and physical activity in target populations.

Selected Past Accomplishments toward Achievement of the Key Outcome:
NIFA's Expanded Food and Nutrition Education Program (EFNEP) addresses some of our most pervasive societal challenges—hunger, malnutrition, poverty, and obesity—by providing practical, hands-on nutrition education to the poorest of the poor. Each year, EFNEP peer educators teach more than a half million low-income families and youth how to change their behavior toward food. More than 80 percent of EFNEP families report living at or below 100 percent of poverty, and nearly 70 percent indicate being of minority status. A 2012 national review of EFNEP data showed that 95 percent of EFNEP graduates improved the quality of their diets, 88 percent improved their nutrition practices, 86 percent stretched their food dollars farther, 66 percent handled their food more safely, and 28 percent increased their physical activity by at least 30 minutes each day.

The recent discovery that human milk contains bioactive components, including the appetite-regulating peptides leptin and ghrelin, also provides an attractive mechanism that may explain why infants who are exclusively breastfed consume fewer calories than infants who are given infant formula, and are leaner at 8 to 11 months of age. Work in the Nutrition and Exercise Laboratory at the University of Wyoming focused on determining whether the appetite suppressing peptides leptin, peptide YY (PYY) and glucogon like peptide 1 (GLP-1) are present in human milk and whether their concentrations change across a single feeding along with milk fat, which is known to be lower in foremilk and higher in hindmilk. It was found that leptin composition of the milk varied considerably among individual mothers and was higher in those who were overweight or obese compared to those who were normal weight. These results could have significant impacts on traditional knowledge concerning the benefits of breastfeeding based on the health of the mother and how the amounts of appetite-regulating peptides infants consume could influence them later in life.

Over the past decade, the number of Americans who have been diagnosed with diabetes has increased by 61 percent, and it is expected to more than double by 2050. Added to this alarming picture is that the Center for Disease Control reports that one out of three children who were born in 2000 will be diagnosed with diabetes during their lifetime. The Dining with Diabetes program run through Extension offices at Pennsylvania State University enhances knowledge to empower individuals to self-manage diabetes. Through nutrition education and information about important health numbers, participants applied new facts and meal strategies to improve their health. The program reached 1,180 adults in 52 counties. Data from the program indicated that participants experienced statistically significant decreases in blood glucose levels, blood pressures, waist circumference, and triglycerides. Participant's responses showed that 96 percent plan to use heart healthy cooking oil, 95 percent increased their knowledge of how to decrease sodium, 98 percent have a greater understanding of their role of fiber, and 85 percent have increased understanding of the role of calcium in the diet.

Selected Accomplishments Expected at the 2014 Proposed Resource Level:
With EFNEP funds all 1862 and 1890 institutions will be able to maintain and sustain the program outreach in addition to support and training from the Federal partner. Funding will assist low-income families and youth to acquire the knowledge, skills, and attitudes, necessary to assist with positive behavior change for nutritionally sound diets, to contribute to their personal development, and to improve the family's overall dietary quality and well-being. Peer educators, members of the communities they support, will use a research-based, interactive approach to reach over a half million new limited-resource audience families and youth each year.

Efficiency Measure 5.2: Cumulative Dollars Saved for Grant Review.

## Key Performance Outcomes and Measures

Key outcomes and performance measures under each of the agency's strategic goals as outlined below:

**Strategic Goal 1**: Assist rural communities to create prosperity so they are self-sustaining, repopulating and economically thriving.

Key Outcomes:

- 2.1 - Expanded science-based knowledge and technologies to generate high-quality products and processes by: (1) increasing knowledge of bioenergy and biomass conversion, (2) creating new commercially viable and marketable alternative crops, and alternative markets for non-food products from existing crops, and (3) establishing new integrated research and extension programs and multi-disciplinary graduate education training programs.
- 2.2 - Increased efficiency of the agricultural production system by: (1) expanding information to model feed utilization for animal species, (2) releasing new or improved varieties or germplasm with enhanced pest or disease resistance, (3) further understanding the biological role of gene sequences in plants, animals, microbes and insects, (4) strengthening masters degree level courses in the food and agricultural sciences, particularly at minority-serving institutions, (5) increasing the number of minority students participating in the workforce by funding minority-serving projects at Hispanic serving institutions, 1890 institutions, 1994 institutions, Alaska-native serving, native-Hawaiian serving institutions, and (6) increasing the number of socially disadvantaged minority farmers and ranchers who are knowledgeable, eligible, and participating in USDA farm programs.
- 2.3 - Increased producers' knowledge of principles and techniques of risk management.
- 3.1 - Expanded economic opportunities in Rural America and increased knowledge pertaining to economic diversification, community planning, service infrastructure, local government, youth/adult workforce planning, and civic engagement through innovative integrated research and extension projects targeted to regional business, economic and business development.
- 3.2 - Increased knowledge among county based staff and community leadership in order to provide research-based practices to encourage appropriate community capitol development which enhances business and economic development, the availability of appropriate education and health services, transportation networks and the vibrant community connections. Electronic deployment of information to

increase the social, cultural, human and economic capitol available for more nimble and creative community responses to needs.

- 4.2 - Expanded science-based information and technologies and reduced number and severity of agricultural pest and disease outbreaks through: (1) connection and data exchange among national plant and animal disease diagnostic networks, (2) increased resource efficiency and decreased economic risk regarding the adoption of sustainable pest management tactics, (3) developed capacity to minimize or mitigate occupational and non-occupational human health risks associated with pest management, and (4) increased capacity in minimizing or mitigating environmental risk associated with pest management.

