

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Statement of  
Dr. Roger Beachy, Director  
Before the  
Subcommittee on Agriculture, Rural Development,  
Food and Drug Administration, and Related Agencies

Mr. Chairman and Members of the Subcommittee, I appreciate the opportunity to present the President's fiscal year (FY) 2012 budget for the National Institute of Food and Agriculture (NIFA), one of the four agencies in the Research, Education, and Economics (REE) mission area of the United States Department of Agriculture (USDA).

Background

As you know, the Food, Conservation, and Energy Act of 2008 (2008 Farm Bill), established within USDA an agency to be known as NIFA. The 2008 Farm Bill and guiding principles called for the integration of programs across functions, funding authorities, and funding mechanisms within the agency. To achieve this goal, NIFA established four Institutes to fund outcome-driven programs that address the science priorities that will maintain the preeminent world position of U.S. agriculture. The Institutes are structured to provide effective program leadership and administer Federal assistance programs which support focus areas of bioenergy, climate, and environment; food production and sustainability; food safety and nutrition; and youth, family, and community.

The Institutes were configured to bring together professionals with expertise in various disciplines and functions to form multidisciplinary, outcome-based teams focused on achieving core stakeholder needs while enhancing the overall quality, relevancy, and performance of

programs. The new structure allows for the creation of a system that integrates basic and applied research, education, and extension programs to address important issues facing agricultural production, the global food supply, the environment, rural communities, and others.

### Proposal

The NIFA FY 2012 budget proposal for discretionary funding is \$1.21 billion. This represents a decrease of \$138 million or approximately 10.24 percent below the FY 2011 Annualized Continuing Resolution discretionary funding amount of \$1.35 billion. Increases in some of NIFA's programs are a result of proposed redirection of funds to support higher priority activities or to promote efficiency in program management. In addition, the budget eliminates earmarked projects and lower priority programs.

NIFA, in concert with the Secretary of Agriculture and the intent of Congress, works in partnership with the land-grant university system, other colleges and universities, and public and private research and education organizations to support exemplary research, education, and extension that address many challenges facing the nation from agricultural production, nutrition, and food safety to energy independence and the sustainability of our natural resources. These partnerships result in a breadth of expertise that is poised to quickly and efficiently deliver critical knowledge through innovative systems.

The FY 2012 NIFA budget request continues to align funding and performance objectives with the USDA strategic goals. NIFA manages its many budget elements in support of research, education, and extension programs as part of a cohesive whole supporting all four of the Department's strategic goals. The agency defines distinct performance criteria, including strategic objectives and key outcomes, with identified annual targets. As part of an integrated budget and performance process, NIFA conducts periodic portfolio reviews by external experts. An external review of all major programs has been completed, and NIFA is working to

implement the recommendations of the reviews in planning and managing its programs. We will continue to conduct external reviews on a rotating basis.

### Agriculture and Food Research Initiative

The President's FY 2012 budget proposes \$324.7 million for the Agriculture and Food Research Initiative (AFRI). AFRI is NIFA's core competitive grant program for research, education, and extension. The program provides funding for projects that address critical issues in U.S. agriculture in the areas of bioenergy, global climate change, global and domestic food security, including in production agriculture, nutrition and health, food safety, foundational programs, and NIFA fellowships.

Bioenergy: NIFA is committed to supporting the development of regional systems for sustainable production of bioenergy and biobased products that will assist rural communities to create wealth and thrive economically. This involves research, education, and extension. Recent AFRI supported awards, one to Cornell University (New York) and another to the University of Wisconsin, will create educational opportunities in math and science for students interested in bioenergy and bio-based products. Both projects are funded under AFRI's sustainable bioenergy challenge area and target the development of regional systems that contribute significantly to reducing dependence on foreign oil, have net positive social, environmental and rural economic impacts, and are compatible with existing agricultural systems.

Bioenergy funds also will support additional regional centers for biomass production, as well as programs that facilitate and clarify land-use changes resulting from feedstock production and conversion. Other programs will seek to identify the socioeconomic impacts of biofuels in rural communities and address logistics of handling feedstocks for biofuels. For example, a coordinated agricultural project (CAP) award to the University of California, Davis (UC Davis) will sequence the genomes of loblolly pine, sugar pine, and Douglas fir. Understanding the

genome sequence of these important species will accelerate breeding efforts and enhance their uses as feedstocks for biofuels and biopower. Increased planting of fast growing varieties of loblolly pine and other agroforestry crops also will contribute to carbon sequestration and help to mitigate the effects of climate change.

