



NATIONAL COALITION FOR FOOD AND AGRICULTURAL RESEARCH

April 24, 2014-Submitted via E-mail to FullCommittee@appro.senate.gov

Testimony of the National Coalition for Food & Agricultural Research (National C-FAR)
Submitted to the Senate Appropriations Committee

RE: Federal Investments in Food and Agricultural Innovation—Research, Extension and Education

Dear Chairwoman Mikulski and Ranking Member Shelby:

The National Coalition for Food and Agricultural Research (National C-FAR) appreciates the opportunity to comment for the record on how federal research dollars can help drive innovation in existing and new fields. National C-FAR's comments focus specifically on the value of innovations achieved through investments in food and agricultural research, Extension and education, and the imperative to include food and agricultural innovation in any conversation on innovation.

Innovation in the food and agricultural sector is an essential part of any comprehensive innovation conversation. Yet there is no witness listed as scheduled to testify at this hearing representing the U.S. Department of Agriculture (USDA). National C-FAR urges you to rectify this oversight by inviting the eminently qualified Dr. Catherine Woteki, Under Secretary for Research, Education and Economics and Chief Scientist, to represent USDA at the April 29 hearing. Alternatively, National C-FAR urges your full Committee to hold a separate hearing on innovations achieved through food and agricultural science. USDA can serve as an invaluable resource and provide a wealth of examples about food and agricultural innovation successes made possible through funding of the USDA REE mission area, as well share as an exciting vision for future innovation opportunities in the food and agricultural sector.

USDA's vital research, education and economics (REE) mission area is a major generator of innovation in the food and agricultural system and in rural America. One can reasonably assert that public and private sector investments in food and agricultural research, Extension and education produce as much or more value-added innovation to our nation than any other sector. USDA alone conducts and funds intra-mural and extra-mural research, Extension and education that generate tremendous innovation outcomes that benefit the nation, its citizens and indeed the world. USDA collaborates and leverages on important projects with the agencies represented on the witness list.

Multiple analyses document that Federal investments in food and agricultural research, Extension and education yield exceptional returns—45 percent annually on average—and provide a range of innovative advances and critical benefits, such as increased agricultural productivity, economic growth and opportunity for American ranchers and farmers, improved food quality and nutrition that contribute to improved human health, and natural resource protection and sustainability.

An abundance of real world examples of innovation through federal investments in food and agricultural science are contained in “**Annual Report on Technology Transfer FY2013.**” This new, 208 page report released by USDA on April 23 highlights and details scientific breakthroughs

discovered by USDA researchers that led to new patents and inventions with the potential for commercial application and potential economic growth. Innovations mentioned in the USDA media release announcing the report range from “flour made out of chardonnay grape seeds that prevents weight gain to antimicrobial packets that keep food from spoiling, efforts to protect U.S. troops in Iraq from diseases carried by sand flies, new processes for turning grass clippings and raked leaves into bioenergy, and many more.” A wealth of other examples exist throughout USDA’s food and agricultural research, Extension and education mission, made possible through federal funding.

USDA reports receiving 51 patents, filing 147 patent applications, and disclosing 180 new inventions in the last fiscal year. National C-FAR urges the Committee to read the report available on-line at https://www.ars.usda.gov/sp2UserFiles/Place/01090000/FY13_TT%20Ann%20Rpt%20.pdf and requests that this report be made part of the hearing record.

With an ever expanding global population and increasing demands for food and other agricultural products, increased investments in food and agricultural research and innovation are essential to maintaining our nation’s food, economic and national security.

Despite the critical importance of investing in food and agricultural research, extension and education, the \$2.7 billion USDA food and agricultural research, education, and Extension budget is less than two percent of USDA's total budget.

By any measure, federal funding for food and agricultural research, Extension and education has failed to keep pace with identified priority needs. Federal investment in research and development at the USDA reportedly has declined by about one-fourth since FY 2003. Meanwhile China plans to spend about 16-times more at \$45 billion annually on agricultural research.

