



United States
Department of
Agriculture

National Institute
of Food
and Agriculture



FY2013

**NATIONAL INSTITUTE OF FOOD AND AGRICULTURE
FY2013 PRESIDENT'S BUDGET PROPOSAL**



NIFA FY2013 PRESIDENT'S BUDGET PROPOSAL

AGRICULTURAL SCIENCE AT THE NATIONAL INSTITUTE OF FOOD AND AGRICULTURE (NIFA) INTEGRATES RESEARCH, EDUCATION, AND EXTENSION to ensure that groundbreaking discoveries go beyond the laboratory and make their way into the classroom and to people who can put the knowledge into practice and improve their lives. **RESEARCH** enables development of the knowledge needed to solve many of the issues facing our nation. **EDUCATION** strengthens schools and universities to train the next generation of scientists, educators, producers, and citizens. **EXTENSION** brings the knowledge gained through research and education to the people who need it most—in the United States and around the world.

NIFA works with the best and brightest scientists in the United States and around the world to find innovative solutions to local and global problems. Collaboration with historically black colleges and universities, Hispanic-serving institutions, and tribal colleges ensures the benefits of NIFA's resources extend to all Americans. With a timely, integrated approach and collaboration with other federal science agencies, NIFA also serves as a vital contributor in science policy decision-making.

NIFA supports the nation's food, fuel, and fiber production system and works across the federal science enterprise to provide innovative and needed solutions to these and other critical issues facing rural communities and American consumers.

In Fiscal Year 2013, NIFA seeks to expand the role and influence of science in agriculture, the environment, human nutrition, and communities through focused, problem-solving research, education, and extension activities. NIFA will focus resources on supporting programs that provide foundational knowledge, as well as on programs that will address critical issues that impact the long-term viability of agriculture.

THE AGENCY'S PRIMARY BUDGET INITIATIVES WILL EMPHASIZE:

- targeted efforts that focus on solutions to high priority issues including adapting agriculture to changing weather and climates; reducing childhood obesity; improving food safety and nutrition; and ensuring sustainable agriculture that provides for food security and meets goals for biofuels, while strengthening rural communities;
- support for fundamental and applied research, education, and extension to the nation's best scientists and educators through Agriculture and Food Research Initiative competitive grants;
- consolidated programs to improve the efficiency of program implementation resulting in research, education, and extension investments with greater focus and enhanced impact;
- linkages among producers, scientific discovery, and application of sustainable practices, through the integrated Sustainable Agriculture Federal-State Matching Grant Program;
- efforts to advance agricultural literacy through enhanced agriculture and natural resources education; and
- outreach activities through the Cooperative Extension System.

FY2013 BUDGET HIGHLIGHTS

AGRICULTURE AND FOOD RESEARCH INITIATIVE (AFRI)

Funding will support high-priority issues:

BIOENERGY

Sustained funding will support regional projects that link research for sustainable biomass production, logistics of handling feedstocks for biofuels, and education programs to create the needed skilled workforce. Ongoing targeted research will focus on enhanced value co-products and crop protection; land-use changes resulting from feedstock production and conversion; and identification of socioeconomic impacts of biofuels in rural communities in order to enhance sustainable rural economies. Funding will be used for genomics work that optimizes dedicated biofuels feedstocks. Funding also will support one new multi-state regional project that will catalyze development of sustainable bioenergy production systems in a region of the country not covered by previous multi-state regional awards.

GLOBAL CLIMATE CHANGE

Funding will support activities on adaptive capacities and mitigation potentials of agricultural and natural resource systems to climate variables such as drought, limits on irrigation water supplies, floods and temperature extremes. Efforts will help farmers, ranchers, land owners, and rural communities adapt to climate variation, reduce greenhouse gas emission, and increase carbon sequestration.

GLOBAL FOOD SECURITY

Programs in this priority area will address pressing issues in food production that contribute to national and global food security while helping America promote

sustainable agriculture and agricultural exports. Funding will be used to improve the understanding of genomic information and breeding to develop new and improved animal breeds and crop cultivars for increased food production and quality. Efforts will target activities that address the problems of U.S. agriculture, create mutual benefits domestically and abroad, and allow new opportunities for interdepartmental initiatives as appropriate.

NUTRITION AND HEALTH

Projects will focus on children and youth ages 2-19, to identify the behavioral factors that influence obesity; develop valid behavioral and environmental instruments that measure progress in obesity prevention efforts; and, fund nutrition research to develop and evaluate effective programs to prevent obesity. Funding will support research and outreach efforts to develop and increase consumption of healthy foods that are low in energy (fats and sugars) and salt, and high in nutrient density and that are appealing (to children).

FOOD SAFETY

Funds will be used 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. NIFA will fund critical environmental and ecological research to improve our understanding of disease-causing microorganisms, and of naturally occurring contaminants in meats, poultry, seafood, and fresh fruits and vegetables. Funding will address efforts to minimize antibiotic resistance transmission through the food chain, and microbial food safety hazards of fresh and fresh-cut fruits and vegetables.

