

Unified Request for NIFA Funding FY 2023

NIFA is the extramural agency that fosters the development and deployment of innovations to secure the nation's food supply. NIFA is designed to address agricultural production and resilience challenges through a federal-state, and local partnership that places stakeholder engagement at its core.

Research¹

NIFA administers capacity funds that allow public U.S. colleges of agriculture to work directly with U.S. producers and consumers. Capacity funds provide support to faculty, students, technicians, and to the university's research capacity overall, to solve climate, production, nutrition, and resilience challenges. Both competitive and capacity programs fund visionary federal priorities. APLU's NIFA research priorities include:

- **Hatch Act:** State Agricultural Experiment Stations (SAES) provide research capacity for critical issues and innovations that affect agricultural production, profitability, and sustainability, such as climate resilience strategies, conservation, economic analysis, environmental stewardship, food safety, invasive species, biosecurity, and precision agriculture.
- **Evans-Allen:** Focusing on agricultural research at 1890s colleges of agriculture, Evans-Allen provides capacity to address small farmer challenges, food security and nutrition, climate change, and workforce development while also training many Black students majoring in agriculture.
- **1994 Institution Research Program:** The Tribal College Research Program supports research aimed at protecting reservation forests, woodlands, grasslands, and crops, as well as monitoring of the quality of soil, water, and other environmental factors.
- **McIntire-Stennis:** Forestry research capacity develops approaches to carbon sequestration, biobased products, forest fires, energy sources, expansion of outdoor recreational activity, and mitigation techniques for invasive species, and trains the next generation of natural resource scientists.
- **Agriculture and Food Research Initiative (AFRI):** AFRI is the nation's flagship competitive grants program for federal priorities related to agricultural and natural resource sciences. Scientists, Extension, and educators use grants to address urgent problems facing our nation's food supply and the environment.



Hatch Act:
\$300 million
Evans-Allen:
\$100 million
1994 Research Grants:
\$17.5 million
McIntire-Stennis:
\$46 million
AFRI:
\$500 million



Smith-Lever:
\$430 million
1890 Extension:
\$85 million
1994 Extension:
\$17.5 million

Cooperative Extension²

The **Cooperative Extension System (CES)** is a network of land-grant-university-connected state, tribal, and local educators who deliver vital, timely, practical information to agricultural producers, small business owners, communities, youth, and families. Extension's informal educators and professionals conduct on-farm research and education, nutrition education, workforce training, and youth/adult volunteer activities, focusing on community success and quality of life. Yet, funding purchasing power has dramatically decreased while demands on Extension have increased, including addressing climate mitigation, technology transfer and technical assistance, behavioral health, diversity/equity/inclusion, and COVID-19 response. APLU's NIFA Extension priorities include:

Smith-Lever Section 3(b) and (c), Extension services at 1890 institutions, and Extension services at 1994 institutions provide essential services that include an out-of-the classroom educational network that combines the expertise and resources of federal, state, tribal, and local partners and LGU researchers to reach people at the local level.

- These programs support 4-H programs run by Extension that empower youth, through volunteerism, clubs, and camps, to reach their full potential, while promoting interest in agriculture and civic leadership.
- Extension programs through 1890 and 1994 institutions in business and entrepreneurship enhance the ability of minority farmers and landowners to acquire capital, integrate new technologies, and use estate planning and tax incentive programs to retain operations and increase profitability.
- Extension educators are trusted members of their communities and provide the research-based knowledge and programs that are needed to improve quality of life for individuals, families, and communities.

Education³

Increased investment in the following NIFA education programs for food, agriculture, and natural resources will increase the chance of meeting the nation's diverse talent needs for the future:

- **1994 Institutions Equity Payment:** These equity-based programs focus on tribal college undergraduate and/or graduate studies in the food and agricultural sciences supporting curricula design, faculty development, experiential learning, equipment, and student retention.
- **Women and Minorities in STEM (WAMS):** This program increases student success for rural women and minorities in agricultural research, education, and Extension.



1994 Education:

\$17.5 million

Women and Minorities in STEM:

\$10 million



Research Facilities Act:

\$365 million

Infrastructure

Agricultural and food research solves global issues by preventing the next pandemic, addressing energy sustainability, limiting forest fires, and feeding global populations. Yet, the U.S. is at a hazardous crossroads, rapidly losing ground as the global leader in agricultural science. In 2020, Gordian, a firm with 30+ years of experience evaluating building determined that 70% of research facilities at U.S. public colleges of agriculture are at the end of their useful life. Land-grant universities are the launchpad for agricultural innovation, but 21st century challenges cannot be addressed with 20th century resources and infrastructure.

To reposition, APLU urges funding of the Research Facilities Act to rebuild an advanced agricultural research infrastructure with facilities constructed for emerging areas of science, including artificial intelligence, big data analytics, and sensor-based observation systems at geographically relevant locations across the nation. Nationwide, there is a need for at least \$11.5 billion in deferred maintenance of agricultural research infrastructure at public colleges of agriculture.

Additional Justification

NIFA is the extramural funding agency that enables the federal-state-local partnerships for research and Extension to secure the nation's food supply. This partnership fosters agricultural professionals and solves problems, but declining funding and poor infrastructure is putting U.S. leadership in agriculture at risk. We request a bold reinvestment in the colleges of agriculture to continue to solve agricultural and food challenges while leading in R&D.

- ¹The return on investment of agriculture research and Extension is \$17 for every public \$1 invested Yet federal support for agricultural research, education, and Extension has been flat in real dollars with public investment below 1990s levels. Global competitors' investments are growing at a rapid pace. In 2016 alone, China outspent the United States in agricultural research and outreach investment by \$3 billion. From 2014–2020, China increased its public ag R&D investments by an average annualized rate of ~14% per year. In the same period, the U.S. was increasing its average investment by ~4% per year.
- ²Over 32,000 university- and county-based employees and 2.8 million volunteers support the federal-state Extension partnership and multiply its impact across nearly all the 3,143 counties, parishes, and boroughs in the United States. In an almost 30-year period, 500,000 more farmers left than entered agriculture—without Extension, as many as 28% additional farmers would have been lost.
- ³USDA projects that each year, between 2021 and 2025, there will be 20,288 more job opportunities for college graduates in food, agriculture, natural resource, and environmental (FANRE) fields than there are graduates from those disciplines (36,112).

The increase for NIFA is \$691 million over the FY2021 levels. This includes the \$365 million requested for the Research Facilities Act. Funding priorities are based on the current information available and may be updated to reflect new information.

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Doug Steele

Association of Public and Land-grant Universities
Vice President, Food, Agriculture & Natural Resources
dsteele@aplu.org
(202) 478-6082

Bridget Krieger

Lewis-Burke Associates LLC
Senior Principal
bridget@lewis-burke.com
202-289-7475

Caron Gala

Association of Public and Land-grant Universities
Director, Governmental Affairs, Agriculture and
International Development
cgala@aplu.org
202-478-6057