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COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE

Statement of
Dr. Colien Hefferan, Administrator
Before the
Subcommittee on Agriculture, Rural Development,
Food and Drug Administration, and Related Agencies

Madam Chairwoman and Members of the Subcommittee, I appreciate the opportunity to present the President's fiscal year (FY) 2008 budget for the Cooperative State Research, Education, and Extension Service (CSREES), one of the four agencies in the Research, Education, and Economics (REE) mission area of the United States Department of Agriculture (USDA).

The CSREES FY 2008 budget proposal is just over $1 billion. CSREES, 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 initiate and develop agricultural research, extension, higher education, and related international activities to advance knowledge for agriculture, the environment, human health and well-being, and communities. In addition, CSREES implements grants for organizations to better reach and assist disadvantaged farmers and ranchers in accessing programs of USDA. These partnerships result in a breadth of expertise that is ready to deliver solutions to problems facing U.S. agriculture today.

The FY 2008 CSREES budget request aligns funding and performance with the USDA strategic goals. CSREES manages its many budget elements in support of research, education, extension, and outreach programs as part of a cohesive whole supporting all six 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, CSREES conducts periodic portfolio reviews by external experts. In 2006, two CSREES programs were reviewed via OMB's Program Assessment Rating Tool. They both received an "effective" score. An external review of all major programs was also completed. CSREES is working to implement the recommendations of the reviews in planning and managing its programs, and will continue to conduct external reviews on a rotating basis.

The President's FY 2008 Budget proposes to renew the FY 2007 initiative to expand and continuously recompete the Hatch Act multi-State/multi-institutional allocations, and establish a similar, separately authorized, program for McIntire-Stennis Cooperative Forestry (McIntire-Stennis) funds. This initiative for multi-State/multi-institutional programming sustains the matching requirements and the leveraging of Federal funds, and allows institutions to focus on program strengths they identify and sustain through linking local issues to broad national goals. To ensure the continuity of projects, the program is designed to allow five years projects, including the orderly completion of current multi-State projects. This will support the important goal of targeting research to the highest quality projects to meet critical national and regional needs.

CSREES will continue to distribute a portion of the Hatch Act and McIntire-Stennis funds on the basis of the formula. The requested $164 million of Hatch Act funding will support research at the State Agricultural Experiment Stations related to producing, marketing, distributing, and utilizing crops and resources; enhancing nutrition; and improving rural living conditions. In addition, funds will support other research topics such as water and other natural resources, crop and animal resources, people and communities, competition and trade, and human nutrition. The $20 million of McIntire-Stennis program will support forestry, natural resources, and ecosystem management related research at State designated college and university forestry programs.

Included in the Hatch request is $9.8 million to support critical biomass research. Funds will be used to support projects with long term impacts that will potentially increase production of renewable fuels from agricultural and forestry biomass, improve economies in rural communities, enhance national security, improve environmental quality, and/or expand markets for U.S. agriculture products.

CSREES proposes to eliminate funding for the Animal Health and Disease Research Program. Alternative funding from the National Research Initiative (NRI) program could be used to support aspects of this program. Recent, large NRI Coordinated Agricultural Project grants are supporting animal disease issues, such as Johne's Disease and Avian Influenza.

CSREES continues to address key problems of national and regional importance in biological, environmental, physical, and social sciences relevant to agriculture, food, the environment, and communities. To address these problems, the NRI program will offer new opportunities such as efforts in biofuels development, disaster resilience, and long term agroecosystems research for discoveries and advances in scientific knowledge. The FY 2008 budget requests $256.5 million for the NRI program.

CSREES is committed to support the development of biofuels and processes to efficiently convert renewable plant products to fuel in an economically, socially, and environmentally sustainable manner. Recent NRI supported research efforts in ethanol production have had tremendous impact on the conversion of cellulosic biomass to ethanol through the development of innovative biocatalysts. For example, NRI supported research conducted at the U.S. Forest Products Laboratory led to the development of a process to use *Pichia stipitus* to ferment the five-carbon sugars found in woody xylose. This process has been selected for the conversion of wood waste for commercial ethanol production in Georgia. Another example is genetically modified yeast developed by scientists at Purdue University which is currently used to convert

wheat straw to ethanol. Both biocatalysts are capable of converting multiple sugar types, and enhancing ethanol production efficiency. Research is needed to continuously improve the efficacy of biocatalysts by enhancing conversion rates and the tolerance of biocatalysts to inhibitors during processing.

In 2008, in support of the Bioenergy Initiative, NRI funding in the amount of $19.2 million is requested to support interdisciplinary research projects that include genomics and genetics, basic and applied plant sciences, novel methods of biological and chemical conversion of biomass, social and economic impacts on rural communities, as well as education and extension. Funded projects will address: developing new and sustainable agricultural feedstocks; developing and improving biocatalysts for biomass conversion; improving the understanding of the impact of the biofuel production on the agricultural ecosystem components including soil fertility and water use; determining the impact of a renewable fuels industry on the economic and social dynamics of rural communities; and reducing the overall cost of converting agricultural feedstocks to biofuels through the development of valuable co-products from the bioenergy process.