Key Performance Measures:

- Cumulative number of biochemical or thermochemical technologies which are developed and used commercially for the conversion of biomass to fuels.
- Cumulative dollars (thousands) saved each year for grant review
- Proposal review time in days

| Performance Measure | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Target | 2014 Target |
|---|---|---|---|---|---|---|
| Cumulative number of biochemical or thermochemical technologies which are developed and used commercially for the conversion of biomass to fuels. | 4 | 5 | 5 | 6 | 6 | 7 |
| Efficiency Measure - Cumulative dollars (thousands) saved each year for grant review | $2,377 | $2,797 | $3,226 | $3,664 | $4,111 | $4,568 |

**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.

Key Outcomes:

- 6 - Expanded and disseminated science-based knowledge and information for management of the nation's natural resources and environment, including soil, air and water, in agricultural, forest, and range working lands and ecosystems.

Key Performance Measures:

- Assessment and control technologies for agricultural emissions developed and used
- Cumulative dollars (thousands) saved each year for grant review
- Proposal review time in days

| Performance Measure | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Target | 2014 Target |
|---|---|---|---|---|---|---|
| Assessment and control technologies for agricultural emissions developed and used | 12 | 14 | 16 | 18 | 19 | 20 |
| Efficiency Measure - Cumulative dollars (thousands) saved each year for grant review | $2,377 | $2,797 | $3,226 | $3,664 | $4,111 | $4,568 |

**Goal 3:** Help America promote agricultural production and biotechnology exports as America works to increase food security.

Key Outcomes:

- 1.2 - Expanded international economic development and trade capacity building through: (1) partnerships between U.S. and counterpart faculty in developing or transitioning countries to strengthen science

applications and (2) technical assistance provided to these countries to support market and agricultural sector development.

- 3.1 - Expanded economic opportunities in Rural America and increased knowledge pertaining to economic diversification, community planning, service infrastructure, local government, youth/adult workforce planning, and civic engagement through innovative integrated research and extension projects targeted to regional business, economic and business development.

Key Performance Measures:

- The number of farmers and ranchers that gained an economic, environmental or quality-of-life benefit from a change in practice learned by participating in a SARE project
- Cumulative dollars (thousands) saved each year for grant review
- Proposal review time in days

| Performance Measure | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Target | 2014 Target |
|---|---|---|---|---|---|---|
| The number of farmers and ranchers that gained an economic, environmental or quality-of-life benefit from a change in practice learned by participating in a SARE project | 11,488 | 12,436 | 12,800 | 13,300 | 13,800 | 14,300 |
| Efficiency Measure - Cumulative dollars (thousands) saved each year for grant review | $2,377 | $2,797 | $3,226 | $3,664 | $4,111 | $4,568 |

**Goal 4:** Ensure that all of America's children have access to safe, nutritious, and balanced meals

Key Outcomes:

- 2.1 - Expanded science-based knowledge and technologies to generate high-quality products and processes by: (1) increasing knowledge of bioenergy and biomass conversion, (2) creating new commercially viable and marketable alternative crops, and alternative markets for non-food products from existing crops, and (3) establishing new integrated research and extension programs and multi-disciplinary graduate education training programs.
- 3.2 - Increased knowledge among county based staff and community leadership in order to provide research-based practices to encourage appropriate community capitol development which enhances business and economic development, the availability of appropriate education and health services, transportation networks and the vibrant community connections. Electronic deployment of information to increase the social, cultural, human and economic capitol available for more nimble and creative community responses to needs.
- 4.1 - Reduced incidence or prevalence of food borne illnesses and contaminants through increased knowledge and/or the development of mitigation, intervention, or prevention strategies via research or integrated research, education, and extension projects in the following food safety areas: pre-harvest food production and transportation, post-harvest processing and distribution, retail preparation and distribution, and consumer preparation, consumption, and behavior.
- 5.1 - New knowledge that clarifies dietary health relationships in order to support better dietary recommendations and improved food products

Key Performance Measures:

- Methods that reduce food contamination and growth of foodborne organisms
- The cumulative number of specific plant diseases labs are prepared to detect
- The cumulative number of specific animal diseases labs are prepared to detect
- Dietary improvements by EFNEP participants
- Cumulative dollars (thousands) saved each year for grant review
- Proposal review time in days

| Performance Measure | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Target | 2014 Target |
|---|---|---|---|---|---|---|
| Methods that reduce food contamination and growth of foodborne organisms | 15 | 17 | 19 | 20 | 21 | 22 |
| The cumulative number of specific plant diseases labs are prepared to detect | 10 | 10 | 11 | 11 | 12 | 12 |
| The cumulative number of specific animal diseases labs are prepared to detect | 9 | 10 | 10 | 11 | 11 | 12 |
| Dietary improvements by EFNEP participants – Percent of participants | 95% | 94% | 94% | 95% | 95% | 95% |
| Efficiency Measure - Cumulative dollars (thousands) saved each year for grant review: | $2,377 | $2,797 | $3,226 | $3,664 | $4,111 | $4,568 |

**NATIONAL INSTITUTE OF FOOD AND AGRICULTURE**
**Full Cost by Department Strategic Goal**
**(Dollars in Thousands)**

**Department Strategic Goal 1: Assist rural communities to create prosperity so they are self-sustaining, repopulating and economically thriving.**

