



ASSOCIATION OF
PUBLIC &
LAND-GRANT
UNIVERSITIES

FY 2024 Appropriations Priorities Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Final Request

Agency	Account	APLU FY2024 Request
National Institute of Food and Agriculture	Hatch Act (State Agricultural Experiment Stations)	\$300 million
	Evans-Allen Program (1890s Research and Education)	\$108 million
	Research Grants for 1994 Institutions	\$17.5 million
	McIntire-Stennis Cooperative Forestry	\$46 million
	Agriculture and Food Research Initiative	\$500 million
	Smith-Lever (Extension Activities)	\$420 million
	1890 Institutions Extension Services	\$88 million
	Extension Services at 1994 Institutions	\$17.5 million
	Payments Funding for 1994 Institutions (Education)	\$17.5 million
	Women and Minorities in STEM	\$10 million
	Research Facilities Act	\$500 million
	Partnerships to Build Capacity in International Agriculture	\$10 million
International Agricultural Science and Education Competitive Grants	\$5 million	

DEPARTMENT OF AGRICULTURE (USDA) NATIONAL INSTITUTE OF FOOD AND AGRICULTURE (NIFA)

APLU requests increases in FY2024 for research, education, and Extension capacity, competitive, and facilities funding in National Institute of Food and Agriculture (NIFA) accounts to:

- Advance critical research priorities such as human nutrition, animal diets, soil and crop health, biobased materials, zoonotic disease preparedness, farm profitability, and climate-smart agriculture.
- Support high-quality faculty, staff, Extension educators and agents, post-docs, and undergraduate and graduate students.

- Provide funding for Extension educators and agents to translate vital information into practice for agricultural producers, small business owners, consumers, families, and young people nationwide.

The partnership between NIFA and public and land-grant universities fosters agricultural professionals and new discoveries leading to innovative approaches to solve contemporary challenges associated with climate change, environmental sustainability, invasive species, agricultural production and processing, food security, and ensuring nutritious and safe food for our nation.

Agriculture and food research and Extension investments continue to provide a significant return to the American taxpayer. Recent data from the U.S. Economic Research Service indicates that for every \$1 in public investment, U.S. food and agriculture R&D has returned \$20 to the American economy. However, the report further notes that “U.S. public agricultural R&D spending peaked in 2002, and by 2019 spending had declined to roughly where it was in 1970.”

Meanwhile, investments by global competitors have grown exponentially, and continue to trend upward. ¹ In 2016 alone, China outspent the United States in agricultural research and outreach investment by \$3 billion. ² Between 2014 and 2020, China increased its public ag R&D investments by an average annualized rate of ~14 percent per year while the U.S. was increasing its average investment by about four percent per year. ³ The U.S. is losing significant ground to global competitors.

CAPACITY FUNDS PROGRAM: HATCH ACT (Agricultural Experiment Stations at 1862s)

APLU FY2024 Request: \$300 million

FY2024 PBR = \$265 million; FY2023 = \$265 million; FY2022 = \$260 million

APLU requests \$300 million in FY2024 for the Hatch authorization account. The Hatch Act capacity funds program supports 1862 land-grant university federal-state Experiment Station partnerships that address high-priority agricultural research. States provide a minimum one-to-one match for each federal dollar, thus leveraging the federal investment. Hatch capacity funds enable translational research to address critical local, state, regional, and national problems.

Experiment Stations steward 75 percent of the public funding for agricultural R&D, providing research capacity to directly advance agricultural production and resilience. Science experts are located across each state at Experiment Stations. These experts respond to critical issues that affect production, profitability, invasive plant/animal species, biosecurity, land and water use,

¹ Mohamedshah F, Havlik S, and Velissariou M. (2020, January.) Food Research Call to Action on Funding and Priorities. IFT.

