

2025 USDA Explanatory Notes – National Institute of Food and Agriculture

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PREFACE

This publication summarizes the fiscal year (FY) 2025 Budget for the U.S. Department of Agriculture (USDA). Throughout this publication any reference to the “Budget” is in regard to the 2025 Budget, unless otherwise noted. All references to years refer to fiscal year, except where specifically noted. The budgetary tables throughout this document show actual amounts for 2022 and 2023, annualized Continuing Resolution levels for 2024, and the President’s Budget request for 2025. Amounts for 2024 estimated levels include: non-enacted amounts such as Full-Time Equivalent levels, fleet levels, information technology investment levels, recovery levels, transfers in and out, balances available end of year, and obligation levels.

Throughout this publication, the “2018 Farm Bill” is used to refer to the Agriculture Improvement Act of 2018. Most programs funded by the 2018 Farm Bill are funded through 2023. Amounts shown in 2024 and 2025 for most Farm Bill programs reflect those confirmed in the baseline.

Pursuant to the Balanced Budget and Emergency Deficit Control Act of 1985, sequestration is included in the numbers for mandatory programs in 2022, 2023, 2024 and 2025.

In tables throughout this document, amounts equal to zero (0) are displayed as dashes (-). Amounts less than 0.5 and greater than zero are rounded and shown as a zero (0). This display treatment is used to prevent the masking of non-zero amounts that do not round up to one (1).

AGENCY-WIDE**PURPOSE STATEMENT**

Section 7511(f)(2) of the Food, Conservation, and Energy Act of 2008 (FCEA) amended the Department of Agriculture Reorganization Act of 1994 ([7 U.S.C. 6971](#)) by establishing the National Institute of Food and Agriculture (NIFA). On October 1, 2009, all authorities administered by the Administrator of the Cooperative State Research, Education, and Extension Service were transferred to the NIFA Director. NIFA programs propel cutting-edge discoveries from research laboratories to farms, classrooms, communities, and beyond. Through three main federal-funding mechanisms, NIFA supports programs that address key national challenges. NIFA’s mission is to invest in and advance agricultural research, education, and extension to solve societal challenges.

Research and Education Activities

Research and Education programs administered by NIFA are the U.S. Department of Agriculture's (USDA) principal entrée to the university system of the United States for the purpose of conducting agricultural research and education programs as authorized by:

- 1) Hatch Act of 1887, as amended ([7 U.S.C. 361a-361i](#));
- 2) McIntire-Stennis Cooperative Forestry Act of 1962, as amended ([16 U.S.C. 582a et seq.](#));
- 3) Evans Allen Act, as amended ([7 U.S.C. 3222](#) et seq.);
- 4) Competitive, Special, and Facilities Research Grant Act, as amended ([7 U.S.C. 3157](#)) (Note: 7 U.S.C. 450i was transferred to 7 U.S.C. 3157) (the 1965 Act);
- 5) National Agricultural Research, Extension, and Teaching Policy Act (NARETPA) of 1977, as amended ([7 U.S.C. 3101 et seq.](#));
- 6) Small Business Innovation Development Act of 1982 (Pub. L. 97-219), as amended ([15 U.S.C. 638](#));
- 7) SBIR and STTR Extension Act of 2022 (Pub. L. 117-183);
- 8) Section 630 of the Act making appropriations for Agriculture, Rural Development and Related Agencies’ programs for fiscal year ending September 30, 1987, and for other purposes, as made applicable by Section 101(a) of Pub. L. 99-591, 100 Stat. 3341;
- 9) Equity in Educational Land-Grant Status Act of 1994 ([7 U.S.C. 301 note](#)) (the 1994 Act);
- 10) Agricultural Research, Extension, and Education Reform Act of 1998 (Pub. L. 105-185), as amended (AREERA);
- 11) Food, Agriculture, Conservation, and Trade Act of 1990 (Pub. L. 101-624) (FACT Act);
- 12) Farm Security and Rural Investment Act of 2002 (Pub. L. 107-171) (FSRIA);
- 13) Food Conservation, and Energy Act of 2008 (Pub. L. 110-246), as amended (FCEA);
- 14) Agricultural Act of 2014 (2014 Farm Bill, Pub. L. 113-79);
- 15) Agriculture Improvement Act of 2018 (2018 Farm Bill, Pub. L. 115-334);

- 16) Infrastructure Investment and Jobs Act (Pub. L. 117-58);
- 17) American Rescue Plan Act of 2021 (Pub. L. 117-2);
- 18) Inflation Reduction Act of 2022 (Pub. L. 117-169);
- 19) And the Research Facilities Act ([7 U.S.C 390 et seq.](#)).

Through these authorities, the USDA participates with State and other cooperators to encourage and assist the State institutions in agricultural research and education through the State Agricultural Experiment Stations (SAES) of the 50 States and territories; by approved Schools of Forestry; 1890 Land-Grant Institutions and Tuskegee University, West Virginia State College, and Central State University ([7 U.S.C. 321](#) et seq., as amended); 1994 Land-Grant Institutions ([7 U.S.C. 301](#) note, as amended); by Colleges of Veterinary Medicine; and other eligible institutions. Appropriated funds provide Federal support for research and education programs at these institutions.