| Program Items | 2011 Actual | 2012 Actual | 2013 Estimate | 2014 Estimate |
|---|---|---|---|---|
| **Discretionary Programs:** | | | | |
| Research | | | | |
| Program | $237,128 | $242,616 | $244,100 | $245,794 |
| Administrative (Direct Costs) | 6,322 | 6,469 | 6,508 | 6,553 |
| Indirect Costs | 3,558 | 3,640 | 3,663 | 3,688 |
| Total Costs | 247,008 | 252,725 | 254,271 | 256,035 |
| FTE's | 82 | 85 | 86 | 83 |
| Education | | | | |
| Program | 55,240 | 53,900 | 54,667 | 44,987 |
| Administrative (Direct Costs) | 1,473 | 1,437 | 1,458 | 1,199 |
| Indirect Costs | 829 | 809 | 820 | 675 |
| Total Costs | 57,542 | 56,146 | 56,945 | 46,861 |
| FTE's | 19 | 19 | 19 | 15 |
| Extension Activities | | | | |
| Program | 342,546 | 339,723 | 341,797 | 328,179 |
| Administrative (Direct Costs) | 9,135 | 9,059 | 9,115 | 8,751 |
| Indirect Costs | 5,138 | 5,096 | 5,127 | 4,923 |
| Total Costs | 356,819 | 353,878 | 356,039 | 341,853 |
| FTE's | 116 | 124 | 121 | 112 |
| Integrated Activities | | | | |
| Program | 958 | 958 | 964 | 958 |
| Administrative (Direct Costs) | 26 | 26 | 26 | 26 |
| Indirect Costs | 14 | 14 | 14 | 14 |
| Total Costs | 998 | 998 | 1,004 | 998 |
| FTE's | 0 | 0 | | 0 |
| Endowment Funds: | | | | |
| Program | 11,880 | 11,880 | 11,880 | 21,880 |
| Total Costs | 11,880 | 11,880 | 11,880 | 21,880 |

**Mandatory Programs:**

| | | | | |
|---|---|---|---|---|
| Risk Management Education | | | | |
| Program | 4,800 | 4,800 | 4,800 | 4,800 |
| Administrative (Direct Costs) | 128 | 128 | 128 | 128 |
| Indirect Costs | 72 | 72 | 72 | 72 |
| Total Costs | 5,000 | 5,000 | 5,000 | 5,000 |
| Beginning Farmers and Ranchers Program | | | | |
| Program | 18,240 | 18,240 | - | - |
| Administrative (Direct Costs) | 486 | 486 | - | - |
| Indirect Costs | 274 | 274 | - | - |
| Total Costs | 19,000 | 19,000 | - | - |
| Total Strategic Goal 1 | 698,247 | 699,627 | 685,139 | 672,627 |
| Total, FTEs | 217 | 228 | 226 | 210 |

**Department Strategic 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**

| Program Items | 2011 Actual | 2012 Actual | 2013 Estimate | 2014 Estimate |
|---|---|---|---|---|
| **Discretionary Programs:** | | | | |
| Research | | | | |
| Program | $115,578 | $116,481 | $117,195 | $131,819 |
| Administrative (Direct Costs) | 3,082 | 3,106 | 3,125 | 3,515 |
| Indirect Costs | 1,734 | 1,747 | 1,758 | 1,977 |
| Total Costs | 120,394 | 121,334 | 122,078 | 137,311 |
| FTE's | 39 | 41 | 41 | 44 |
| Extension Activities | | | | |
| Program | 50,450 | 50,035 | 50,340 | 48,334 |
| Administrative (Direct Costs) | 1,345 | 1,334 | 1,343 | 1,289 |
| Indirect Costs | 757 | 751 | 755 | 725 |
| Total Costs | 52,552 | 52,120 | 52,438 | 50,348 |
| FTE's | 17 | 17 | 18 | 16 |
| Integrated Activities | | | | |
| Program | 8,623 | 4,320 | 4,347 | - |
| Administrative (Direct Costs) | 230 | 115 | 116 | - |
| Indirect Costs | 129 | 65 | 65 | - |
| Total Costs | 8,982 | 4,500 | 4,528 | - |
| Total Strategic Goal 2 | 181,928 | 177,954 | 179,044 | 187,659 |
| FTE's | 3 | 2 | 2 | 0 |
| Total, FTEs | 59 | 60 | 61 | 60 |

**Department Strategic Goal 3 : Help America promote agricultural production and biotechnology exports as America works to increase food security**

| Program Items | 2011 Actual | 2012 Actual | 2013 Estimate | 2014 Estimate |
|---|---|---|---|---|
| **Discretionary Programs:** | | | | |
| Research | | | | |
| Program | $181,407 | $182,588 | $183,707 | $245,328 |
| Administrative (Direct Costs) | 4,839 | 4,870 | 4,900 | 6,543 |
| Indirect Costs | 2,720 | 2,738 | 2,755 | 3,679 |
| Total Costs | 188,966 | 190,196 | 191,362 | 255,550 |
| FTE's | 62 | 64 | 64 | 81 |
| Extension Activities | | | | |
| Program | 670 | 662 | 669 | 643 |
| Administrative (Direct Costs) | 18 | 18 | 18 | 17 |
| Indirect Costs | 10 | 10 | 10 | 10 |
| Total Costs | 698 | 690 | 697 | 670 |
| FTE's | 0 | 0 | 0 | 0 |
| Integrated Activities | | | | |
| Program | 15,329 | 15,345 | 15,438 | 26,046 |
| Administrative (Direct Costs) | 409 | 409 | 412 | 694 |
| Indirect Costs | 230 | 230 | 231 | 391 |
| Total Costs | 15,968 | 15,984 | 16,081 | 27,131 |
| FTE's | 5 | 0 | 5 | 9 |
| Total, FTEs | 67 | 64 | 69 | 90 |
| **Mandatory Programs:** | | | | |
| National Institute of Food and Agriculture | | | | |
| Biomass Research and Development | | | | |
| Program | 28,800 | 38,400 | - | - |
| Administrative (Direct Costs) | 768 | 1,024 | - | - |
| Indirect Costs | 432 | 576 | - | - |
| Total Costs | 30,000 | 40,000 | - | - |
| Organic Research Initiative Sec. 7206 | | | | |
| Program | 19,200 | 19,200 | - | - |
| Administrative (Direct Costs) | 512 | 512 | - | - |
| Indirect Costs | 288 | 288 | - | - |
| Total Costs | 20,000 | 20,000 | - | - |

| | | | | |
|---|---|---|---|---|
| Specialty Crop Grant Programs Sec. 7311 | | | | |
| Program | 48,000 | 48,000 | - | - |
| Administrative (Direct Costs) | 1,280 | 1,280 | - | - |
| Indirect Costs | 720 | 720 | - | - |
| Total Costs | 50,000 | 50,000 | - | - |
| Total Strategic Goal 3 | 305,632 | 316,870 | 208,140 | 283,351 |