² Beintema N, Pratt AN, Stads GJ (2020, September) Key Trends in Global Agricultural Research Investment. IFPRI

³ Baldos, Uris Lantz, Frederi G. Viens, Thomas W. Hertel, and Keith O. Fuglie. R&D Spending, Knowledge Capital, and Agricultural Productivity Growth: A Bayesian Approach. *American Journal of Agricultural Economics*. 101(1): 291–310; <https://doi.org/10.1093/ajae/aay039>.

climate resilience, economic analysis, and farm safety. The Hatch account funds advance [agricultural production](#) and [processing, profitability, and sustainability](#); recent impacts include:

- Meltless, compostable, and anti-microbial [jelly ice cubes](#) that keep food cold without the need for plastic cooling packs or large amounts of ice;
- Disease resistant banana trees that support Hawaiian banana production in the face of a damaging virus;
- [Soybean cultivars](#) that extend the planting and growing seasons, enabling higher yields in limited daylight;
- “[Soil-moisture re-emergence](#),” a method to predict long-term drought and rain conditions; and
- A process for turning [wastewater into biodiesel](#).

Despite this program’s vital role for every state, Hatch funding has seen declines in inflation-adjusted values over the past decade. At the same time, China, India, and Brazil overtook the U.S. in public investment in agricultural R&D.⁴ APLU requests \$300 million in FY2024 for the Hatch account to begin to catch up in real dollar terms. This will support data-driven long-term research on local and regional agricultural systems that have greater environmental sustainability while maintaining profitability and productivity.

CAPACITY FUNDS PROGRAM: EVANS-ALLEN PROGRAM (Agricultural Research at 1890s)

APLU FY2024 Request: \$108 million

FY2024 PBR = \$98 million; FY2023 = \$89 million; FY2022 = \$80 million

APLU requests \$108 million in FY2024 for the Evans Allen program account. Congress approved the Evans-Allen Act of 1977 to provide capacity funding for food and agricultural research at the 1890 Historically Black land-grant universities and Tuskegee University in a manner like that provided to the 1862 universities under the Hatch Act of 1887. Research conducted under the Evans-Allen Program has led to hundreds of scientific breakthroughs of benefit to the nation and communities served by 1890s institutions. Specifically, the Evans-Allen Program enables research for small farmer challenges, health, wellness and health disparities, food security and nutrition, rural prosperity and economic sustainability, natural resources and the environment and workforce development. Most Black students majoring in agriculture graduate from 1890s universities. Examples of scientific breakthroughs stemming from 1890s agricultural research programs include:

- Researchers at an 1890s institution developed post-harvest technology to eliminate the problem of allergens in peanuts and are expanding their studies to address wheat allergens and tree nut allergens. Peanut allergies, which have tripled in the past two decades, are the leading cause of food allergy related deaths in children.⁵

⁴ <https://www.ers.usda.gov/amber-waves/2022/june/investment-in-u-s-public-agricultural-research-and-development-has-fallen-by-a-third-over-past-two-decades-lags-major-trade-competitors/>

⁵ [The Economic Impact of Peanut Allergies by H. Eric Cannon, PharmD, FAMCP](#)

- A small ruminant researcher at an 1890s institution developed a database of animal management practices to enable greater understand of protein production. The resulting VetLink App is not only helping producers, but also young and beginning farmers who want to enter agriculture.⁶

Providing \$108 million in FY2024 for the Evans-Allen account will help address the U.S.-based agricultural leader diversity gap, small farmer challenges, food security and nutrition, climate change, and workforce development.

COMPETITIVE PROGRAM: 1994 INSTITUTION RESEARCH PROGRAM
APLU FY2024 Request: \$17.5 million
FY2024 PBR = \$5 million; FY2023 = \$5 million; FY2022 = \$4.5 million

The Tribal College Research program helps the 1994 Land-grant Universities build scientific research capacity and provide a solid foundation in research knowledge for students. The 1994s often serve as the primary institution of scientific inquiry, knowledge and learning for tribal communities. The modest research funding received by the 1994s helps protect reservation forests, woodlands, grasslands, and crops, and monitoring of the quality of soil, water, and other environmental factors.

1994 land-grant university research projects range from studying bison herd productivity to efforts focused on promoting traditional plants and diets, controlling invasive species, and revitalizing tribal economies. A few examples include:

- Address of microbial release of mercury and other mining contaminants on both reservation (drinking-water) and regional watersheds with large and diverse ecosystems.
- Training students in state-of-the-art genetic sequencing, field sampling, data analysis, and dissemination.
- Reintroduction of and commercial growth of traditional crops such as pawpaw and pumpkin while also evaluating the dietary and nutritional significance of each plant.
- Developing traditional food recipes that are nutritious and appealing to reduce diet-related diseases and related health-care costs.