The State institutions conduct research on the problems continuously encountered in the development of a permanent perpetuating and sustainable agriculture and forestry system, and in the improvement of the economic and social welfare of rural and urban families. Because of differences in climate, soil, market outlets, and other local conditions, each State has distinct problems in the production and marketing of crops and livestock. Farmers, foresters, and people in rural communities in individual States naturally look to their SAES, universities, and colleges for solutions to the State and local problems and request services and solutions to address these problems.

The Department's higher education mission is carried out in strong alliance with States, universities, and the private sector. NARETPA designated USDA as the lead Federal agency for higher education in the food and agricultural sciences. Through NIFA, USDA has implemented that charge with a broad array of initiatives to link teaching, research, and extension; to improve the training of food and agricultural scientists and professionals; and to strengthen the quality of education programs throughout the nation. Section 1417 of NARETPA ([7 U.S.C. 3152](#)), was amended by section 7106 of FCEA to provide eligibility to the University of the District of Columbia to receive grants and fellowships for food and agricultural science education. This program is also subject to provisions found in NARETPA; Pub. L. 97-98; Pub. Food Security Act of 1985 (Pub. L. 99-198); Second Morrill Act of 1890; Act of June 17, 1988, (Pub. L. 100-339); FACT Act; Equity in Educational Land-Grant Status Act of 1994, (Pub. L. 103-382); FAIR Act; AREERA; Pub. L. 106-78, Aviation and Transportation Security Act of November 19, 2001, (Pub. L. 107-71), and National Veterinary Medical Service Act of December 6, 2003, (Pub. L. 108-161) (NVMSA).

Appropriations and additional provisions for research and education activities are authorized under the following Acts:

Hatch Act

Funds under the Hatch Act of 1887 as amended ([7 U.S.C. 361a-361i](#)) are allocated to the State Agriculture Experiment Stations (SAES) of the 50 States, the District of Columbia, Puerto Rico, Guam, the Virgin Islands, Micronesia, American Samoa, and the Northern Mariana Islands for research to promote sound and prosperous agriculture and rural life.

Eligible State institutions are required to submit a Plan of Work to NIFA for approval before Hatch Act funds are distributed. The Hatch Act provides that the distribution of Federal payments to States for fiscal year 1955 shall become a fixed base, and that any sums appropriated in excess of the 1955 level shall be distributed in the following manner:

- 20 percent equally to each State;
- not less than 52 percent to the States as follows: one-half in an amount proportionate to the relative rural population of each State to the total rural population of all States, and one-half in an amount proportionate to the relative farm population of each State to the total farm population of all States;
- not less than 25 percent for multi-State, multi-disciplinary, multi-institutional research activities to solve problems concerning more than one State; and
- 3 percent for the administration of the Act.

Federal funds provided under the Hatch Act to State institutions must be matched with non-Federal funding on a dollar-for-dollar basis. Matching requirements for the insular areas of the Commonwealth of Puerto Rico, the Virgin Islands, Guam, Micronesia, American Samoa, the Northern Mariana Islands, and the District of Columbia are subject to the matching requirements of an amount equal to not less than 50 percent of the formula funds distributed

to each insular area and the District of Columbia as stated in the Hatch Act, as amended by section 7404 of the FCEA. These provisions also state that the Secretary may waive the matching funds requirement of an insular area and the District of Columbia for any fiscal year if the Secretary determines that the government of the insular area or the District of Columbia will unlikely meet the matching requirement for the fiscal year.

Section 7(c) of the Hatch Act allows unexpended funds to be carried over for use during the following fiscal year. In accordance with provisions of AREERA, at least 25 percent of available Hatch Act funds must be used to support multi-State research; States also must expend 25 percent, or two times the level spent in fiscal year 1997 (whichever is less), on activities that integrate cooperative research and extension.

The three percent of funds appropriated under the Hatch Act for administration includes the disbursement of funds and a continuous review and evaluation of the research programs of the SAES supported wholly or in part from Hatch funds. NIFA encourages and assists in the establishment of cooperation within and between the States, and actively participates in the planning and coordination of research programs between the States and the Department at the regional and national levels.

