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Testimony of the
Federation of American Societies for Experimental Biology

On
FY 2016 Appropriations for the Department of Agriculture Agriculture and Food
Research Initiative and Agricultural Research Service

Submitted to the
Senate Committee on Appropriations
Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and
Related Agencies

Senator Jerry Moran, Chairman
Senator Jeff Merkley, Ranking Member

The Federation of American Societies for Experimental Biology (FASEB) respectfully requests a fiscal year (FY) 2016 appropriation of a minimum of $450 million for the Agriculture and Food Research Initiative and $1.189 billion for the Agricultural Research Service. This funding level represents a continuing commitment to the vital field of agricultural research.
FASEB, a federation of 27 scientific societies, represents more than 120,000 life scientists and engineers, making it the largest coalition of biomedical research associations in the United States. Our mission is to advance health and welfare by promoting progress and education in biological and biomedical sciences.

The United States Department of Agriculture (USDA) funds research through a competitive grants system, the Agriculture and Food Research Initiative (AFRI), and an “in-house” effort administered by the Agricultural Research Service (ARS). These programs support research that addresses some of the grand challenges of our time: global food security, human nutrition, climate change, and sustainable bioenergy. In addition to the fundamental knowledge generated in these areas, USDA also funds translational research to create useable solutions and technologies from cutting-edge science.

Opportunities for agricultural research are growing, as Congress recognized by expanding USDA’s research mandate in the 2012 Farm Bill. Harnessing this potential would generate new knowledge in the food, nutrition, and agricultural sciences, and translate those fundamental discoveries into practical solutions that benefit all sectors of society and every geographic region in the country.

Examples of promising USDA-funded research include:

- **Developing Heat-Resistant Lettuce Crops**: USDA-funded researchers at the University of California at Davis have discovered a way to allow lettuce seeds to grow at higher temperatures than previously possible. Wild lettuce from Peru has a gene that allows for germination at a higher temperature, and the research team incorporated the gene into commercial crops. The new lettuce type requires less water to cool the soil, conserving resources and saving farmers money.

- **Reducing Allergens in Peanuts**: Peanut allergies are the most severe of all food allergies in the United States, affecting 2.8 million people. Scientists at North Carolina Agricultural and Technical State University have developed a method to remove up to 98 percent of the allergen by soaking roasted, shelled peanuts in a solution of enzymes. Human clinical trials have been completed, and the hypoallergenic peanuts are expected to be available in stores soon.

- **Sustaining American Corn Production**: Commercial corn crops covered 95 million acres of American soil and generated $65 billion in revenues in 2013. However, corn production is threatened by extreme weather events. In order to improve communication, analysis, and data sharing about corn farming practices, a partnership known as the Sustainable Corn Project has been launched as a collaboration between scientists at Iowa

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State University, USDA ARS, and ten land-grant universities. This USDA-funded project is also training 159 students to become the next generation of agricultural scientists.  

- **Using Mobile App Technology to Support Farmers:** Farmers are required by the Environmental Protection Agency and state oversight bodies to submit nutrient management plans and other data on their soil and crops. This administrative burden placed on farmers reduces efficiency, costing farmers time and money. A USDA-funded team of engineers and scientists from the University of Vermont have developed a mobile application to help farmers meet their obligations and avoid potential fines for non-compliance. The app will also assist farmers to reduce nutrient runoff, saving time and increasing productivity.

**Unleashing the Potential of Agricultural Research**

ARS and AFRI researchers address key agricultural and national priorities like ensuring access to high-quality, safe food, sustaining an internationally competitive agricultural industry, adapting to a changing climate, and assessing and monitoring the nutritional status of Americans. Agency funds also support training programs for the next generation of agricultural researchers.

The 2012 Farm Bill renewed the AFRI program, recommending an authorized level of $700 million annually. This legislation also expanded AFRI’s research priorities to include diseases that can be transmitted from animals to humans, the effectiveness of conservation practices in addressing nutrient losses, and the economic costs, benefits, and viability of producers adopting conservation practices. Steady, sustained increases for AFRI are critical for meeting the program’s expanded goals and continuing to build a foundation of knowledge that will help solve current and future societal challenges.

**FASEB recommends a minimum of $450 million for AFRI and $1.189 billion for ARS in FY 2016. This funding level represents a continuing commitment to the vital field of agricultural research.**

Thank you for the opportunity to offer FASEB’s support and recommendations for the USDA research programs.

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