Global Climate Change: AFRI 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. A CAP award to the University of Florida will complement the loblolly pine research being done on the above-mentioned UC Davis project. The University of Florida researchers will study climate change mitigation and adaptation as it relates to southern pines, particularly loblolly pine. Under the project a regional network will be established to monitor the effects of climate change and use the information to develop plants that adapt to changes in climate. In a CAP award to the University of Idaho, scientists will monitor changes in soil carbon and nitrogen levels and greenhouse gas emissions related to mitigation of and adaptation to climate change in the region's agriculture, which produces 13 percent of the nation's wheat supply and 80 percent of its specialty soft white wheat for export. The research team also will determine the effects of current and potential alternative cropping systems on greenhouse gas emissions, carbon, nitrogen and water-levels, as well as energy budgets and local and regional farm income impacts, using models and replicated field trials.

Global Food Security: In 2012, NIFA proposes support for programs that address pressing issues in food production that will contribute to national and global food security while helping America promote sustainable agriculture and agricultural exports. Funding will support projects to enhance reproductive fertility in food animals; minimize losses from livestock disease; and reduce crop losses by developing resistance to plant insect pests, and plant bacterial diseases. Research includes activities that address the programs of U.S. agriculture, create mutual benefits

domestically and abroad, and allow new opportunities for inter-departmental initiatives as appropriate.

Nutrition and Health: AFRI will support nutrition and health projects that focus on children ages 2-14. Funding will be used to identify the behavioral factors that influence obesity; develop valid behavioral and environmental instruments that measure progress in obesity prevention efforts; and to support nutrition research that leads to the development and evaluation of effective programs to prevent obesity. Projects will target various populations of Americans so as to develop recommendations that recognize the differences in family structure, available foods, ethnic diversity, and other parameters. NIFA recently awarded a grant to the North Carolina State University to assist researchers in finding solutions to childhood obesity issues and to support USDA's "Know Your Farmer, Know Your Food" activities which help to link local consumers with local producers.

Food Safety: NIFA is committed to improving the safety of the U.S. food supply through new and improved rapid detection methods, pre- and post-harvest epidemiological studies, improved food harvesting, and advanced processing technologies. NIFA will fund critical environmental and ecological research to improve our understanding of disease-causing microorganisms, how they are spread before harvest as well as after harvest, and of naturally occurring contaminants in meat, poultry, seafood, and fresh fruits and vegetables. Funding also will target the control of food-borne pathogens.

Foundational Programs and NIFA Fellowships: AFRI funding will allow substantive research investments in each of the legislatively-established priority areas, and will expand support for graduate education through awards made to individuals pursuing research careers in NIFA research priority areas.

The NIFA FY 2012 budget proposes to redirect funding from the Graduate Fellowships Program and the Institution Challenge Grants Program (two small, stand-alone programs that support collegiate academic activities and graduate fellowships) into the AFRI program. A portion of the proposed AFRI increase will support activities similar to those previously funded through these programs to train the next generation of scientists who pursue careers in food and agriculture. This redirection will allow efficiency in management and alignment of medium to long-term research goals with scientific training opportunities and directions.

#### Sustainable Agriculture

In FY 2012, NIFA proposes an increase of \$10.8 million for a total of \$30 million in funding for research, education, extension, and integrated activities related to developing practices that support agriculture that is sustainable. Sustainable agriculture efforts will continue to increase knowledge about - and help farmers and ranchers adopt - practices that are profitable, environmentally sound, and good for communities. Included in the requested funding is a new State-Federal matching program which will leverage State and/or private funds and build the long-term capacity to guide the evolution of American agriculture to a more highly productive, sustainable system.

#### Minority Programs

NIFA continues to expand diversity and opportunity activities under minority-serving programs. In FY 2012, the budget requests \$8 million for the Federally-Recognized Tribes Extension Program to support an increase in the number of Federally-recognized tribes being served by extension programs, and \$5 million for Extension Services at 1994 Institutions including an increase of \$1 million to pilot a food and nutrition program in a number of Native American communities. In addition, NIFA requests \$20 million for 1890 Institution Capacity Building Grants Program to support multi-state alliances among the 1890 Institutions; \$10 million for the Hispanic-Serving Institutions (HSI) Education Grants Program to support alliance among HSIs;

and \$4 million for the Tribal Colleges Education Equity Grants Program for activities to reach American Indian students.