McIntire-Stennis Cooperative Forestry Act

The McIntire-Stennis Cooperative Forestry Assistance Act of 1962 ([16 U.S.C. 582a et seq.](#)) as amended authorizes funding of research in State institutions certified by a State representative designated by the governor of each State. The Act provides that appropriated funds be apportioned among States as determined by the Secretary. The Secretary annually seeks the advice of the Forestry Research Advisory Council (Council) to accomplish efficiently the program purpose. The Council consists of not fewer than sixteen members representing Federal and State agencies concerned with developing and utilizing the Nation's forest resources, the forest industries, the forestry schools of the State-certified eligible institutions, State Agricultural Experiment Stations (SAES), and volunteer public groups concerned with forests and related natural resources. Determination of apportionments follows consideration of pertinent factors including areas of non-Federal commercial forest land, volume of timber cut from growing stock, and the non-Federal dollars expended on forestry research in the State. Section 7412 of Food, Conservation, and Energy Act (FCEA) amended the McIntire-Stennis Act to include 1890 Institutions (as defined in section 2 of AREERA ([7 U.S.C. 7601](#))) as eligible for consideration in these determinations. The Act also provides that payments must be matched by funds made available and budgeted from non-Federal sources by the certified institutions for expenditure on forestry research. Section 7604 of the 2018 Farm Bill (Pub. L. 115-334) amended the McIntire-Stennis Cooperative Forestry Assistance Act to include 1994 Institutions (as defined in section 532 of the Equity in Educational Land-Grant Status Act of 1994 ([7 U.S.C. 301](#)) note; Pub. L. 103-382) that offer an associate degree or a baccalaureate degree in forestry.

Section 7101 of the 2014 Farm Bill (Pub. L. 113-79) allowed eligible State institutions to declare their intention not to be considered a cooperating forestry school, and to alternatively be considered as a Non-Land-Grant College of Agriculture. Such a declaration remained in effect until September 30, 2018. In accordance with Section 7102 of the 2018 Farm Bill, cooperating forestry schools will no longer have to opt out of that status to be considered as Non-Land-Grant Colleges of Agriculture (NLGCAs) because the definition of a NLGCA no longer excludes the cooperating forestry schools.

Research at 1890 Institutions (Evans-Allen Program)

Section 1445 of NARETPA; Food and Agriculture Act of October 28, 1978, (Pub. L. 95-547); and subject to provisions of Agriculture and Food Act of 1981 (Pub. L. 97-98); Food Security Act of 1985 (Pub. L. 99-198); FACT Act; FAIR Act; AREERA; FSRIA; FCEA; Section 7129 of the 2014 Farm Bill (Pub. L. 113-79), and Section 7115 of the 2018 Farm Bill (Pub. L. 115-334), authorizes support of continuing agricultural research at colleges eligible to receive funds under the Act of August 30, 1890, including Tuskegee University.

The general provisions section 753 of Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2002 (Pub. L. 107-76) makes West Virginia State College eligible to receive funds under this program. Section 7129 of the 2014 Farm Bill makes Central State University eligible to receive funds under this program beginning in fiscal year 2016. Section 7115 of the 2018 Farm Bill establishes a minimum additional funding amount for eligible entities in the fiscal years following certain eligible entities' qualification should the funding level increase by \$3 million.

If there are insufficient funds appropriated for Section 1445 (or Section 1444) to continue the minimum additional funding amounts for eligible institutions, the provision provides for a reduction in allocations made to eligible institutions. Eligible State institutions are required to submit a Plan of Work to NIFA for approval before these formula funds are distributed. The agricultural research programs at the 1890 Land-Grant Colleges and Universities are designed to generate new knowledge which will assist underprivileged people in rural areas and small farmers to obtain a higher standard of living. Therefore, there is a high concentration of research effort in the areas of small farms, sustainable agriculture, rural economic development, human nutrition, rural health, and youth and elderly.

The Act allows 3 percent for administrative expenses by the Secretary. Distribution of payments made available under section 2 of the 1965 Act for fiscal year 1978 are a fixed base and sums in excess of the 1978 level are to be distributed as follows, unless the funding amount is increased by \$3 million in particular fiscal years, in which case Section 7115 of the 2018 Farm Bill includes additional directives regarding allocation of that increase:

- 20 percent equally to each State;
- 40 percent in an amount proportionate to the rural population of the State in which the eligible institution is located to the total rural population of all States in which eligible institutions are located, as determined by the last preceding decennial census current at the time each such additional sum is first appropriated; and
- the balance shall be allotted among the eligible institutions in the proportion that the farm population of the State in which the eligible institution is located to the total farm population of all the States in which eligible institutions are located, as determined by the last preceding decennial census current at the time each such additional sum is first appropriated.

Section 1445(a)(2) of NARETPA ([7 U.S.C. 3222\(a\)\(2\)](#)), as amended by section 7122 of FCEA requires that funds appropriated for this program be not less than 30 percent of the Hatch Act appropriation. Section 1445(a) allows unexpended funds to be carried over for use during the following fiscal year. Section 1449 of NARETPA ([7 U.S.C. 3222d](#)), requires that Federal funds be matched by the State from non-Federal sources. For fiscal year 2007 and each fiscal year thereafter, not less than 100 percent of formula funds to be distributed must be matched. The Secretary of Agriculture may waive the matching funds requirement above the 50 percent level for any fiscal year for an eligible institution of a State if the Secretary determines the State will be unlikely to satisfy the matching requirement. Allotments to Tuskegee University and Alabama A&M University shall be determined as if each institution were in a separate State.