Funding for bioenergy efforts will be leveraged through coordination with key interagency committees and collaborations. Current collaborations include partnering with the Department of Energy (DOE) on the study of plant and microbial genomics, and feedstock genomics for bioenergy. Another partnership includes the DOE, National Science Foundation (NSF), National Aeronautics and Space Administration, Environmental Protection Agency, National Institutes of Health and others on the Interagency Metabolic Engineering Working Group. CSREES also is partnering with NSF and DOE on the Maize and Rice Genome Project and with NSF on the Microbial Genome Sequencing Program.

Under the NRI, funding will be used to identify factors that enhance the resiliency of rural communities and families impacted by disasters. Activities include studies on effects of

communication networks, economic structure, governance, and family systems on the survival and the speed of recovery from disasters. Research conducted will address economic and social consequences of alternative disaster recovery approaches; identify cost-effective communication methods to alert and educate people; and be used to prepare communities for emergency response and disaster recovery.

The NRI will support research efforts to study, design, manage, and optimize long-term agroecosystems using an integrated approach. The supported long term agricultural research will examine agriculture as a part of an interactive system that provides food security, economic viability, ecological goods and services, resource conservation, and increased production. Long term systems-level analyses will identify strategies to increase the economic success and environmental sustainability of agriculture.

CSREES proposes that $45.13 million for Integrated research, education, and extension activities for programs that focus on water quality, food safety, organic transition, and pest management programs (which includes the pest related programs and methyl bromide) be administered through the NRI.

Within the integrated activities, CSREES requests funding for the National Integrated Pest Management Initiative to broaden the program beyond food cropping systems to include forest, urban (ornamentals and turf) and livestock pest management and production issues related to ecosystem management. Additionally, funding support is requested for priorities within the National Integrated Water Program to support projects that address water and wastewater reuse, conservation, as well as water quality for agriculture, rural, and urbanizing watersheds.

CSREES, through cooperative efforts with the Animal and Plant Health Inspection Service, is expanding its efforts for agricultural security utilizing a unified Federal-State network of public

agricultural institutions. The 19 key animal and plant laboratories, strategically located in States around the country including New York, Louisiana, Georgia, Texas, Wisconsin, Iowa, Colorado, California, Washington, Arizona, Florida, Michigan, North Carolina, Indiana, and Kansas are identifying and responding to high risk biological pathogens in the food and agricultural system. The FY 2008 budget requests $14.3 million in support of the President's Food and Agriculture Defense Initiative (FADI). This request includes $2.3 million to address the Asian Soybean Rust Pest Information Platform for Education and Extension. Funding will be used to maintain and enhance pest risk management tools for Asian soybean rust and other pathogens of legumes.

Currently, all 50 States and many U.S. territories are connected to the National Plant Diagnostic Network (NPDN) through digital distance diagnostics, used throughout the Nation to speed early detection of high consequence plant pathogens and solve other agriculture 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. The system was utilized when the first case of Asian Soybean Rust was found in Louisiana. Data was quickly transmitted to Federal officials and diagnosed using this technology. During a nine month period, 1,189 samples were submitted by Georgia county extension offices to scientists at the University of Georgia's main campus. More than 150 samples have been submitted to the University of Hawaii, many from Guam, American Samoa, and other pacific territories with limited access to trained specialists. Washington State University is using this technology along the Canadian border and near key ports of entry. Increased funding for FADI will include continuing the connection of first detectors from every corner of the U.S. with NPDN diagnosticians, dramatically increasing the ability of the network to diagnose high consequence plant pathogens and other pests, whether introduced naturally or intentionally.

CSREES proposes $5 million for the Agrosecurity Education Program to help universities to develop and deliver programs that address agro- and bio-security issues. The program will

develop and promote curricula for undergraduate and graduate level higher education programs that support the protection of animals, plants, and public health. The program is designed to support cross-disciplinary degree programs that combine training in food sciences, agricultural sciences, medicine, veterinary medicine, epidemiology, microbiology, chemistry, engineering, and mathematics (statistical modeling) to prepare food system defense professionals.

