

President's FY2020 Budget Request in Areas of Interest to Ag & Applied Economists
by Caron Gala (April 2, 2019)

The Trump Administration released the President's Fiscal year 2020 (FY20) budget request in detailed form on March 18, 2019. Of particular interest to AAEA members are the proposed budgets for programs related to agricultural and applied economics at the U.S. Department of Agriculture, the Environmental Protection Agency, and the National Science Foundation. This report summarizes the proposed FY20 budgets for selected programs, in comparison to the FY19 budget enacted by Congress.

U.S. Department of Agriculture programs in applied economics and statistics

Table 1. FY20 Budget for the United States Department of Agriculture key Research Agencies and Offices

	FY19 Enacted	FY 20 Budget Request
Office of the Chief Economist	\$21.3 M	\$19.8 M
REE		
Economic Research Service	\$86.8 M	\$61.0 M
National Agricultural Statistics Service	\$174.5 M	\$163 M
National Institute of Food and Agriculture	\$927.6 M	\$1,596.3 M

The **Office of the Chief Economist (OCE)** advises the Secretary of Agriculture on the economic implications of Department policies, programs, and proposed legislation. OCE provides agricultural economic intelligence and projections related to agricultural commodity markets; risk analysis and cost-benefit analysis related to international food and agriculture; bioenergy issues; sustainable development; agricultural labor; global climate adaptation; environmental markets; and pesticide and pest management issues. The Chief Economist is responsible for the coordination, review and clearance of commodity and aggregate agricultural and food-related data used to develop Departmental outlook and situation material. The \$1.3 M cut in funding suggested by the President's budget request would include:

- a cut of \$1.3 M in cooperative research projects, external contracts, and interagency agreements across all OCE programs.
- reduced funding to the Policy Research Centers by 7%.
- impacts to data purchasing for pesticide use, environmental markets, and conservation and performance.

The **Research, Education, and Economics (REE) Mission Area** is dedicated to the creation of a safe, sustainable, competitive U.S. food and fiber system and strong, healthy communities, families, and youth through integrated research, analysis and education. The REE Mission Area includes four agencies, the Economic Research Service, the National Institute of Food and Agriculture, National Agricultural Statistics Service, and the Agricultural Research Service. We review the firm

The **Economic Research Service (ERS)** is USDA's primary source of economic information and economic and social science research. ERS' mission is to anticipate economic and policy issues related to food, agriculture, the environment, and rural development, and conduct research that informs public program and policy decisions. In addition to a \$25.8 M cut to the ERS budget, the proposal also requests use of

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\$15.5 M of the remaining funds to go towards relocation of the agency, proposing to pay what appears to be double rent for the agency in FY20 (rent going from \$5 M to \$10 M in the GSA totals).

Impacts on agency's programs would include:

- A decrease of \$20.5 M and 72 staff years for Research on [Agricultural Markets and Trade, Farms, Conservation](#) and [Agricultural Research and Development](#) (\$48.4 M and 206 staff years available in 2018).
- A reduction of \$15.1 M and 67 staff years for Research and Analysis on [Food Assistance, Nutrition and Diet Quality](#) (\$18.9 M and 93 staff years available in 2018).
- A decline of \$4.0 M and 20 staff years for [Rural Economy and Well-being Research and Analysis](#) (\$4.0 M and 20 staff years available in 2018). All rural development research is moved to the National Institute of Food and Agriculture (NIFA) and the Agricultural Research Service (ARS). No related increases exist for these accounts.
- A cut of \$2.2 M and 10 staff years for [Food Safety Research and Analysis](#) (\$2.2 M and 10 staff years available in 2018). All food safety research is moved to NIFA and ARS. No related increases exist for these accounts.

The budget request includes no funds for interaction with the Food and Nutrition Service (a cut of \$3 M) nor the Foreign Agricultural Service (a reduction of \$120,000 and one staff year). This is in addition to the reduction in staff years and funding for interactions that are planned for FY19, according to the budget (see Table ERS-3 in the congressional justification for FY20). It is unclear as to if this is associated with the plan to relocate the agency out of the National Capital Area.