Payments to 1994 Institutions (Tribal Colleges Education. Equity)

The 1994 Act ([7 U.S.C. 301 note](#)) authorizes the use of funds to benefit those entities identified as the 1994 Land Grant Institutions. Funds are distributed on a formula basis and may be used to support teaching programs in the food and agricultural sciences in the targeted need areas of: 1) curricula design and instructional materials development; 2) faculty development and preparation for teaching; 3) instruction delivery systems and strategic partnerships; 4) student experimental learning; 5) equipment and instrumentation for teaching; and 6) student recruitment and retention.

Section 7402 of FCEA amended section 532 of the 1994 Act by adding Ilisagvik College. Section 7402 of the 2014 Farm Bill (Pub. L. 113-79) amended section 532 of the 1994 Act by adding College of the Muscogee Nation and Keweenaw Bay Ojibwa Community College, effective October 2014. Also, FCEA amended section 534 to authorize that funds payable to a 1994 Institution be withheld and redistributed to other 1994 Institutions if the Institution declines to accept funds or fails to meet the accreditation requirements of section 533. Section 7502 of the 2018 Farm Bill (Pub. L. 115-334) amended section 532 of the 1994 Act by updating eligible institutions' names and adding Red Lake Nation College.

Education Grants for 1890 Institutions (Capacity Building Grants)

Pursuant to 1417(b)(4) of NARETPA, this program stimulates the development of high-quality teaching, research, and extension programs at the 1890 Land-Grant Institutions and Tuskegee University, West Virginia State College, and Central State University (per Section 7129 of the 2014 Farm Bill (Pub. L. 113-79)). Section 7107 of FCEA amended section 1417(b)(4) of NARETPA ([7 U.S.C. 3152\(b\)\(4\)](#)) to expand extension capacity building, as well as teaching and research. This competitive program is designed to strengthen institutional teaching, research, and extension capacities through cooperative programs with Federal and non-Federal entities and achieve three major goals: 1) Advancing the cultural diversity of the food and agricultural sciences scientific and professional workforce

by attracting and educating more students from underrepresented groups; 2) Strengthen linkages among the 1890 Institutions, other colleges and universities, USDA, or other Federal agencies, and private industry; 3) Enhance and strengthen the quality of teaching, education, research, and extension programs at the 1890 Institutions to establish them as full partners in the U.S. food and agricultural sciences higher education system. Projects or grants support development activities that include, but are not limited to: curricular design and materials development, faculty preparation and enhancement for education, development and use of alternative methods like mobile classrooms/laboratories, student recruitment and retention services, acquisition and instructional laboratory and classroom equipment, student experiential learning, studies and experimentation, centralized research support systems, extension support systems, and technology delivery systems, to respond to identified State, regional, national, or international educational needs in the food and agricultural sciences, or rural economic, community, and business development. In 2023 the program has emphasized the addition of building artificial intelligence (AI), Machine Learning Capacity opportunities in cooperation with the USDA-NIFA funded AI Institutes: AI Institute for Future Agricultural Resilience, Management, and Sustainability and AI Institute for Next Generation Food Systems.

Scholarships at 1890 Institutions

Section 1446 of the 2018 Farm Bill (Pub. L. 115-334) provides mandatory funding in the enacted amount of \$40 million, until expended, to carry out this program, authorized by [7 U.S.C. 3222a](#). The purpose of the program is to award grants to each of the eligible 1890 Land-Grant Institution, including Tuskegee University. The general provisions, section 753, of Pub. L. 107-76 designated West Virginia State College as eligible to receive funds under any Act of Congress authorizing funding to 1890 Institutions. Section 7129 of the 2014 Farm Bill (Pub. L. 113-79) designates Central State University as an eligible 1890 Land-Grant Institution. The grants are for awarding scholarships to individuals who have been accepted for admission to such college or university; will be enrolled at such college or university not later than one year after the date of such acceptance; and intend to pursue a career in the food and agricultural sciences, including a career in agribusiness, energy, and renewable fuels; or financial management.

Centers of Excellence at 1890 Institutions

The Centers are designed to supply the country with a globally diverse workforce and support critical global development needs, thereby supporting U.S. national security, address trans-boundary research and education challenges including climate change, conservation, biodiversity, and development, or strengthen teaching curricula and student recruitment. The 1890 Institutions have a long history of working on these topics but the small size of their individual programs and lack of sufficient investment in infrastructure have hampered their contributions. These Centers help the institutions increase their effectiveness in serving the nation. Section 1673 of the Food, Agriculture, Conservation and Trade Act of 1990, as amended by Section 7213 of the 2018 Farm Bill ([7 U.S.C. 5926\(d\)](#)) authorizes funding for the recognition of Centers of Excellence at 1890 Institutions to focus on Student Success and Workforce Development; Nutrition, Health, Wellness, and Quality of Life; Farming Systems, Rural Prosperity, and Economic Sustainability; Global Food Security and Defense; Natural Resources, Energy, and Environment; and Emerging Technologies.