**Strategic Goal 4: Ensure that all of America's children have access to safe, nutritious, and balanced meals.**

| Program Items | 2011 Actual | 2012 Actual | 2013 Estimate | 2014 Estimate |
|---|---|---|---|---|
| **Discretionary Programs:** | | | | |
| Research | | | | |
| Program | $85,570 | $86,323 | $86,848 | $106,292 |
| Administrative (Direct Costs) | 2,282 | 2,302 | 2,316 | 2,834 |
| Indirect Costs | 1,284 | 1,295 | 1,303 | 1,594 |
| Total Costs | 89,136 | 89,920 | 90,467 | 110,720 |
| FTE's | 29 | 30 | 31 | 36 |
| Extension Activities | | | | |
| Program | 66,300 | 65,755 | 66,161 | 63,519 |
| Administrative (Direct Costs) | 1,768 | 1,754 | 1,764 | 1,694 |
| Indirect Costs | 995 | 986 | 993 | 953 |
| Total Costs | 69,063 | 68,495 | 68,918 | 66,166 |
| FTE's | 21 | 23 | 23 | 21 |
| Integrated Activities | | | | |
| Program | 10,539 | - | - | - |
| Administrative (Direct Costs) | 281 | - | - | - |
| Indirect Costs | 158 | - | - | - |
| Total Costs | 10,978 | - | - | - |
| FTE's | 4 | 0 | 0 | |
| Total, FTEs | 54 | 53 | 54 | 57 |
| **Mandatory Programs:** | | | | |
| Healthy Urban Food Enterprise Development Center | | | | |
| Program | 960 | - | - | - |
| Administrative (Direct Costs) | 26 | - | - | - |
| Indirect Costs | 14 | - | - | - |
| Total Costs | 1,000 | - | - | - |
| Total Strategic Goal 4 | 170,177 | 158,415 | 159,385 | 176,886 |
| Total Cost, All Strategic Goals | 1,219,104 | 1,206,986 | 1,214,828 | 1,293,643 |
| Total FTEs, All Strategic Goals | 397 | 405 | 410 | 417 |

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Report on Anticipated RFA Publication Date

Information on the publication schedule for NIFA Requests for Applications (RFAs) is included below, as required by a directive from the FY 2013 House Report on the Agriculture Appropriations Bill. The scope of the final RFA will depend upon the final appropriations levels enacted by Congress. The actual publication dates may change due to factors such as amount and timing of appropriations, unexpected delays in the review process, and science developments. For the most up-to-date AFRI RFA publication schedule, please refer to the NIFA website at: http://nifa.usda.gov/funding/rfas/afri.html.

The anticipated RFA publication dates are provided for the Agriculture and Food Research Initiative and for Other Competitive Programs.

**Agriculture and Food Research Initiative (AFRI)**

The U.S. Department of Agriculture (USDA) established the AFRI, under which the Secretary of Agriculture may make competitive grants for fundamental and applied research, education, and extension to address food and agricultural sciences (as defined under section 1404 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA) (7 U.S.C. 3103)), as amended, in six priority areas. The six priority areas include: 1) plant health and production and plant products; 2) animal health and production and animal products; 3) food safety, nutrition, and health; 4) renewable energy, natural resources, and environment; 5) agriculture systems and technology; and 6) agriculture economics and rural communities. The alignment of AFRI programs with the Farm Bill priorities will be described in the RFA.

The RFA topics for the 2014 AFRI program are described below in Table, organized by Farm Bill priorities. In addition, Table 2 reflects the estimated funding investment for priority areas based on a FY 2014 total investment level of $383 million. Planned AFRI investments are described based on current science priorities and planned resources. Final AFRI-funded projects will depend upon resource levels, science priorities at the time of funding, and applications received. The historical investment is based on a two-year average of awards made for each sub-priority during FYs 2010 through 2011.

**Table 1: AFRI RFAs/Expected FY 2014 RFA Publication Dates for AFRI are 8/1/2013 through 12/31/2013**
Legislative Authority for AFRI: 7 U.S.C. 450i(b)