Providing \$17.5 million in funding for the 1994 Institutional Research Program account in FY2024 will enhance research capacity needed to meet the needs of tribal communities and lands.

⁶ <https://www.pvamu.edu/blog/usda-funds-pvamus-vetlink-moble-app/>

CAPACITY FUNDS PROGRAM: McINTIRE-STENNIS COOPERATIVE FORESTRY

APLU FY2024 Request: \$46 million

FY2024 PBR = \$38 million; FY2023= \$38 million; FY2022 = \$36 million

APLU requests \$46 million to support the McIntire-Stennis Cooperative Forestry (MSCF) program in FY2024. MSCF research investigates methods of carbon sequestration, development of biobased products, prevention of forest fires, identification of biobased-energy sources, expansion of outdoor recreational activity, stewardship of clean air and water, fish and wildlife habitat, mitigation techniques for invasive species, and training of forest and natural resource scientists. It is a direct source of funds for forest and natural resource science graduates. McIntire-Stennis funds are matched by state and private dollars, often as much as nine to one.

The U.S. is home to 823 million acres of forest and woodlands. The United States forest products industry accounts for approximately four percent of the nation's total manufacturing gross domestic product (GDP), producing over \$200 billion in products every year. The innovation, which occurs in partnership with U.S. colleges of forestry and natural resources, provides significant support for the growth and maintenance of this industry. For example:

- McIntire Stennis allows researchers to breed new types of Populus species for greater biomass productivity, while preserving water and biodiversity.
- McIntire Stennis supports research on forest disturbances that limit carbon capture potential, including disease outbreaks, and wildfire and wind disturbance, as well as human-caused effects such as the loss of forests to development.

However, pressing challenges require new research on modern technologies to monitor forest fires, approaches to utilizing forests as a natural climate solution, wood product innovation and market development, and mitigation techniques for impacts from disturbances.

An increase in funding to \$46 million in FY2024 for the McIntire Stennis Cooperative Forestry Program will advance research and outcomes on emerging forest stressors; adaptation to and mitigation of climate change; utilization of wood and new applications for forest products; initiatives in multi cropping (agroforestry); management of forests and related rangelands for livestock, game and wildlife; and new forestry uses for underserved audiences.

COMPETITIVE PROGRAM: AGRICULTURE AND FOOD RESEARCH INITIATIVE (AFRI)

APLU FY2024 Request: \$500 million

FY2024 PBR = \$550 million; FY2023 = \$455 million; FY2022 = \$445 million

APLU requests \$500 million in FY2024 for the Agriculture and Food Research Initiative (AFRI), USDA's flagship competitive grants program. AFRI leverages capacity-supported research

through Hatch and Evans-Allen, and 1994 research partnerships into practical innovations that improve rural economies, increase food production and security, stimulate the bioeconomy, mitigate the impacts of climate variability, address water availability issues, ensure food safety, enhance human nutrition, and train the next generation of agricultural scientists and professionals. Competitive programs, such as AFRI, enable bold and integrated (i.e., research, education, and Extension) efforts across multiple institutions and regions.

As examples, AFRI research grants support detection of cattle disease, cut greenhouse gases from dairy cows, and elucidate heat impacts on bees. The returns on investment of agriculture research and Extension are significant, averaging \$20 for every dollar invested.⁷ Furthermore, the AFRI program, Food and Agricultural Science Enhancement (FASE) grants, boosts institutional capacity to attract new scientists into careers in food and agricultural sciences, developing a more robust and competitive national workforce. FASE grants, which constituted 20 percent of AFRI awards in 2019, provide support for pre- and postdoctoral fellowships, and new investigators from a diverse array of institutions.