Food choice behavior is influenced by a variety of factors ranging from income and culture to physiological needs, societal standards, and community resources. However, knowledge of how these factors interact to affect food choices for both adults and children is limited. Current research, funded by the NRI, focuses on how the feeding environment and practices affect the development of children's food habits. Researchers at the University of New Mexico have developed a comprehensive, science-based evaluation plan for a program called "Cooking with Kids" operating in the Santa Fe elementary schools. A test instrument was developed to measure food preferences, acceptance of new foods, and cooking attitudes and self-efficacy. The test results showed improvements in the children's social skills, cooperation, and other academic outcomes. The researchers are now using the evaluation plan to determine the effects of two intensity levels of the program (cooking and tasting vs. tasting only) on actual fruit and vegetable intake. They also are evaluating food preferences, acceptance of new foods, cooking attitudes, and family food preparation and eating practices against a control group, a cohort of 3rd grade students and their parents. This research has wide applicability in educational programs like the Expanded Food and Nutrition Education Program (EFNEP) which uses experiential learning to improve the diets of low-income families and youth and to reduce their risk of obesity. The FY 2008 budget requests $62.3 million for EFNEP.

CSREES continues to expand diversity and opportunity with activities under 1890 base and educational programs, and 1994, insular areas, and Hispanic-Serving Institutions educational programs. In FY 2008, the budget requests funds totaling $72.4 million for both the research and

extension 1890 base programs. Funding for our 1890 base programs provides a stable level of support for the implementation of research and extension programming that is responsive to emerging agricultural issues. Funding for the 1994 Institutions strengthens the capacity of the Tribal Colleges to more firmly establish themselves as partners in the food and agricultural science and education system through expanding their linkages with 1862 and 1890 Institutions.

Proposed funding for the Resident Instruction Grants for Insular Areas Program will be used 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. Continued funding for the Hispanic-Serving Institutions promotes the ability of the institutions to carry out educational training programs in the food and agricultural sciences. This proven path of research, extension, and educational program development rapidly delivers new technologies into the hands of all citizens, helping them solve problems important to their lives.

CSREES also will continue to effectively reach underserved communities through increased support for the Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers (OASDFR) Program. CSREES will fund competitive multi-year projects to support outreach to disadvantaged farmers and ranchers by providing grants to educational institutions and community-based organizations to support these groups. Funds for the OASDFR program will encourage and assist socially disadvantaged farmers and ranchers in their efforts to become or remain owners and operators by providing technical assistance, outreach, and education to promote fuller participation in all USDA programs. CSREES requests $7 million for the OASDFR program.

CSREES is requesting funds to support eXtension through the New Technologies for Agricultural Extension (NTAE). The NTAE will expand access, understanding, and usefulness

of the valuable information and education that Cooperative Extension has to offer in order to meet the changing needs of the Nation. The FY 2008 budget proposal includes $3 million for the NTAE Program.

The CSREES higher education programs contribute to the development of human capacity and respond to the need for a highly trained cadre of quality scientists, engineers, managers, and technical specialists in the food and fiber system. The FY 2008 budget sustains support for most of the higher education programs including the Food and Agricultural Sciences National Needs Graduate Fellowship program. This program prepares graduates to deal with emerging challenges in such areas as agricultural biosecurity to ensure the safety and security of our agriculture and food supply, natural resources and forestry, and human health and nutrition, including problems related to obesity such as diabetes and cardiovascular health.

To build on specific international initiatives, and in support of the Administration's commitment to India, CSREES proposes $2 million for the International Science and Education program. Of this, $1 million will support of the U.S./India Agricultural Knowledge Initiative. CSREES believes it is positioned to play a central role in expanding partnerships with scientists in India. Other higher education programs will provide important and unique support to Tribal Colleges, the 1890 Land-Grant Colleges and Universities, and the 1862 Land-Grant Universities as they pilot important new approaches to expand their programs.

To ensure the highest quality research which addresses national needs within available funding, the FY 2008 budget proposes to eliminate earmarked projects. Peer-reviewed competitive programs that meet national needs are a more effective use of taxpayer dollars than earmarks that are provided to a specific recipient for needs that may not be national. Based upon its broad scope, including the expanded integrated authority, and proposed funding increase, alternative

funding from the NRI could be used to provide a peer-reviewed forum for seeking and assessing much of the work funded through earmarks.

The FY 2008 budget proposes changes in the general provisions including increasing the amount provided from the NRI that may be used for competitive integrated activities from “up to 22 percent” to “up to 30 percent”. Also proposed is the elimination of the cap on indirect costs for competitively awarded grants. In the past indirect cost rate caps have resulted in recipients’ inability to recover legitimate indirect costs. The proposed elimination allows full indirect cost recovery under competitive awards and places CSREES competitive programs on an equal footing with other Federal assistance programs, so that top scientists will be more likely to apply for CSREES grant programs. This is especially important in implementing the growing number of jointly funded programs CSREES supports with other Federal science agencies.

CSREES, in collaboration with university and other partners nationwide, seeks to provide innovative and resilient responses to critical agricultural issues. This proposal provides support for research, extension, higher education, and outreach and assistance activities in the food, agricultural, and human sciences that can make a difference in solving emerging problems facing the Nation.

Madam Chairwoman, this concludes my statement. I will be glad to answer any questions the Committee may have.