| 2008 Farm Bill AFRI Priority Area | 2014 AFRI Request for Applications (RFA) Focus Areas |
|---|---|
| | **Food, Agricultural, Natural Resources, and Human Sciences Education and Literacy Initiative**. The RFA will focus on providing fellowships to outstanding pre- and postdoctoral students in the food, agricultural, natural resource, and human sciences. The program is focused on developing technical and functional competence for predoctoral students and the research independence and teaching credentials of postdoctoral scientists through well-developed and highly interactive mentoring and training activities. The program solicits applications that address at least one of the 2008 Farm Bill AFRI Priority Areas (including all the sub-priorities) or one of the Challenge Areas. |
| | **Foundational Science**. The RFA will focus on building a foundation of knowledge in fundamental and applied food and agricultural sciences critical for solving current and future societal challenges. The RFA will initiate the Critical Agricultural Research and Extension (CARE) Competition under Foundational Science. CARE will address critical and emerging needs in plant and animal production and protection. The Foundational Science area is organized by, and directly aligns with, the 2008 Farm Bill AFRI priority areas. The Foundational Science priorities are designed to include the scope of topics listed within each of the 2008 Farm Bill Priority Areas (sub-priorities). |
| **Plant Health and Production and Plant Products** | **Agricultural and Food Production and Security**. The RFA will focus on the societal challenge to keep American agriculture competitive and enhance global food security by ensuring the availability and accessibility of safe and nutritious food. This RFA will support projects designed to achieve the long-term outcome of increasing global food availability through increased sustainable food production with reduced losses. This RFA may support projects that address the 2008 Farm Bill AFRI Priority of 2008 Farm Bill AFRI Priority on Plant Health Production and Plant Products, including the sub-priorities on conventional breeding and plant-pest interactions and biocontrol systems. |
| | **Agricultural Production and Climate Variability**. The RFA will focus on the societal challenge to adapt agroecosystems and natural resource systems to climate variability and change and implement mitigation strategies in those systems. This RFA will support projects designed to achieve the long-term outcome of developing new varieties of plants and animals and new strategies for agriculture and forest production systems for adaptation to climate variability and change; sustainable use of natural resources and support for sustainable rural economies under variable and changing climates; reduction in the use of energy, nitrogen fertilizer, and water by ten percent; and increase carbon sequestration by fifteen percent through resilient agriculture and forest production systems. This RFA may support projects that address the 2008 Farm Bill AFRI Priority on Plant Health Production and Plant Products, including the sub-priorities on plant genome structure and function, molecular and cellular genetics and plant biotechnology, conventional breeding, and crop plant responses to environmental stresses. |
| | **Water and Water Resources.** The RFA will address water and water resources issues. The RFA for this new program area will support projects that coordinate and leverage efforts in the Agricultural Production and Climate |

| | |
|---|---|
| | Variability and Sustainable Bioenergy challenge areas. The program will focus on developing solutions for water management that link food, water, climate change, energy, and environmental issues. This RFA may support projects that address the 2008 Farm Bill AFRI Priority of Plant Health Production and Plant Products, including the sub-priorities on plant genome structure and function, molecular and cellular genetics and plant biotechnology, conventional breeding, and crop plant responses to environmental stresses. |
| | **Sustainable Bioenergy**. The RFA will focus on the societal challenge to secure America's energy future. This RFA will support projects designed to achieve the long-term outcome of reducing the national dependence on foreign oil through the production of sustainable bioenergy. This RFA may support projects that address the 2008 Farm Bill AFRI Priority of Plant Health Production and Plant Products, including the sub-priorities on plant genome structure and function, molecular and cellular genetics and plant biotechnology, conventional breeding, plant-pest interactions and biocontrol systems, crop plant responses to environmental stresses, and new food and industrial uses of plant products. |
| | **Food Safety.** The RFA will focus on the societal challenge to improve food safety for all Americans. This RFA will support projects designed to achieve the long-term outcome of reducing foodborne hazards through a safe food supply. This RFA will support projects that address the 2008 Farm Bill AFRI Priority on Plant Health Production and Plant Products, including the sub-priorities on plant genome structure and function, molecular and cellular genetics and plant biotechnology, and plant-pest interactions and biocontrol systems. |
| | **Food, Agricultural, Natural Resources, and Human Sciences Education and Literacy Initiative**. The RFA will focus on providing fellowships to outstanding pre- and postdoctoral students in the food, agricultural, natural resource, and human sciences. The program is focused on developing technical and functional competence for predoctoral students and the research independence and teaching credentials of postdoctoral scientists through well-developed and highly interactive mentoring and training activities. The program solicits applications that address at least one of the 2008 Farm Bill AFRI Priority Areas (including all the sub-priorities) or one of the Challenge Areas. |
| **Animal Health and Production and Animal Products** | **Foundational Science**. The RFA will focus on building a foundation of knowledge in fundamental and applied food and agricultural sciences critical for solving current and future societal challenges. The RFA will initiate the Critical Agricultural Research and Extension (CARE) Competition under Foundational Science. CARE will address critical and emerging needs in plant and animal production and protection. The Foundational Science is organized by, and directly aligns with, the 2008 Farm Bill AFRI priority areas. The Foundational Science priorities are designed to include the scope of topics listed within each of the 2008 Farm Bill Priority Areas (sub-priorities). |
| | **Agricultural and Food Production and Security**. The RFA will focus on the societal challenge to keep American agriculture competitive and enhance global food security by ensuring the availability and accessibility of safe and nutritious food. This RFA will support projects designed to achieve the long-term outcome of increasing global food availability through increased sustainable food production with reduced losses. This RFA may support projects that address the 2008 Farm Bill AFRI Priority of 2008 Farm Bill AFRI Priority on Animal Health and Production and Animal Products, including the sub-priorities on aquaculture, conventional breeding, identification of genes responsible for improved production traits and resistance to disease, improved nutritional performance of animals, improved nutrient qualities of animal products and uses, and development of new and improved animal |

