



American Society of Agronomy • Crop Science Society of America • Soil Science Society of America

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November 22, 2018

The Honorable Michael Conaway
Chairman
House Committee on Agriculture
U.S. House of Representatives
Washington, D.C. 20515

The Honorable Colin Peterson
Ranking Member
House Committee on Agriculture
U.S. House of Representatives
Washington, D.C. 20515

Dear Chairman Conaway and Ranking Member Peterson:

On behalf of the American Society of Agronomy (ASA), Crop Science Society of America (CSSA) and Soil Science Society of America (SSSA), thank you for your leadership and support of food and agriculture research, education and extension.

Collectively, these scientific Societies represent over 18,000 scientists in academia, industry, and government. We support more than 13,300 Certified Crop Advisers (CCA), and over 700 Certified Professional Soil Scientists (CPSS). Our members and certified professionals are dedicated to meeting the demands of a growing world population through the pursuit of agronomic, crop and soil science knowledge and application.

America's incredible productivity stems from Federal investments in agricultural science and technology. These investments have helped U.S. farmers through droughts and floods, pests and pathogens, and changing consumer tastes. They help provide Americans with safe, nutritious and affordable food. Investments in agricultural science and technology also bring a 20-fold return to the GDP.

The United States used to lead the world in public investments in agricultural research. However, between 2008 and 2013 public investments in food and agriculture R&D fell by nearly 20 percent. This level is far below what is necessary to meet the critical challenges facing U.S. agriculture in the 21st century. While U.S. investments are falling, China has increased its agricultural investment and is now the global leader in R&D public funding – nearly double that of the U.S.

To maintain America's innovation and global competitiveness, we offer the following Farm Bill recommendations:

[Increase the availability of equipment grants.](#)

Agricultural researchers with innovative and exciting ideas may require large or specialized equipment for their research. Currently, the only avenue for most researchers to obtain such equipment is through USDA NIFA's AFRI grant program. However, the existing program favors proposals that do not include

large equipment purchases. Large equipment grants were authorized in past farm bills, but this program was repealed in the Agricultural Act of 2014.

We propose a competitive USDA-managed grants program with matching requirement that is open to all researchers and can be used for special purpose scientific research equipment.

Student grants bolster the workforce pipeline.

A recent USDA NIFA and Purdue University Report emphasized how the agriculture industry will create nearly 57,900 jobs each year from 2015 to 2020. There is a huge gap in the number of graduates prepared to fill these jobs, with only 35,000 new graduates with expertise in food, agriculture or natural resources. Twenty-seven percent of these new jobs will be in science, technology, engineering and mathematics (STEM).

Other areas of science have flagship fellowship programs, such as the NSF Graduate Research Fellowship. These programs attract the best graduates to STEM careers and give them the flexibility to pursue the graduate program of their choosing. They act as a magnet for talent and raise the profile of the sciences.

The agricultural sciences lack such a magnet, so top-flight undergraduates have no way to distinguish themselves and pursue their own innovative research ideas. While USDA NIFA supports a limited number of graduate students through a variety of mechanisms, none offers students the ability to directly apply for funding as they are considering graduate school. Students who could be the next generation of leaders in agricultural science may instead simply choose a different field.

We propose a student fellowship program that encourages excellent undergraduates to independently apply for prestigious, USDA fellowships that enable them to attend their top-choice graduate program and university. Such a fellowship would not only enable the best and brightest students to pursue careers in agriculture, it would also lend status to all agriculture science pursuits.

Some research needs sustained funding.

Crop rotation, nutrient management, conservation implementation, and plant breeding experiments are just a few categories of long-term agriculture research that pay dividends only after six to ten years of sustained investigation. However, grants are typically only three to four years in length. This causes a potential funding gap. Researchers are hesitant to even begin such long-term work with no guarantee that funding will be renewed to complete the project. As a result, successful research proposals prioritize conservative, short-term work with quick pay-offs. While current law allows for AFRI grants up to 10 years, NIFA has not addressed the needs of long-term research.

We propose that the term of the grant match the needs of the science and not the other way around. NIFA should be encouraged to designate a small number of AFRI projects for six to ten years of funding, projects that cannot be accomplished in a lesser amount of time and that solve important problems or address specific knowledge gaps. These projects should be subject to mid-term review to ensure that interim research objectives are being fulfilled.

Create a mechanism to fund high-risk, high-reward research.

Due to huge advances in genetics, microbiology, and data analytics, agricultural scientists are poised to address the fascinating questions and global challenges facing the world's agricultural enterprise.

However, this type of research is also at the “cutting edge,” with no guarantee of a quick pay-off. We need to take risks to find many of the high reward results.

We propose a pilot program within NIFA that funds only projects with the potential for high-impact results.

Matching requirements are cumbersome and out of date.

The 2014 Farm Bill included a new matching requirement for most institutions receiving NIFA grants. Certain institutions, such as land-grant universities, are exempt, while non-exempt institutions are required to either partner with exempt institutions or apply for a waiver. This creates a barrier to entry for many non-exempt institutions. The challenges facing agriculture necessitate funding the best and brightest ideas regardless of the institution type.

We support eliminating across the board matching requirements for competitive grants programs within NIFA.

FFAR should not be an experiment left unfinished.

The Foundation for Food and Agriculture Research (FFAR) was one of the highlights of the 2014 Farm Bill. In creating FFAR, Congress showed tremendous vision on how to bring additional investment into agriculture research at a time when traditional funding sources continue to decline. The FFAR model is a success in matching research investments dollar-for-dollar with non-Federal funds. It is proving to be an example in good government and a wise investment of taxpayer funds.

We urge Congress to provide continued support for FFAR in the next Farm Bill.

Economic and environmental sustainability through conservation.

Farm Bill conservation programs are critical in helping farmers and ranchers address local resource concerns through voluntary locally-led efforts. The current suite of programs provide America’s farmers and ranchers the financial and technical support they need to continue to improve water quality and soil health, reduce erosion and enhance wildlife habitat. While great strides have been made, producers continue to face complex natural resource challenges.

We support a fully-funded conservation title to ensure farmers and ranchers have the tools they need to implement best management practices, conserve and enhance natural resources, and improve both economic and environmental sustainability.

Thank you for your efforts on behalf of food and agricultural research. We look forward to working with you in developing the 2018 Farm Bill research and conservation titles.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ellen Bergfeld".

Ellen Bergfeld, Ph.D.
CEO