However, since AFRI's authorization in the 2008 Farm Bill, the program has not received more than approximately 60 percent of its authorized level of \$700 million, despite a consistently greater number of revolutionary ideas that cannot be initiated due to insufficient funding. For example, in FY 2019 (the last year for which data are available), over 2,000 competitive funding applications, totaling over \$1.5 billion, were submitted by AFRI but less than a third of that amount was provided as funding.⁸

APLU's request for AFRI of \$500 million in FY2024 will allow for more of the program's competitive, targeted requests for applications to be funded allowing for timely science-based responses to changing national priorities and a higher research return on investment.

CAPACITY FUNDS PROGRAM: SMITH-LEVER FUNDS (Cooperative Extension System via 1862s)

APLU FY2024 Request: \$420 million

FY2024 PBR = \$325 million; FY2023 = \$325 million; FY2022 = \$320 million

APLU requests \$420 million in Smith-Lever funds to support the Cooperative Extension System (CES), a unique network of researchers, specialists, agents, and educators who deliver vital, practical information to agricultural producers, small business owners, communities, youth, and families. These programs support over 32,000 university- and county-based employees and 2.8 million volunteers whose efforts multiply across all the 3,143 counties, parishes, and boroughs in the U.S. Flat funding of Smith-Lever for multiple years has caused an erosion of personnel impacting the reach of Extension and the ability to serve communities.

⁷Baldos, Uris Lantz, Frederi G. Viens, Thomas W. Hertel, and Keith O. Fuglie. R&D Spending, Knowledge Capital, and Agricultural Productivity Growth: A Bayesian Approach. *American Journal of Agricultural Economics*. 101(1): 291–310; <https://doi.org/10.1093/ajae/aay039>.

⁸<https://www.nifa.usda.gov/sites/default/files/resource/AFRI%20Annual%20Review%20v2%202019%20text%20508%20final.pdf>

Extension professionals support a wide-variety of functions, from coordinating on-farm research trials to facilitating volunteer activities for youth or adult education, all with a focus on community. As part of CES, the 4-H network provides the nation's youth with community mentors and learning opportunities related to food, agriculture, environment, and personal growth. Increases to these programs allow for timely locally relevant and scholarly programs.

Furthermore, Cooperative Extension programs are fundamental in averting the spread of agricultural pest and diseases, connecting people with high-quality information during national emergencies, and keeping American farmers on the farm by providing information about sources of on-farm income.^{9,10} Below are just some of the countless impacts of Smith Lever funding:

- Disaster relief information via the [Extension Disaster Education Network \(EDEN\)](#).
- Providing farmers with access to research-based fruit production guides.
- Increased self-confidence in youths participating in the [Juntos 4-H program](#).

APLU requests \$420 million in FY2024 for Smith Lever funds at the 1862 institutions, which will support Cooperative Extension System researchers, agents, educators, and staff in fulfilling the mission of bringing vital, practical information to agricultural producers, small business owners, consumers, families, and young people nationwide.

CAPACITY FUNDS PROGRAM: 1890 INSTITUTIONS EXTENSION SERVICES
APLU FY2024 Request: \$88 million
FY2024 PBR = \$76 million; FY2023 = \$72 million; FY2022 = \$65 million

APLU requests \$88 million in FY2024 for the Extension Services of 1890s land-grant universities. This program supports adoption of new farm production and management approaches through informal education via on-site demonstrations. 1890s Extension leads to more successful small and medium-size family farms and enhances the marketing skills of farmers in placing products in local, national, and global markets.

- For example, Extension faculty at one institution identified a shortage of facilities for goat and sheep producers and solved the problem by developing a Mobile Processing Unit. This innovation helps small farmers meet the growing consumer demand for safe, locally produced food. The unit saved local producers approximately \$1,865 per each in 2022.
- 1890s Cooperative Extension Programs developed Families First-Nutrition Education and Wellness System, a nutrition education curriculum on how to plan, select, and prepare meals with the goal of improving overall health. More than 35, 1890 and 1862 Land-Grant universities adopted the curriculum to assist thousands of recipients across the nation.

⁹ <https://nifa.usda.gov/announcement/nifa-supports-disaster-education-through-eden>

¹⁰ Goetz, S.J. and M. Davlasheridze. State-Level Cooperative Extension Spending and Farmer Exits. *Applied Economic Perspectives and Policy*. March 2017. 39(1): 65-86 <https://onlinelibrary.wiley.com/doi/abs/10.1093/aep/39.1.65>

- One 1890s institution alone has taught more than 3,500 youths about healthy eating and meal preparation through community education programs.