Education Grants for Hispanic-Serving Institutions

Pursuant to section 1455 of NARETPA ([7 U.S.C. 3241](#)), this program is the foundation for USDA efforts to better serve underserved students at Hispanic-Serving Institutions, and to prepare them for careers in agricultural science and agribusiness. This competitive program expands and strengthens academic programs in the agricultural sciences, natural resources, forestry, veterinary medicine, home economics, and disciplines allied closely to the food and agriculture production and delivery systems at Hispanic-serving colleges and universities, including two-year community colleges that have at least 25 percent Hispanic enrollment. Section 7128 of FCEA amended section 1455 of NARETPA to require that all grants made under this program be awarded on a fully competitive basis and removed the requirement for consortia in subsection (b)(1). Funds may support: 1) curricula design, degree programs, materials development, and library resources; 2) faculty preparation and enhancement for teaching; 3) instruction delivery systems; 4) scientific instrumentation for teaching; 5) student experiential learning; and 6) student recruitment and retention.

Education Grants for Alaska Native and Native Hawaiian-Serving Institutions

The program, originally authorized by section 759 of Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2000, Pub. L. 106-78, and re-designated as section 1419B of NARETPA ([7 U.S.C. 3156](#)), is aimed at recruiting, supporting, and educating minority scientists and professionals, and advancing the educational capacity of Native-serving institutions. Funds may be used to support projects in the targeted areas of: 1) enhancing educational equity for under-represented students; 2) strengthening educational capacities, including libraries, curriculum, faculty, scientific instrumentation, instruction delivery systems, and student recruitment and retention; 3) attraction and retention of undergraduate and graduate students; and 4) cooperative initiatives to maximize the development of resources such as faculty, facilities and equipment to improve teaching programs. Additionally, to support the activities of consortia of Native Hawaiian serving Institutions to enhance educational equity for underrepresented students, section 7112 of FCEA permits consortia to designate fiscal agents for the members of the consortia and to allocate among the members funds made available under this program. Funds are awarded on a competitive basis under the program.

Research Grants for 1994 Institutions

The 1994 Act ([7 U.S.C. 301](#) note), as amended by the 2014 Farm Bill (Pub. L. 113-79) and the 2018 Farm Bill (Pub. L. 115-334), authorizes a competitive research grants program for institutions designated as 1994 Institutions. The program allows scientists at the legislatively eligible 1994 Institutions to participate in agricultural research activities that address tribal, national, and multi-State priorities. Pursuant to Section 7402 of the 2014 Farm Bill (Pub. L. 113-79), 1994 Institutions may work with the Agricultural Research Service or at least 1 of the other land-grant colleges or universities, a Non-Land-Grant College of Agriculture, or cooperating forestry schools eligible to receive funds under McIntire-Stennis Cooperative Forestry Act; ([7 U.S.C. 3103](#)).

Capacity Building for Non Land-Grant Colleges of Agriculture (NLGCA) Institutions

Section 7138 of the FCEA ([7 U.S.C. 3319j](#)) established this competitively awarded grants program to assist the NLGCA Institutions in maintaining and expanding their capacity to conduct education, research, and outreach activities relating to agriculture, renewable resources, and other similar disciplines. Section 7101 of the 2014 Farm Bill (Pub. L. 113-79) defined eligibility for this program and a certification process was implemented accordingly. Section 7102 of the 2018 Farm Bill (Pub. L. 115-334) amended the definition of NLGCA to clarify that eligible entities must offer a baccalaureate or higher degree in the study of agricultural sciences, forestry, or both in any area of study specified in [7 U.S.C. 3103\(14\)\(A\)\(ii\)](#). The latest definition of NLGCA Institutions includes Hispanic-serving agricultural colleges or universities and McIntire-Stennis colleges and universities.

NLGCA Institutions may use the funds: (a) to successfully compete for funds from Federal grants and other sources to carry out educational, research, and outreach activities that address priority concerns of national, regional, State, and local interest; (b) to disseminate information relating to priority concerns to interested members of the agriculture, renewable resources, and other relevant communities, the public, and any other interested entity; (c) to encourage members of the agriculture, renewable resources, and other relevant communities to participate in priority education, research, and outreach activities by providing matching funding to leverage grant funds; and (d) through: (1) the purchase or other acquisition of equipment and other infrastructure (not including alteration, repair, renovation, or construction of buildings); (2) the professional growth and development of the faculty of the NLGCA Institution; and (3) the development of graduate assistantships. As a program priority, applications that address the national challenge to increase the number and diversity of students entering food and agriculture-related science, technology, engineering, and mathematics (STEM) disciplines are encouraged.