The [National Agricultural Statistics Service \(NASS\)](#) is committed to providing timely, accurate, and useful statistics in service to U.S. agriculture. Its over 400 individual reports cover virtually every aspect of U.S. agriculture, including production and supplies of food and fiber, prices paid and received by farmers, farm labor and wages, farm finances, chemical use, and changes in the demographics of U.S. producers. Of all of these reports, the most notable is the Census of Agriculture which is done on a five-year cycle. [The 2018 Census of Agriculture will be released on April 12, 2019.](#)

Every five years, NASS conducts a program review following the completion of the Census of Agriculture. The review considers the latest information from the census, estimates from the current annual estimating programs, and administrative data to ensure that the NASS annual estimating program adapts to reflect changes in agriculture. Program changes balance resources across all of the NASS estimating programs. A number of changes have been made based on the [program's 2019 review](#). In the President's FY20 budget request, NASS receives a cut to the Agricultural Estimates Program of \$10.7 M.

The [National Institutes of Food and Agriculture \(NIFA\)](#) is USDA's primary extramural research funding agency. Its mission is to advance knowledge for agriculture, the environment, and human health and wellbeing by funding targeted research, education, and extension projects and programs, some of which are specific to the Land-Grant University System, others open to participation by other partner organizations. Within NIFA, Hatch base capacity funds are used to support continuing agricultural research at 1862 Land-Grant Universities (LGUs) and State Agricultural Experiment Stations (SAES). The McIntire-Stennis Research Program supports development of new knowledge and innovations to sustain healthy, productive forests, agroforests, rangelands, and grasslands and address the challenges facing forest owners and the forest products industry. The Evans-Allen program underpins and supports NIFA's

competitive programs. The funding for the program is needed to help build capacity and reduce the disparities that exist between the land-grant universities.

In the NIFA budget request, the [Agriculture and Food Research Initiative \(AFRI\)](#), which is the premier competitive grants program for agricultural sciences, receives an additional \$85 M, for a total request of \$500 M. NIFA proposes the AFRI program to include a broad emphasis on '[Harnessing Technological Innovation for Rural Prosperity](#)' through focused investments in three major complementary components of AFRI: 1) Sustainable Agricultural Systems, 2) Foundational and Applied Science, and 3) Education and Workforce Development. These reflect the OMB Office of Science and Technology Policy memo on '[FY2020 Administration Research and Development Budget Priorities](#)', which encourages advanced and precision agriculture and aquaculture technologies, including the use of embedded sensors, data analytics, and machine learning techniques to minimize agricultural inputs and maximize the quantity and quality of agricultural products. It states that agencies should prioritize investments in pre-competitive research regarding the safety of microorganisms, plants, and animals developed using gene editing, in order to greater leverage biotechnology products for agriculture.

- NIFA proposes to invest \$134 million of appropriated funds in the **Sustainable Agricultural Systems** programs to support large integrative projects that develop technological solutions to major agricultural system challenges.
- The agency proposes to invest \$317 million in the **Foundational and Applied Science programs**, and for support of interagency partnerships on technologies such as robotics including unmanned aerial systems and cyberphysical systems. This area will also support societal acceptance and economic implications of agricultural technologies, including gene editing and big data. In support of the [Executive Order on Maintaining American Leadership in Artificial Intelligence](#) which was released on February 11, 2019, NIFA will invest in approaches to improve management and application of big data, applications of AI in agriculture, and data-driven entrepreneurship in rural America.
- The agency proposes to invest \$49 million in **Education and Workforce Development programs** to promote development of the workforce needed to spur innovations in the agricultural economy, enhance rural prosperity, and advance competitiveness of U.S. agriculture.

The NIFA budget includes \$10 M in mandatory funding for the new 2018 Farm Bill program of Urban, Indoor, and Other Emerging Agricultural Production Research, Education, and Extension Initiative, which establishes a competitive grants program to support research, education, and extension activities to facilitate the development of urban, indoor, and other emerging agricultural production, harvesting, transportation, aggregation, packaging, distribution, and markets. Within the NIFA budget, \$9.5 M is made available for relocation expenses for the alteration and repair of leased buildings and improvements.