#### Hispanic-Serving Agricultural Colleges and Universities Endowment Fund

The Hispanic/Latino community is the fastest growing sector of the American population. In 2012, NIFA budget requests \$10 million to establish an endowment fund for the Hispanic-Serving Agricultural Colleges and Universities (HSACU). This investment in the HSACU is needed to ensure they can compete effectively for NIFA competitive grants. Support for this endowment fund will assist in the development of a skilled and marketable Hispanic student population for employment in the food and agriculture sector.

#### Pest Management

NIFA proposes to consolidate funding for the Expert Integrated Pest Management Decision Support System, Pest Management Alternatives, and Integrated Pest Management and Biological Control into a single program to improve the efficiency of program implementation resulting in research investments with greater focus, more appropriate scale, and enhanced impact. In 2012, \$4 million in funding will focus on applied research projects seeking to develop predictive models and real-time information and management tools for pest management challenges in plant and animal production systems.

#### Science, Technology, Engineering, and Mathematics Education

The FY 2012 budget proposes \$3.5 million for the Secondary Education/2-Year Post Secondary, and Agriculture in the K-12 Classroom (SPECA) Program. Projects will be funded that promote and strengthen secondary education in agribusiness and agriscience, and increase the number and/or diversity of young Americans pursuing college degrees in the food and agricultural science. Funds also will be used to improve rural education within the SPECA program including updating and revising secondary, two-year post secondary, and higher education

biological, social, and related curricula, especially at academic institutions serving rural areas, to meet the challenges of preparing graduates for emerging science, technology, engineering and mathematics related employment opportunities critical to revitalizing rural American communities, and to ensure a qualified workforce in the United States. In addition, funds will be used to establish a separate Sustaining Rural Communities through Education component to focus on academic curricula at the K-14 grade levels that will address the economic health and viability of rural communities. SPECA emphasis would be on curricula improvements and faculty expertise.

#### Other Programs

NIFA will continue funding for most other programs, including formula funded programs. However in light of constrained budget levels, NIFA is proposing decreases that are 5 percent below the FY 2011 President's Budget levels for the Hatch Act, McIntire-Stennis Cooperative Forestry, and Smith-Lever 3(b) and (c) formula programs. We also propose to eliminate funding for the Animal Health and Disease Research Program. The FY 2011 President's Budget levels are maintained in the FY 2012 proposal for the 1890 Extension and Evans Allen formula programs.

To ensure the highest quality research that addresses national needs within available funding, the FY 2012 budget proposes to eliminate earmarked projects which total nearly \$141 million. By allocating funding to a predetermined list of projects, earmarks reduce the ability of program administrators to allocate funding based on merit. Peer-reviewed competitive programs that meet national needs are a more effective use of Federal taxpayer dollars than earmarks that are provided to a specific recipient for needs that may not be national. Based upon its broad scope and proposed funding increase, alternative funding from the AFRI could be used to provide a peer-reviewed forum for seeking and assessing much of the work funded through earmarks.

### General Provisions

The FY 2012 budget proposes a change in the general provisions to increase the amount provided for indirect costs on competitively awarded grants from 22 percent to 30 percent. In the past indirect cost rate caps have resulted in recipients' inability to recover applicable indirect costs. The proposed increase allows for additional indirect cost recovery under competitive awards and better aligns NIFA competitive programs with other Federal assistance programs. This is especially important in implementing the growing number of jointly funded programs NIFA supports with other Federal science agencies. In addition, if indirect cost limitations restrict participation in NIFA competitive programs, then it is possible that some of the most innovative proposals that could lead to breakthroughs to solve research goals offered by NIFA are not being submitted to the agency.

### Conclusion

During the past year, NIFA listened to input from more than 200 stakeholder groups and individuals and increased discussions and work with members of the communities that serve the tribal nations, the 1890 institutions, and Hispanic-serving institutions. NIFA leaders visited a number of institutions to listen to the concerns of faculty and the concerns of deans, administrative units, scientific organizations, and small businesses. This budget proposal incorporates feedback from stakeholders and will allow NIFA, in collaboration with university and other partners nationwide, to provide innovative and timely responses to critical agricultural issues. This proposal provides support for research, education, and extension activities in the food, agricultural, and human sciences that can make a difference in solving emerging problems facing the Nation.

Mr. Chairman, this concludes my statement. I will be glad to answer any questions the Subcommittee may have.