New Beginning for Tribal Students

Section 1450 of the National Agricultural Research, Extension and Teaching Policy Act of 1977 ([7 U.S.C. 3222e](#)), as added by section 7120 of the 2018 Farm Bill (Pub. L. 115-334) established this program to make competitive grants to land-grant colleges and universities to provide identifiable support specifically targeted for Tribal students, through recruiting, tuition and related fees, experiential learning, and student services (including tutoring, counseling, academic advising, and other student services that would increase the retention and graduation rate of Tribal students enrolled at the land-grant college or university, as determined by the Secretary). All grantees are required to provide a 100 percent match in the form of cash or in-kind contributions. The program includes an annual limitation of \$500,000 that may be awarded to Institutions located in the same State.

Grants for Insular Areas

Funds are awarded for grants to insular areas of the Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, the Northern Mariana Islands, Micronesia, the Marshall Islands, or the Republic of Palau for resident instruction and distance education as follows:

Resident Instruction and Agriculture and Food Science Facilities and Equipment Grants for Institutions of Higher Education in Insular Areas

Pursuant to section 1491 of NARETPA ([7 U.S.C. 3363](#)) and ([7 U.S.C. 3222b-2](#)), as amended, is designed to enhance teaching and extension programs in food and agricultural sciences that are in the insular areas. Funds may be used to enhance programs in agriculture, natural resources, forestry, veterinary medicine, home economics, and disciplines closely allied to the food and agriculture production and delivery systems. Funds also may be used to acquire, alter, or repair facilities or relevant equipment necessary for conducting agricultural research. Funds are awarded on a competitive basis under the program.

Distance Education Grants Program for Institutions of Higher Education in Insular Areas

Pursuant to section 1490 of NARETPA ([7 U.S.C. 3362](#)), as amended, is designed to strengthen the capacity of insular area institutions. Funds may be used to enhance the capability of the institutions to carry out collaborative distance food and agricultural education programs using digital network technologies. Funds are awarded on a competitive basis under the program.

Agriculture and Food Research Initiative

Subsection (b) of the 1965 Act ([7 U.S.C. 3157\(b\)](#)) as amended by section 7406 of FCEA (Pub. L. 110-246), section 7404 of the 2014 Farm Bill (Pub. L. 113-79), and section 7504 of the 2018 Farm Bill (Pub. L. 115-334) establishes an Agriculture and Food Research Initiative (AFRI) to make competitive grants for fundamental and applied research, extension, and education to address food and agricultural sciences (as defined under section 1404 of NARETPA). The Secretary is authorized to award competitive grants to State agricultural experiment stations, colleges and universities, university research foundations, other research institutions and organizations, Federal agencies, national laboratories, private organizations or corporations, individuals, and any group consisting of two or more of these entities. Grants will be awarded to address critical issues in United States agriculture in areas that address food, and nutrition security, expanding markets for producers, indigenous traditional ecological knowledge, climate change, and equity for underserved producers. Addressing these critical issues will engage scientists and educators with expertise in:

- Plant health and production and plant products;
- Animal health and production and animal products;
- Food safety, nutrition, and health;
- Bioenergy, natural resources, and environment;
- Agriculture systems and technology; and
- Agriculture economics and rural communities.

Of the funds made available for research, no less than 60 percent shall be used for fundamental research and no less than 40 percent shall be used for applied research. No less than 30 percent of the amount allocated for fundamental research shall be made available to make grants for research to be conducted by multidisciplinary teams and no more than 2 percent may be used for equipment grants. In addition, awards may be made to assist in the development of capabilities in the agricultural, food, and environmental sciences (e.g., new investigator and strengthening awards). In accordance with section 7404 of the 2014 Farm Bill (Pub. L. 113-79), entities established under a commodity promotion law, or a state commodity board (or other equivalent State entity) may directly submit to the Secretary for consideration proposals for requests for applications that specifically address issues related to the priority areas. Accepted topics are incorporated, as appropriate, into AFRI requests for applications. Eligible applicants include State agricultural experiment stations, colleges and universities, university research foundations, other research institutions and organizations, Federal agencies, national laboratories, private organizations or corporations, individuals, and any group consisting of two or more of these eligible entities.

To the maximum extent practicable, NIFA, in coordination with the Under Secretary for Research, Education, and Economics (REE), will make awards for high priority research, education, and extension, taking into consideration, when available, the determinations made by the National Agricultural Research, Extension, Education, and Economics Advisory Board. Integrated research, education and extension activities under this program are authorized pursuant to the authority found in section 406 of AREERA ([7 U.S.C. 7626](#)) and at an amount no less than 30 percent of the funds made available under this authority.

Veterinary Medicine Loan Repayment (VMLRP)

The program, authorized by section 1415A of NARETPA ([7 U.S.C. 3151a](#)) as amended, provides for a loan repayment program for a specified payment amount of qualifying educational loans of veterinarians for geographical areas that have a shortage of veterinarians; and areas of veterinary practice that the Secretary determines have a shortage of veterinarians, such as food animal medicine, public health, epidemiology, and food safety. Section 7105 of FCEA amended section 1415A of NARETPA ([7 U.S.C. 3151a](#)) to require NIFA to give priority to agreements with veterinarians for the practice of food animal medicine in veterinarian shortage situations. Funds are awarded on a competitive basis under the program.