| | |
|---|---|
| | husbandry and production systems that take into account production efficiency, animal well-being, and animal systems applicable to aquaculture. |
| | **Agricultural Production and Climate Variability**. The RFA will focus on the societal challenge to adapt agroecosystems and natural resource systems to climate variability and change and implement mitigation strategies in those systems. This RFA will support projects designed to achieve the long-term outcome of developing new varieties of plants and animals and new strategies for agriculture and forest production systems for adaptation to climate variability and change; sustainable use of natural resources and support for sustainable rural economies under variable and changing climates; reduction in the use of energy, nitrogen fertilizer, and water by ten percent; and increase carbon sequestration by fifteen percent through resilient agriculture and forest production systems. This RFA may support projects that address the 2008 Farm Bill AFRI Priority on Animal Health and Production and Animal Products, including the sub-priorities on cellular and molecular basis of animal reproduction, growth, disease, and health, conventional breeding, identification of genes responsible for improved production traits and resistance to disease, and development of new and improved animal husbandry and production systems that take into account production efficiency, animal well-being, and animal systems applicable to aquaculture. |
| | **Water and Water Resources.** The RFA will address water and water resources issues. The RFA for this new program area will support projects that coordinate and leverage efforts in the Agricultural Production and Climate Variability, and Sustainable Bioenergy challenge areas. The program will focus on developing solutions for water management that link food, water, climate change, energy, and environmental issues. This RFA may support projects that address the 2008 Farm Bill AFRI Priority of Animal Health Production and Animal Products, including the sub-priorities on aquaculture, improved nutritional performance of animals, and development of new and improved animal husbandry and production systems that take into account production efficiency, animal well-being, and animal systems applicable to aquaculture. |
| | **Food Safety.** The RFA will focus on the societal challenge to improve food safety for all Americans. This RFA will support projects designed to achieve the long-term outcome of reducing foodborne hazards through a safe food supply. This RFA may support projects that address the 2008 Farm Bill AFRI Priority on Animal Health and Production and Animal Products, including the sub-priorities on cellular and molecular basis of animal reproduction, growth, disease, and health, animal biotechnology, identification of genes responsible for improved production traits and resistance to disease, and development of new and improved animal husbandry and production systems that take into account production efficiency, animal well-being, and animal systems applicable to aquaculture. |
| **Food Safety, Nutrition, and Health** | **Food, Agricultural, Natural Resources, and Human Sciences Education and Literacy Initiative**. The RFA will focus on providing fellowships to outstanding pre- and postdoctoral students in the food, agricultural, natural resource, and human sciences. The program is focused on developing technical and functional competence for predoctoral students and the research independence and teaching credentials of postdoctoral scientists through well-developed and highly interactive mentoring and training activities. The program solicits applications that address at least one of the 2008 Farm Bill AFRI Priority Areas (including all the sub-priorities) or one of the Challenge Areas. |
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| | **Water and Water Resources.** The RFA will address water and water resources issues. The RFA for this new program area will support projects that coordinate and leverage efforts in the Agricultural Production and Climate Variability, and Sustainable Bioenergy challenge areas. The program will focus on developing solutions for water management that link food, water, climate change, energy, and environmental issues. This RFA may support projects that address the 2008 Farm Bill AFRI Priority of Food Safety, Nutrition, and Health, including the sub-priorities on microbial contaminants and pesticides residue related to human health, postharvest physiology and practices, and improved processing technologies. |
| | **Nutrition and Health**. The RFA will focus on the societal challenge of childhood obesity prevention. This RFA will support projects designed to achieve the long-term outcome of reducing obesity among children and adolescents ages 2–19 years. This RFA may support projects that address the 2008 Farm Bill AFRI Priority of Food Safety, Nutrition, and Health, including the sub-priority on links between diet and health and bioavailability of nutrients. |
| | **Food Safety.** The RFA will focus on the societal challenge to improve food safety for all Americans. This RFA will support projects designed to achieve the long-term outcome of reducing foodborne hazards through a safe food supply. This RFA may support projects that address the 2008 Farm Bill AFRI Priority of Food Safety, Nutrition, and Health, including the sub-priorities on microbial contaminants and pesticides residue related to human health, links between diet and health and bioavailability of nutrients, postharvest physiology and practices, and improved processing technologies. |
| **Renewable Energy, Natural Resources, and Environment** | **Food, Agricultural, Natural Resources, and Human Sciences Education and Literacy Initiative**. The RFA will focus on providing fellowships to outstanding pre- and postdoctoral students in the food, agricultural, natural resource, and human sciences. The program is focused on developing technical and functional competence for predoctoral students and the research independence and teaching credentials of postdoctoral scientists through well-developed and highly interactive mentoring and training activities. The program solicits applications that address at least one of the 2008 Farm Bill AFRI Priority Areas (including all the sub-priorities) or one of the Challenge Areas. |

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| | **Water and Water Resources.** The RFA will address water and water resources issues. The RFA for this new program area will support projects that coordinate and leverage efforts in the Agricultural Production and Climate Variability, and Sustainable Bioenergy challenge areas. The program will focus on developing solutions for water management that link food, water, climate change, energy, and environmental issues. This RFA may support projects that address the 2008 Farm Bill AFRI Priority of Renewable Energy, Natural Resources, and Environment, including the sub-priorities on global climate effects on agriculture, fundamental structures and functions of ecosystems, and minimizing soil and water losses and sustaining surface and ground water quality. |
| | **Sustainable Bioenergy**. The RFA will focus on the societal challenge to secure America's energy future. This RFA will support projects designed to achieve the long-term outcome of reducing the national dependence on foreign oil through the production of sustainable bioenergy. This RFA may support projects that address the 2008 Farm Bill AFRI Priority of Renewable Energy, Natural Resources and Environment, including the sub-priorities on fundamental structures and functions of ecosystems, biological and physical bases of sustainable production systems, minimizing soil and water losses and sustaining surface and ground water quality, forestry, and biological diversity. |
| **Agriculture Systems and Technology** | **Food, Agricultural, Natural Resources, and Human Sciences Education and Literacy Initiative**. The RFA will focus on providing fellowships to outstanding pre- and postdoctoral students in the food, agricultural, natural resource, and human sciences. The program is focused on developing technical and functional competence for predoctoral students and the research independence and teaching credentials of postdoctoral scientists through well-developed and highly interactive mentoring and training activities. The program solicits applications that address at least one of the 2008 Farm Bill AFRI Priority Areas (including all the sub-priorities) or one of the Challenge Areas. |