Fiscal challenges continue to constrain real progress towards achieving the fully authorized level of \$700 million for the Agriculture and Food Research Initiative (AFRI), the USDA’s largest competitive research program – while leaving the agency’s intramural research program – the Agricultural Research Service (ARS) with diminished resources. A continuing deficit, in terms of a commitment to federal funding for food and agricultural research, Extension and education, will have detrimental effects on human and animal health and the nation’s economy.

The President’s Council of Advisors on Science and Technology (PCAST) underscored the importance of food and agricultural science and innovation in its “**Report to the President on Agriculture Preparedness and the Agriculture Research Enterprise**,” released in December 2012. The PCAST report documents the significance of the agricultural research enterprise and the value to society of the innovations that have resulted, as well as that the agricultural research enterprise has been chronically underfunded. The PCAST report includes a number of recommendations, and National C-FAR recommends this report for your information and consideration. National C-FAR supports the PCAST recommendation to increase federal investments in food and agricultural research by \$700 million per year in order to help generate the science needed to meet critical future challenges in the food and agricultural sector.

Speaking of innovation, National C-FAR applauds the Senate for leading the way and the Congress for authorizing the new Foundation for Food and Agricultural Research (FFAR) and including \$200 million in mandatory funding for FFAR in the 2014 Agricultural Act. Stronger public investment will spur more private investment and innovation in food and agricultural science. Funds provided by the Congress through FFAR will be leveraged to stimulate private investment and innovation in

agricultural science in support of USDA's REE mission on plant and animal health, food safety and nutrition, renewable energy, natural resources and environment, agricultural and food security, technology, agricultural economics and rural communities. Each and every federal dime devoted to the Foundation will be *at least* matched with private contributions. National C-FAR is committed to supporting actions to establish the FFAR on an expedited basis so that the funds provided by the Congress can be put to wise and effective, highly leveraged, use.

Scientific outcomes and tools realized through USDA's REE mission are needed to help achieve safer, more nutritious, convenient and affordable foods delivered to sustain a well nourished, healthy population; more efficient and environmentally friendly food, fiber and forest production; improved water quality, land conservation, wildlife and other environmental conditions; less dependence on non-renewable sources of energy; expanded global markets and improved balance of trade; and more jobs and sustainable rural economic development.

Publicly financed food and agricultural research, Extension and education are necessary complements to private sector research and innovation, focusing in areas where the private sector does not have an incentive to invest, when 1) the pay-off is over a long term; 2) the potential market is more speculative; 3) the effort is during the pre-technology stage; and 4) where the benefits are widely diffused. Public research, Extension and education help provide oversight and measure long-term progress. Investments now also help detect and resolve problems in an early stage, thus saving American taxpayer dollars in remedial and corrective actions.

National C-FAR believes the nation has a serious deficit in federal funding for food and agricultural RE&E, just as the nation has a budget deficit. This food and agricultural science funding deficit is long running and unsustainable. Failure to address this research funding deficit will have real negative consequences, not just to our food and agricultural system but to the entire U.S. economy and global food security. The nation may never know the full impact of missed opportunities or delayed advances and innovation lost due to insufficient investment by the United States in food and agricultural science—or its impact on human, animal and plant health, and the nation's economy.

National C-FAR serves as a forum and a unified voice in support of sustaining and increasing public investment at the national level in food and agricultural research, extension and education. National C-FAR is a nonprofit, nonpartisan, consensus-based and *customer-led* coalition that brings food, agriculture, nutrition, conservation and natural resource organizations together with the food and agricultural research and Extension community. National C-FAR's support encompasses the entire REE mission, including the need to modernize our nation's food and agricultural science infrastructure at USDA labs and universities. Our support includes both USDA's suite of extramural programs in the National Institute of Food and Agriculture (NIFA), such as AFRI and capacity funds, and the Economic Research Service (ERS), and the National Agricultural Statistics Service (NASS).

Respectfully Submitted,



R. Thomas (Tom) Van Arsdall, Executive Director
National Coalition for Food and Agricultural Research
PO Box 351, Chester, MD 21619
tom@vanarsdall.com (703) 509-4746