Since 2011, VMLRP has received over 2,000 applications from food animal veterinarians for assistance with educational debt repayment in return for service in veterinary shortage areas designated by Federal or State Animal Health Officials. Over the twelve-year period, the Program has awarded 765 service agreements through a competitive process matching the most meritorious applications with shortage areas. These veterinarians provide services for animals involved in US food and fiber production, which includes not only cattle, small ruminants, swine, poultry, and aquatic species, but also animals such as honeybees, equids, camelids and cervids. Food animal veterinarians provide public practice services in government agencies and academic institutions, ensuring food safety and security through epidemiologic and other public health related activities. The VMLRP program receives approximately \$10M in appropriated funding each year to fund loan repayments. To qualify for the program, food animal veterinarians must have graduated from an American Veterinary Medical Association (AVMA)-accredited veterinary medical college and commit to serving for three years in a shortage area. Awards are for amounts not exceeding \$25,000 per year, for each of the three years, and can be renewed.

Veterinary Services Grant Program

The Veterinary Services Grant Program helps mitigate food animal veterinary service shortages in the United States through two different project types. Education, Extension, and Training (EET) grants have a three-year duration and up to \$250,000 in funding for education and Extension activities that provide current and future veterinarians, veterinary students and veterinary technicians with specialized skills and practices by expanding educational programs at American Veterinary Medical Association (AVMA)-accredited schools and professional organizations. Rural Practice Enhancement (RPE) grants have a three-year duration and funds directly support veterinary clinics and practices by providing up to \$125,000 for the purchase of equipment to enhance food animal veterinary services in a designated veterinary shortage situation area. Appropriation to the VSGP for fiscal year 2023 was \$3.8 million.

The program, authorized by section 1415B of NARETPA as amended, provides for a competitive grants program to develop, implement, and sustain veterinary services. Program activities will substantially relieve veterinarian shortage situations, facilitate private veterinary practices engaged in public health activities, or support the practices of veterinarians who are providing or have completed providing services under agreement under the Veterinary Medicine Loan Repayment Program. Section 7106 of the 2018 Farm Bill (Pub. L. 115-334) amended section 1415B of NARETPA ([7 U.S.C. 3151b](#)) to give priority to grant awards for programs or activities with a focus on the practice of food animal medicine.

Continuing Animal Health and Disease Research Program

Section 1433 of NARETPA, as amended by Pub. L. 113-79 and 115-334 ([7 U.S.C. 3195 et seq.](#)), provides for support of livestock and poultry disease research in accredited schools or colleges of veterinary medicine or SAES that conduct animal health and disease research. These funds provide support for new research initiatives and enhance research capacity leading to improved animal health, reduced use of antibacterial drugs and improved safety of foods of animal origin. In accordance with amendments made by Section 7111 of the 2014 Farm Bill (Pub. L. 113-79), allocated funds may only be used to meet the expenses of conducting animal health and disease research,

publishing and disseminating the results of such research, and contributing to the retirement of employees subject to the Act of March 4, 1940 ([7 U.S.C. 331](#)); for administrative planning and direction; and to purchase equipment and supplies necessary for conducting research described above.

These funds shall be distributed as follows:

- 4 percent shall be retained by the Department of Agriculture for administration, program assistance to the eligible institutions, and program coordination;
- 48 percent shall be distributed in an amount proportionate to the value of and income to producers from domestic livestock, poultry, and aquaculture in each State to the total value of and income to producers from those same species in all the States; and
- 48 percent shall be distributed in an amount proportionate to the animal health research capacity of the eligible institutions in each State to the total animal health research capacity in all the States.

Eligible institutions must provide non-Federal matching funds in States receiving annual amounts in excess of \$100,000 under this authorization. In the event the annual appropriation for this program exceeds \$5 million in a fiscal year, Section 7111 of the 2014 Farm Bill authorizes a new competitive grant program under this authority which would be implemented to address the critical needs of animal agriculture by funding eligible entities to conduct research to promote food security, and on the relationship between animal and human health, and to develop and disseminate to the public tools and information based on the research conducted above and sound science.

Supplemental and Alternative Crops

The SAC grant program supports projects that lead to expanded adaptation and increased acreage in the U.S. of canola grown for oil and industrial hemp grown for value added products. Such crops are important to U.S. agriculture in that these can provide new and profitable cropping options in response to low commodity prices and changes in consumer demand for new agricultural-based products. The U.S. does not produce enough canola oil to meet its annual domestic consumption needs. Modern canola has major uses in healthy human foods and animal feeds, as a natural pest control when used as a cover crop, and as a feedstock in industrial chemical manufacture and biofuel production. Historically, hemp has been grown for its essential oil, seed, and fiber. Hemp cultivation offers a range of environmental benefits, including carbon storage, erosion prevention, increased biodiversity, low to no pesticide requirement, and breaking disease cycles in crop rotation. Revival of industrial hemp cultivation requires intensification of crop improvement and marketing research to address the basic and unique challenges facing the emerging U.S. hemp industry. The purpose of this integrated research and extension program is to adapt these multiple-purpose crops to diverse growing regions in the U.S., so that domestic canola oil and industrial hemp production can be significantly increased and be profitable nationwide. Such efforts require strategically designed, region-based research approaches and effective communication of useful information and transfer of technologies to users as rapidly as possible. SAC supports research and Extension in conventional and organic production systems.