1890s Extension programs in business and entrepreneurship enhance the ability of minority farmers and landowners to acquire capital, integrate innovative technologies, and use estate planning and tax incentive programs to retain operations and increase profitability. APLU requests \$88 million in FY2024 for 1890 Institutions' extension to bring vital, practical information to agricultural producers, small business owners, consumers, families, and young people.

COMPETITIVE PROGRAM: 1994 INSTITUTION EXTENSION PROGRAM
APLU FY2024 Request: \$17.5 million
FY2024 PBR = \$21 million; FY2023 = \$11 million; FY2022 = \$9.5 million

APLU requests \$17.5 million in FY2024 for the Tribal Colleges (also known as the 1994 land-grant institutions) Extension, which supports community-based learning on topics such as farmer education, youth development, diet and nutrition, and rural entrepreneurship. Outreach, technical assistance, and continuing education through traditional Cooperative Extension programs are limited in many tribal communities, often due to remote rural settings and funding limitations. Federal funding is critical to address significant funding shortages and advance further successful outcomes, including:

- Reducing the impact of invasive species on Native American reservation landscapes through landowner education that restores land productivity by controlling and containing new invaders.
- Increasing financial literacy for students, youth and families while promoting a college-going culture through programs grounded in Native American Tribal values.

APLU's request of \$17.5 million in FY2024 for the Tribal Extension Program will enable additional development and delivery of Extension programming in underserved tribal communities.

CAPACITY FUNDS PROGRAM: SMITH-LEVER 3(d)
APLU FY2024 Request: \$95 million
FY2024 PBR = \$114.1 million; FY2023 = \$91.25 million; FY2022 = \$90 million

APLU supports \$95 million in funding for the Smith-Lever (d) programs. Most of these funds support the Expanded Food and Nutrition Education Program (EFNEP), which combats nutrition insecurity in low-income populations. Other accounts funded by Smith-Lever 3(d) include: Farm Safety and Youth Farm Safety Education; New Technologies for Agricultural

Extension; Children, Youth, and Families at Risk; and Federally Recognized Tribes Extension Programs.

Nutrition insecurity reflected by poor health disproportionately affects minority and low-income populations. EFNEP employs and trains more than 1,900 trusted, peer educators, annually. EFNEP program graduates reported saving \$549,195 collectively in food costs. In 2018, NIFA provided EFNEP funding to 76 land-grant universities, across all 50 states, six U.S. territories, and the District of Columbia, reaching approximately 119,000 adults, over 365,000 youth, and more than 345,000 family members indirectly. APLU supports \$95 million to grow the EFNEP program at a critical moment for those who are food insecure across the country.

Women and Minorities in STEM

APLU FY2024 Request: \$10 million

FY2024 PBR = \$2.3 million; FY2023 = \$2 million; FY2022 = \$1 million

APLU requests \$10 million in FY2024 for the Women and Minorities in STEM program. USDA projects that each year between 2021 and 2025, there will be 39 percent more job opportunities for college graduates in food, agriculture, natural resource, and environmental fields than there are graduates from those disciplines. Increased investment in NIFA WAMS programs will increase the chance of meeting the nation's talent needs. The program fosters greater recruitment and retention of diverse students, strengthening the workforce pipeline to meet industry and competitiveness needs.

COMPETITIVE PROGRAM: 1994 INSTITUTIONS EQUITY PAYMENT

APLU FY2024 Request: \$17.5 million

FY2024 PBR = \$15 million; FY2023 = \$7 million; FY2022 = \$5.5 million

APLU requests \$17.5 million in FY2024 for the 1994 Equity Payment program. The program strengthens higher education instruction in the food and agricultural sciences at the 1994 land-grant institutions. Equity programs focus on undergraduate and/or graduate studies in the food and agricultural sciences in curricula design and development, faculty development, instruction delivery systems, student experiential learning, equipment and instrumentation for teaching, or student recruitment and retention.