FOUNDATIONAL PROGRAMS

Funding will allow substantive research investments 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.

NIFA FELLOWSHIPS

Funding is proposed for graduate and post-graduate education through awards made to individuals pursuing research careers in NIFA research priority areas.

CROP PROTECTION

NIFA proposes to consolidate funding for Expert Integrated Pest Management (IPM) Decision Support System, IPM & Biological Control, Minor Crop Pest Management/IR-4, Pest Management Alternatives, Smith-Lever 3(d) Pest Management, and Regional Pest Management Centers into a single program called Crop Protection administered under Integrated Activities. This 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.

Funded activities will be for IPM projects that respond to pest management challenges with coordinated regional and national research, education, and extension programs, and promote further development and use of IPM approaches. The program will foster regional and national team building efforts, communication networks, and enhanced stakeholder participation. The program will focus on plant protection

tactics and tools; diversified IPM systems; enhancing agricultural biosecurity; IPM for a sustainable society; and development of the next generation of IPM scientists.

GRANTS FOR INSULAR AREAS

NIFA proposes to consolidate funding for “Resident Instruction Grants for Insular Areas” and “Distance Education Grants for Insular Areas” into a single program called Grants for Insular Areas. This consolidation allows for greater efficiency in administering the program.

Funds will enhance resident instruction, curriculum, and teaching programs in food and agricultural sciences located 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. It also will support activities to strengthen the capacity of institutions in these insular areas to carry out collaborative distance food and agricultural education programs using digital network technologies.

SUSTAINABLE AGRICULTURE

Integrated activities will focus on a new Federal-State matching grant program to assist in the creation or enhancement of State sustainable agriculture research, extension, and education programs. Funding will be used for activities that integrate sustainable agriculture in all State research, extension and education projects; support new research at sustainable agriculture centers; build stronger Statewide farmer-to-farmer networks and outreach and technical assistance strategies; and incorporate sustainable agriculture studies and curriculum in undergraduate and graduate degree programs.

HISPANIC-SERVING AGRICULTURAL COLLEGES AND UNIVERSITIES (HSACU) ENDOWMENT FUND

The Hispanic/Latino community is the fastest growing sector of the American population. This investment in the HSACU is needed to ensure they can compete effectively for NIFA competitive grants. Support for this endowment fund for HSACU will assist in the development of a skilled and marketable Hispanic student population for employment in the food and agriculture sector.

EDUCATION

Funded activities will support training to ensure a vast pool of graduates interested in careers in the biotechnology, food systems, economics, and other fields of agriculture. NIFA is requesting funding for the Graduate Fellowships Grants, Institution Challenge Grants, Multicultural Scholars, and Secondary Education, Two-Year Postsecondary Education and Agriculture in the K-12 Classroom programs.

EXTENSION

Funding is proposed for Smith-Lever 3(d) for the New Technologies for Agricultural Extension Program to support a national web-based information and education delivery system for the Cooperative Extension System (CES), and the Children, Youth, and Families at Risk Program to improve the quality and quantity of comprehensive community-based programs for at-risk children, youth, and families supported by the CES. NIFA also proposes funding to assist forest and range landowners and managers in making resource management decisions under the Renewable Resources Extension Act Program.

OTHER PROGRAMS

Proposed increases in Federal administration will support the modernization of NIFA's grant applications systems and processes. NIFA will continue funding for most other programs, including formula funded and minority-serving programs, in order to serve the nation's needs through exemplary research, education, and extension that address many challenges facing agriculture, the environment, and nutrition. From production, nutrition and food safety to energy independence and the sustainability of our natural resources, NIFA's investment in science helps to secure America's future.

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE (\$'000)

PROGRAMS

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DISCRETIONARY FUNDING

RESEARCH AND EDUCATION ACTIVITIES:

Agriculture and Food Research Initiative	\$264,470	\$325,000
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FORMULA PROGRAMS:

Hatch Act	236,334	234,834
McIntire-Stennis Cooperative Forestry	32,934	32,934
Evans-Allen Program	50,898	50,898
Animal Health and Disease, Section 1433	4,000	0

SPECIAL RESEARCH GRANTS:

Expert IPM Decision Support System a/	153	0
Integrated Pest Management & Biological Control a/	2,362	0
Minor Crop Pest Management, IR-4 a/	11,913	0
Pest Management Alternatives a/	1,402	0
Global Change, UV-B Monitoring	1,300	1,405
Other Grants b/	2,700	0

OTHER RESEARCH:

Critical Agricultural Materials	1,081	0
Aquaculture Centers	3,920	3,920
Sustainable Agriculture Research and Education Program	14,471	14,471
Supplemental and Alternative Crops	825	0
1994 Research Grants	1,801	1,801
Joe Skeen Institute for Rangeland Restoration	961	0
Federal Administration (Direct Appropriation)	10,500	14,229
Farm Business Management and Benchmarking Program	1,450	0
Sun Grant Program	2,200	0
Policy Research	4,000	0
Capacity Building for Non-Land Grant Colleges of Agriculture	4,500	0

HIGHER EDUCATION:

Graduate Fellowships Grants c/	0	3,851
Institution Challenge Grants c/	0	5,643
Multicultural Scholars c/	0	1,239
Institution Challenge, Multicultural Scholars and Graduate Fellowships Grants	9,000	0
1890 Institution Capacity Building Grants	19,336	19,336
Hispanic Serving Institutions Education Grants Program	9,219	9,219
Tribal Colleges Education Equity Grants Program	3,335	3,335
Interest (Est.) Earned on Tribal Colleges Endowment Fund	4,743	5,045
Secondary Educ./2-Year Post Secondary, & Agriculture in the K-12 Classroom	900	981
Alaska Native-serving and Native Hawaiian-serving Institutions	3,194	3,194
Veterinary Medical Services Act	4,790	4,790
Grants for Insular Areas	0	1,650
Resident Instruction Grants for Insular Areas d/	900	0
Distance Education Grants for Insular Areas d/	750	0

Total, Research and Education Activities

	710,342	737,775
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INTEGRATED ACTIVITIES:

SECTION 406 LEGISLATIVE AUTHORITY:

Water Quality	4,500	0
Regional Pest Management Centers a/	4,000	0
Methyl Bromide Transition Program	1,996	0
Organic Transition Program	4,000	4,000
Crop Protection	0	29,056

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(integrated activities, continued)

OTHER LEGISLATIVE AUTHORITIES:

Regional Rural Development Centers	\$998	\$998
Sustainable Agriculture Federal-State Matching Grant Program	0	3,500
Food and Agriculture Defense Initiative	5,988	5,988
Total, Integrated Activities	21,482	43,542

EXTENSION ACTIVITIES:

FORMULA PROGRAMS:

Smith-Lever Formula 3(b)&(c)	294,000	292,411
1890 Institutions	42,592	42,592

SMITH-LEVER 3(D) PROGRAMS:

Expanded Food and Nutrition Education Program	67,934	67,934
Pest Management a/	9,918	0
Farm Safety and Youth Farm Safety Education and Certification	4,610	4,610
New Technologies for Agricultural Extension	1,550	1,750
Children, Youth, and Families at Risk	7,600	8,395
Sustainable Agriculture	4,696	4,696
Federally-Recognized Tribes Extension Program	3,039	3,039

OTHER EXTENSION PROGRAMS:

Extension Services at 1994 Institutions	4,312	4,312
Renewable Resources Extension Act	3,700	4,060
Rural Health and Safety	1,500	0
1890 Facilities (Section 1447)	19,730	19,730
Food Animal Residue Avoidance Database Program (FARAD)	1,000	0
Grants for Youth Serving Institutions	750	0
Women and Minorities in Science, Technology, Engineering and Mathematics (STEM) Fields	400	400
Federal Administration	7,852	8,544
Total, Extension Activities	475,183	462,473

TOTAL DISCRETIONARY FUNDING e/

1,207,007 **1,243,790**

MANDATORY AND ENDOWMENT FUNDING

Hispanic-Serving Agriculture Colleges and Universities Endowment Fund	\$0	\$10,000
Tribal Colleges Endowment Fund	11,880	11,880
Organic Agriculture Research and Extension Initiative	20,000	f/
Beginning Farmers and Ranchers Program	19,000	f/
Biomass Research and Development	40,000	f/
Specialty Crop Research Initiative	50,000	f/
Biodiesel Fuel Education Program g/	1,000	f/
Agriculture Risk Management Education Program g/	5,000	5,000
Community Food Projects Competitive Grants Program g/	5,000	5,000

TOTAL, MANDATORY AND ENDOWMENT FUNDING

151,880 **31,880**

TOTAL, DISCRETIONARY AND MANDATORY FUNDING

1,358,887 **1,275,670**

NOTE: a/ In FY 2013 program is consolidated under Integrated Activities, Crop Protection Program.
 b/ In FY 2012 funding is for Potato Research - \$1,350,000 and Forest Products Research - \$1,350,000.
 c/ In FY 2012 program is consolidated under Research & Education Activities, Institution Challenge, Multicultural Scholars & Graduate Fellowships Grants Program.
 d/ In FY 2013 program is consolidated under Research & Education Activities, Grants for Insular Areas Program.
 e/ Estimated interest on Tribal College Endowment Fund is included in the total.
 f/ Funding for this Farm Bill mandatory program is subject to reauthorization.
 g/ Mandatory program delegated to another USDA agency but administered by NIFA.