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| | **Food Safety.** The RFA will focus on the societal challenge to improve food safety for all Americans. This RFA will support projects designed to achieve the long-term outcome of reducing foodborne hazards through a safe food supply. This RFA may support projects that address the 2008 Farm Bill AFRI Priority on Agriculture Systems and Technology, including the sub-priorities on new uses and new products from traditional and nontraditional crops, animals and natural resources, robotics, energy efficiency, computing, and expert systems, new hazard and risk assessment and mitigation measurements, and water quality and management. |
| **Agriculture Economics and Rural Communities** | **Food, Agricultural, Natural Resources, and Human Sciences Education and Literacy Initiative**. The RFA will focus on providing fellowships to outstanding pre- and postdoctoral students in the food, agricultural, natural resource, and human sciences. The program is focused on developing technical and functional competence for |

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| | **Agricultural and Food Production and Security**. The RFA will focus on the societal challenge to keep American agriculture competitive and enhance global food security by ensuring the availability and accessibility of safe and nutritious food. This RFA will support projects designed to achieve the long-term outcome of increasing global food availability through increased sustainable food production with reduced losses. This RFA may support projects that address the 2008 Farm Bill AFRI Priority of 2008 Farm Bill AFRI Priority on Agriculture Economics and Rural Communities, including the sub-priorities on strategies for entering into being competitive in domestic and overseas markets, farm efficiency and profitability, new decision tools for farm and market systems, choices and applications of technology, and technology assessment. |
| | **Agricultural Production and Climate Variability**. The RFA will focus on the societal challenge to adapt agroecosystems and natural resource systems to climate variability and change and implement mitigation strategies in those systems. This RFA will support projects designed to achieve the long-term outcome of developing new varieties of plants and animals and new strategies for agriculture and forest production systems for adaptation to climate variability and change; sustainable use of natural resources and support for sustainable rural economies under variable and changing climates; reduction in the use of energy, nitrogen fertilizer, and water by ten percent; and increase carbon sequestration by fifteen percent through resilient agriculture and forest production systems. This RFA may support projects that address the 2008 Farm Bill AFRI Priority on Agriculture Economics and Rural Communities, including the sub-priorities on farm efficiency and profitability, new decision tools for farm and market systems, choices and applications of technology, and technology assessment. |
| | **Water and Water Resources.** The RFA will address water and water resources issues. The RFA for this new program area will support projects that coordinate and leverage efforts in the Agricultural Production and Climate Variability, and Sustainable Bioenergy challenge areas. The program will focus on developing solutions for water management that link food, water, climate change, energy, and environmental issues. This RFA may support projects that address the 2008 Farm Bill AFRI Priority of Agriculture Economics and Rural Communities, including the sub-priorities on strategies for entering into being competitive in domestic and overseas markets, farm efficiency and profitability, new decision tools for farm and market systems, choices and applications of technology, and technology assessment. |
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| **Nutrition and Health**. The RFA will focus on the societal challenge of childhood obesity prevention. This RFA will support projects designed to achieve the long-term outcome of reducing obesity among children and adolescents ages 2–19 years. This RFA may support projects that address the 2008 Farm Bill AFRI Priority on Agriculture Economics and Rural Communities, including the sub-priorities on strategies for entering into being competitive in domestic and overseas markets, new decision tools for farm and market systems, choices and applications of technology, and technology assessment. |
| **Food Safety.** The RFA will focus on the societal challenge to improve food safety for all Americans. This RFA will support projects designed to achieve the long-term outcome of reducing foodborne hazards through a safe food supply. This RFA may support projects that address the 2008 Farm Bill AFRI Priority on Agriculture Economics and Rural Communities, including the sub-priorities on strategies for entering into being competitive in domestic and overseas markets, new decision tools for farm and market systems, choices and applications of technology, and technology assessment. |

**Table 2: AFRI Estimated Funding**

| 2008 Farm Bill AFRI Priority Area | Historical Investment | Proposed 2014 Budget |
|---|---|---|
| Plant Health and Production and Plant Products—Plant systems, including: | | $90M* of $383M |
| (i) Plant genome structure and function; | 10% | |
| (ii) Molecular and cellular genetics and plant biotechnology; | 17% | |
| (iii) Conventional breeding, including cultivar and breed development, selection theory, applied quantitative genetics, breeding for improved food quality, breading for improved local adaptation to biotic stress and abiotic stress, and participatory breeding; | 21% | |
| (iv) Plant-pest interactions and biocontrol systems; | 45% | |
| (v) Crop plant response to environmental stresses; | 5% | |
| (vi) Unproved nutrient qualities of plant products; and | 0% | |
| (vii) New food and industrial uses of plant products. | 2% | |
| | 100% | |
| Animal Health and Production and Animal Products—Animal systems, including: | | $64M* of $383M |
| (i) Aquaculture; | 2% | |
| (ii) Cellular and molecular basis of animal reproduction, growth, disease, and health; | 44% | |
| (iii) Animal biotechnology; | 0% | |
| (iv) Conventional breeding, including breed development, selection theory, applied quantitative genetics, breeding for improved food quality, breeding for improved local adaptation to biotic stress and abiotic stress, and participatory breeding; | 16% | |
| (v) Identification of genes responsible for improved production traits and resistance to disease; | 12% | |
| (vi) Improved nutritional performance of animals; | 4% | |
| (vii) Improved nutrient qualities of animal products and uses; and | 2% | |
| (viii) The development of new and improved animal husbandry and production systems that take into account production efficiency, animal well-being, and animal systems applicable to aquaculture. | 20% | |
| | 100% | |