Environmental Protection Agency programs in applied economics

Table 2. FY20 Budget Table for the Environmental Protection Agency

	2019 Enacted	FY 20 Budget Request
<i>Office of Policy (includes NCEE*)</i>	\$27.4 M	\$32.4 M
<i>Geographic Programs</i>	\$447.9 M	\$37.3 M
<i>Office of Water, Science and Technology (ORD)</i>	\$713.8 M	\$463.1 M
<i>Science to Achieve Results</i>	\$28.5 M	\$0 M
<i>National Center for Environmental Research</i>	\$49.9 M	\$3.0 M

The mission of the [Environmental Protection Agency \(EPA\)](#) is to protect human health and the environment. The Agency guides national efforts to reduce environmental and human health risks, based upon on-going research and scientific analysis. [EPA's Office of Policy \(OP\)](#) interacts with many federal agencies during its rulemaking activities. From time to time, OP collaborates with other federal regulatory and natural resource agencies (e.g., the USDA, the DOE, DOI, and NOAA) to collect economic data used in the conduct of [economic cost-benefit analyses of environmental regulations and policies](#).

[EPA's National Center for Environmental Economics \(NCEE\)](#), a part of OP will gather important benefits data and build a benefits model to assess the benefits of national regulations that change water quality. This effort will provide important evidence-based data and analyses, consistent with economic science best practices to inform decision making.

The [Science to Achieve Results \(STAR\)](#), funds research grants and graduate fellowships in environmental science and engineering disciplines through a competitive solicitation process and independent peer review. EPA will prioritize activities that support decision-making related to core environmental statutory requirements, as opposed to extramural activities.

National Science Foundation programs in applied economics and multidisciplinary research

Table 3. FY20 Budget Table for the National Science Foundation

	2018 Enacted*	FY 20 Budget Request
<i>Social and Economic Sciences (SES)</i>	\$87.1 M	\$80.6 M
<i>AI</i>	\$12.2 M	\$10.3 M
<i>INFEWS</i>	\$2.5 M	\$2.0 M
<i>CAREER</i>	\$2.3 M	\$2.5 M
<i>Behavioral and Cognitive Sciences (BCS)</i>	\$86.6 M	\$79.0 M
<i>SBE Office of Multidisciplinary Activities (SMA)</i>	\$23.6 M	\$21.7 M

*Please note that we do not have this granular information for FY19 enacted omnibus appropriations.

The [National Science Foundation Directorate SBE](#) provides approximately 62% of the federal funding for basic research at academic institutions in the social, behavioral, and economic sciences. SBE researchers' findings have the potential to help to grow the economy, secure the homeland, improve the health and safety of American families, and increase the competitiveness of America's farms, offices, and factories. The funding for the SBE Directorate includes funding for [NSF's Big Ideas](#), particularly those for human perceptions, actions, and adaptive strategies are critical for interdisciplinary science to produce transformative social benefits. Additionally, the Social and Economic Science include funding for:

- Artificial Intelligence (AI) related to advancing machine learning (ML); developing natural language processing models; integrating ML advances using big data with learning mechanisms developed in cognitive science; developing new statistical inferences and algorithms for the analysis of large data sets; and understanding the legal and ethical implications of AI.
- SBE will participate in this NSF-wide initiative to explore the [interactions among food, energy, and water \(INFEWS\)](#) systems. Specifically, SBE will support well-integrated interdisciplinary research efforts to understand, model, design, and manage these interconnected systems that involve social and behavioral processes (such as decision-making by and governance of individuals, organizations, and institutions) and their interactions with the FEW systems' various physical, chemical, and biological processes. NSF plans to end formal investment in INFEWS at

the end of FY 2020, and thus will undertake planning and strategizing exercises internally and in consultation with other federal agencies to determine which aspects of INFEWS should be supported through core programs and which aspects may become part of a different investment area or scientific thrust for the Foundation beyond FY 2020.

- The [Faculty Early Career Development \(CAREER\)](#) Program is a Foundation-wide activity that offers the National Science Foundation's most prestigious awards in support of early-career faculty who have the potential to serve as academic role models in research and education and to lead advances in the mission of their department or organization.