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

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Support research at the USDA Agricultural Research Service and Agriculture & Food Research Institute

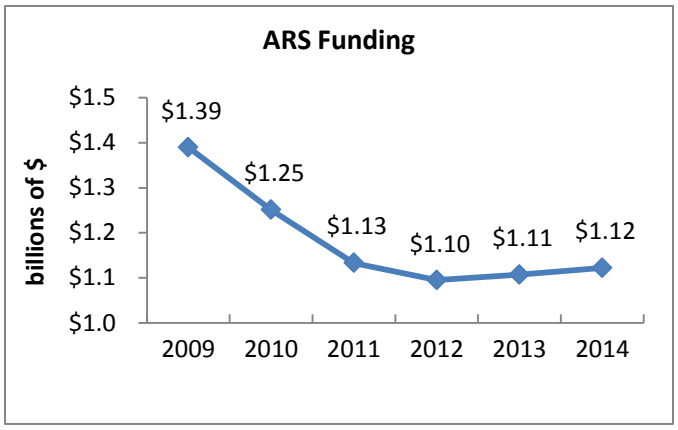
Why is food and agriculture research important?

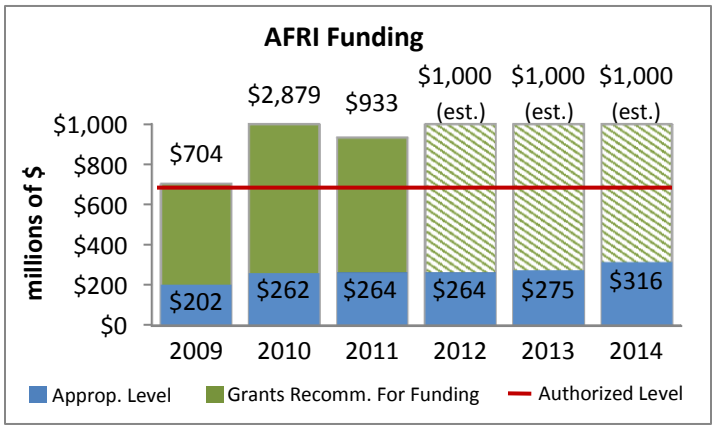
Throughout its history, the United States has depended on agriculture not only to feed its citizens, but also as a major driver of its economy. Exports of agricultural products resulted in a $37 billion trade surplus in 2011 and the agricultural sector is currently responsible for 1 in 12 American jobs. The success of the U.S. agriculture enterprise is due in large part to the strong investment in food and agriculture research made throughout the 20th century. Because of this investment, the U.S. farmer is among the most efficient in the world and the United States is the global leader in meeting the world's demand for food.

However, investments in agriculture research have stalled or even decreased over the past three decades. Investments in food and agriculture research today will help us meet the greatest challenges facing our nation and the world: food safety and security, natural resource management and clean energy production. Facing these challenges requires a renewed commitment to the food and agriculture research enterprise.

Federal funding for food and agriculture research

Since the 1950s, the Agricultural Research Service (ARS) has been the chief intramural agricultural research agency for the U.S. Department of Agriculture (USDA). In 2008, Congress established the Agriculture and Food Research Initiative (AFRI) to provide competitive research funding. This combination of intramural and extramural research programs allows USDA to manage a research portfolio that is both sustained and flexible. ARS intramural research is uniquely suited to conduct research that requires a long term investment, while AFRI has a greater capacity to respond to new and emerging issues in the food and agriculture sciences.





We urge Congress to support strong investments in ARS and AFRI for FY 2015

What has food and agriculture research given us?

Agricultural Production

"Greenbug" infestations cost wheat farmers $250 million annually in crop losses and pesticide expenses. However ARS scientists have bred a greenbug-resistant winter wheat line that serves as a new strategy in pest control.

Human Health and Nutrition

Dietary micronutrient deficiencies, such as the lack of vitamin A, iodine, iron or zinc, are linked to diseases and death worldwide. AFRI-funded research, focused on identifying the genes involved in iron and zinc uptake, will lead to the creation of new, more nutritious rice varieties.

Food Safety

Keeping dangerous microorganisms out of poultry and preventing foodborne illness and death is a long-standing ARS research goal. ARS scientists have developed a method for injecting "good" bacteria into incubating chicken eggs to combat *Salmonella*, a bacteria infecting over 40,000 Americans each year.

Sustaining Natural Resources

A group of chemical engineers are using AFRI funding to test a new way of creating biofuels and industrial chemicals from perennial grasses that can be grown on lands that are unsuitable for annual crops such as corn, wheat and soybean. This work could significantly advance the use of biomass as a sustainable energy source.

Loss of Innovation

Since its inception, AFRI has consistently received more research proposals of merit than it has been able to fund. In FY 2011, 977 grants, rated highly innovative, were not funded because the AFRI budget totaled $264 million. 977 proposals that could have held the answers to increased crop yield, clean energy or drought mitigation went unfunded. By not fully funding AFRI, what new ideas are we missing? Can we really afford to let these future advances go undiscovered?

FY 2011		
2,165	Proposals submitted	$1,448,050,446
1,308	Recommended for funding	$933,454,938
331	Awarded	$240,591,513
977	Recommended, but not awarded	$692,863,425

Workforce Development

To create a vibrant, innovative research enterprise, a primary concern is support for a well-trained workforce. AFRI and ARS play a critical role in training the next generation of food and agriculture researchers and educators. In FY 2011, AFRI supported 1,600 undergrads, graduate students and postdoctoral researchers. ARS labs employ over 200 postdoctoral researchers and provide countless mentors to undergraduate and graduate students. Unfortunately, because of continued flat or declining federal funding for AFRI and ARS, food and agriculture science is not seen as an attractive career option to students planning career paths. Greater investments in AFRI and ARS will help attract the brightest students from diverse fields of basic science to pursue food and agriculture research.

Global Competitiveness

While the United States still leads the world in research and discovery, our advantage is rapidly eroding and our global competitors may soon overtake us.

- From 2001-2011, Asia's share of global R&D spending grew from 25% to 34% while the United States' share declined from 37% to 30%.
- In 2007, China became second only to the U.S. in the estimated number of people engaged in scientific and engineering R&D.
- India, Brazil and China have dramatically increased their public investments in agriculture R&D, accounting for a quarter of global spending from 2000-2008.