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| Food Safety, Nutrition, and Health—Nutrition, food safety and quality, and health, including:<br>(i) Microbial contaminants and pesticides residue relating to human health;<br>(ii) Links between diet and health;<br>(iii) Bioavailability of nutrients;<br>(iv) Postharvest physiology and practices; and<br>(v) Improved processing technologies. | <br>21%<br>61%<br>2%<br>5%<br>11%<br>100% | $86M* of $383M |
| Renewable Energy, Natural Resources, and Environment—Natural resources and the environment, including:<br>(i) Fundamental structures and functions of ecosystems;<br>(ii) Biological and physical bases of sustainable production systems;<br>(iii) Minimizing soil and water losses and sustaining surface water and ground water quality;<br>(iv) Global climate effects on agriculture<br>(v) Forestry; and<br>(vi) Biological diversity. | <br>7%<br>48%<br>5%<br>30%<br>8%<br>2%<br>100% | $93M* of $383M |
| Agriculture Systems and Technology—Engineering, products, and processes, including:<br>(i) New uses and new products from traditional and nontraditional crops, animals, by products, and natural resources;<br>(ii) Robotics, energy efficiency, computing, and expert systems;<br>(iii) New hazard and risk assessment and mitigation measures; and<br>(iv) Water quality and management. | <br>59%<br>18%<br>15%<br>8%<br>100% | $26M* of $383M |
| Agriculture Economics and Rural Communities—Markets, trade, and policy, including:<br>(i) Strategies for entering into and being competitive in domestic and overseas markets;<br>(ii) Farm efficiency and profitability, including the viability and competitiveness of small and medium-sized dairy, livestock, crop and other commodity operations;<br>(iii) New decision tools for farm and market systems;<br>(iv) Choices and applications of technology;<br>(v) Technology assessment; and<br>(vi) New approaches to rural development, including rural entrepreneurship. | <br>19%<br>31%<br>11%<br>5%<br>7%<br>27%<br>100% | $24M* of $383M |

*Funding amounts by priority area are calculations using an historical rate of investment. Final investments for 2014 will depend upon enacted appropriation levels, applications received and funded, and categorization of funded projects.

**Other Competitive Programs**

Non-AFRI competitive programs included in the Congressional Directive are listed below. FY 2013 discretionary funding is based on the Annualized Continuing Resolution appropriations, and may not reflect final funding amounts appropriated in the full-year FY 2013 Agriculture Appropriations Act. FY 2014 Budget estimates are the estimated resources based on the President's budget request, and may differ from final FY 2014 funding amounts appropriated by Congress.

Program RFAs/Expected FY 2014 RFA Publication Dates are 8/1/2013 through 12/31/2013.

| Program | Authority | Scope of RFA and Budget Justification | 2013 Estimate ($000s) | 2014 Budget ($000s) |
|---|---|---|---|---|
| Sustainable Agriculture Research and Education Program | 7 U.S.C. 5811, 7 U.S.C. 5831, & 7 U.S.C. 5832 in accordance with the general authorities in 7 U.S.C. 343(d) | The RFA will focus on increasing the knowledge of and help farmers and ranchers to adopt practices that are profitable, environmentally sound, and good to communities. Grants awarded by the four regional administrative councils will support projects that address crop and livestock production and marketing, stewardship of soil and other natural resources, economics and quality of life. The program will support development of technical guides and handbooks and education and training for Cooperative Extension System agents, and other agricultural professionals involved in the education and transfer of technical information concerning sustainable agriculture. | $19,285 | $22,667 |
| Water Quality | 7 U.S.C. 7626 | a/ | 4,528 | a/ |
| Regional Pest Management Centers | 7 U.S.C. 7626 | b/ | 4,024 | b/ |
| Methyl Bromide | 7 U.S.C. 7626 | a/ | 2,008 | a/ |
| Organic Transition Program | 7 U.S.C. 7626 | The RFA will focus on the development and implementation of research, extension and higher education programs to improve the competitiveness of organic livestock and crop producers, as well as those who are adopting organic practices. The program is focused on the development and implementation of biologically based pest management practices that mitigate the ecological, agronomic and economic risks associated with a transition from conventional to organic agricultural production systems. | 4,024 | 4,000 |
| Crop Protection/Pest Management | 7 U.S.C. 7626 | The RFA will focus on integrated pest management (IPM) projects that respond to pest management challenges with coordinated regional and national research, education, and extension programs, and will serve as a catalyst for promoting further development and use of IPM approaches. This new program consolidates the Expert IPM Decision Support System, IPM and Biological Control, Pest Management Alternatives, Smith-Lever 3(d) Pest Management, and Regional Pest Management Centers programs into a single program to ensure the ability to | 0 | 17,143 |

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| | | support the synergistic research, education and extension activities needed to ensure global food security. The program will develop and help end-users discover and implement effective, affordable, and environmentally-sound IPM strategies to reduce economic, environmental, and societal losses caused by diseases, insects, weeds, and other pests that affect crops and livestock and pests that affect human well-being and community vitality. The program will focus on plant projection tactics and tools, diversified IPM systems, enhancing agricultural biosecurity, IPM for sustainable communities, and development of the next generation of IPM scientists. | | |
| Specialty Crop Research Initiative | 7 U.S.C. 7621 et seq. [Section 7311 of FCEA amended Title IV of the Agricultural Research, Extension, and Education Reform Act of 1998 (7 U.S.C. 7621 et seq.)] | c/ | c/ | c/ |
| Beginning Farmers and Ranchers Program | 7 U.S.C. 3319f(c)(1) | c/ | c/ | c/ |
| Organic Agriculture Research and Extension Initiative | 7 U.S.C. 5925 [Section 7206 of Food, Conservation, and Energy Act of 2008 (FCEA) amended section 1672B of the Food, Agriculture, Conservation and Trade Act of 1990 (7 U.S.C. 5925)] | c/ | c/ | c/ |

Note: a/ Funding for the program is not requested in FY 2014.
b/ The program is consolidated under Integrated Activities, Crop Protection/Pest Management Program.
c/ The program expired at the end of FY 2012.