- As an example, 1994 Equity programs train current and future Native American lands resource managers and provides a strong educational base for Tribal College graduates in managing federal, state, municipal, and private natural resources.
- Enhancing student success by modernizing course curriculum and providing field-based labs to allow students to experience and conduct research.

Infrastructure: Research Facilities Act (RFA)

APLU FY2024 Request: \$500 million

FY2024 PBR = \$10 million; FY2023 = \$2 million; FY2022 = N/A

APLU requests \$500 million for the Research Facilities Act in FY2024. Modernizing research, Extension, and education facilities would advance cutting-edge research and applied science innovations critical for 21st century R&D goals at public colleges of agriculture, veterinarian, forestry, and natural resources across the country. Today, agricultural researchers at U.S. colleges of agriculture are conducting 21st century research in mid-20th century facilities, many of which are crumbling. A 2021 report found that 70 percent of the facilities at agricultural colleges and universities are beyond their useful life, with an estimate of deferred maintenance of \$11.5 billion and a replacement value of \$38.1 billion.¹¹

Competitive funding through the RFA would allow colleges of agriculture to update and rebuild facilities to meet modern needs of students, scientists, and the communities served by colleges of agriculture. Investment in the RFA will also help further attract top-level talent into the U.S. agri-science sector and raise the return on other federal public agricultural research and Extension investments. APLU requests \$500 million in FY2024 to make progress in addressing substantial deferred maintenance infrastructure issues impacting the effectiveness and reach of agricultural sciences.

COMPETITIVE PROGRAMS: Partnerships to Build Capacity in International Agriculture

APLU FY2024 Request: \$10 million

FY2024 PBR = \$N/A; FY2023 = \$10 million; FY2022 = N/A

APLU requests \$10 million in FY2024 for the Partnerships for Capacity in International Agriculture Program. This program would develop critical research and outreach partnerships between land-grant universities, non-land grant colleges of agriculture, cooperating forestry schools, and international partner institutions in other countries. Investments in international agriculture strengthen U.S. standing in global markets and support a culturally competent domestic agricultural workforce. In practice, both knowledge and experience are key to the success of graduating students and professionals in agricultural science, business, and finance.

¹¹ <https://www.aplu.org/library/a-national-study-of-capital-infrastructure-at-colleges-and-schools-of-agriculture-an-update/file>

COMPETITIVE PROGRAMS: International Agricultural Science and Education Competitive Grants

APLU FY2024 Request: \$5 million

FY2024 PBR = \$N/A; FY2023 = \$5 million; FY2022 = N/A

APLU requests \$5 million for International Agricultural Science and Education Competitive Grants in FY2024. Land Grant Universities have a disproportional role in global agricultural science and Extension. This competitive grant program provides support to land-grant universities in the development of domestically beneficial research partnerships and student educational experiences. When the programs were previously funded, during a seven-year period, 106 awards were made to 62 different universities in 38 states with distributed impact. Since 2012, these titles have been authorized but there have been no appropriations for these programs thus limiting the global reach of agricultural sciences.

Bill Language Request: WAIVER AUTHORITY

APLU requests the following language in the FY24 appropriations bill to allow the Secretary of Agriculture to waive the matching requirement for the Specialty Crop Research Initiative (SCRI) and Emergency Citrus Disease Research and Extension (ECDRE) programs authorized in the 2018 Farm Bill: “The Secretary of Agriculture may waive the matching funds requirement under Section 412(g) of the Agricultural Research, Extension, and Education Reform Act of 1998 (7 U.S.C. 7632(g)).

ABOUT THE ASSOCIATION OF PUBLIC AND LAND-GRANT UNIVERSITIES

APLU is a research, policy, and advocacy organization dedicated to strengthening and advancing the work of public universities in the U.S., Canada, and Mexico. With a membership of 251 public research universities, land-grant institutions, state university systems, and affiliated organizations, APLU's agenda is built on the three pillars of increasing degree completion and academic success, advancing scientific research, and expanding engagement. Annually, its 210 U.S. member campuses enroll 4.5 million undergraduates and 1.3 million graduate students, award 1.3 million degrees, employ 1.2 million faculty and staff, and conduct \$48.5 billion in university-based research.