Pursuant to section 1473D of NARETPA ([7 U.S.C. 3319d](#)) grants are awarded to conduct fundamental and applied research related to the development of new commercial products derived from natural plant material for industrial, medical, and agricultural applications. Funds are awarded on a competitive basis under the program.

Multicultural Scholars, Graduate Fellowship, and Institution Challenge Grants

Funds are awarded for grants and fellowships for food and agricultural sciences education as follows:

Higher Education Multicultural Scholars Program

Section 1417(b)(5) of NARETPA ([7 U.S.C. 3152\(b\)\(5\)](#)) provides competitive grants to institutions to conduct scholarship programs that attract students from underrepresented groups to prepare them for careers in the food and agricultural sciences for careers in the food and agricultural science.

Higher Education National Needs Graduate Fellowship Grants

Pursuant to section 1417(b)(6) of NARETPA ([7 U.S.C. 3152\(b\)\(6\)](#)) are competitive awards to provide fellowship grants to colleges and universities to stimulate the development of food and agricultural scientific expertise in targeted areas of national need specifically to the recruitment and training of new graduate students for critical food

and agricultural scientific positions. Awards to institutions are prioritized to support at least one of the following Targeted Expertise Shortage Areas: 1) animal and plant production; 2) forest resources; 3) agricultural educators and communicators; 4) agricultural management and economics; 5) food science and human nutrition; 6) sciences for agricultural biosecurity; and 7) training in integrative biosciences for sustainable food and agricultural systems.

Institution Challenge Grants (Higher Education Challenge (HEC) Grants Program)

Pursuant to section 1417(b)(1) of NARETPA ([7 U.S.C. 3152\(b\)\(1\)](#)) supports competitive grants to strengthen institutional capacities, including curriculum, faculty, scientific instrumentation, instruction delivery systems, and student recruitment and retention, to respond to identified State, regional, national, or international educational needs in the food and agricultural sciences, or in rural economic, community, and business development Projects supported by the Higher Education Challenge Grants Program will: (1) address a state, regional, national, or international educational need; (2) involve a creative or non-traditional approach toward addressing that need that can serve as a model to others; (3) encourage and facilitate better working relationships in the university science and education community, as well as between universities and the private sector, to enhance program quality and supplement available resources; and (4) result in benefits that will likely transcend the project duration and USDA support.

Secondary and 2-year Post-Secondary Education

This program, authorized by section 1417(j) of NARETPA as amended ([7 U.S.C. 3152\(j\)](#)), is designed to promote and strengthen secondary education in agribusiness and agriscience, and to increase the number and/or diversity of young Americans pursuing college degrees in the food and agricultural sciences. The intent of the program is to encourage teachers creatively to incorporate elements of agriscience and agribusiness into secondary education programs. Section 7109 of FCEA amended section 1417(j) of NARETPA to include support for current agriculture in the classroom programs for grades K-12. Proposals address targeted need areas of curricula design and instructional materials development; faculty development and preparation for teaching; career awareness; linkages between secondary, 2-year post-secondary, and institutions of higher learning; or education activities promoting diversity in students seeking degrees in agribusiness and agriscience.

Aquaculture Centers

Pursuant to section 1475(d) of NARETPA ([7 U.S.C. 3322\(d\)](#)), funding supports aquaculture research, development, demonstration, and extension education to enhance viable and profitable U.S. aquaculture production to benefit consumers, producers, service industries, and the American economy. Funds are awarded on a competitive basis through a regional system.

NIFA funds five Regional Aquaculture Centers, that encourage and facilitate cooperative and collaborative research and extension education programs in aquaculture having regional or national application. Center programs are an exemplary model for public-private coordination and industry engagement and serve to complement and strengthen existing research and extension educational programs provided by USDA and other public institutions.

Projects that are developed and funded by the Regional Centers are based on industry needs in partnership with industry representatives and are designed to directly impact commercial aquaculture development and expansion in all states and territories. The Centers are organized to take advantage of the best aquaculture science, education skills, and facilities in the United States. Center programs ensure effective coordination and a region-wide, team approach to projects jointly conducted by research, extension, government, and industry personnel. Inter-agency collaboration and shared funding are strongly encouraged.

Sustainable Agriculture Research and Education (SARE)

The purpose of the SARE program is to encourage research and extension projects designed to increase knowledge concerning agricultural production systems that: 1) Maintain and enhance the quality and productivity of the soil; 2) Conserve soil, water, energy, natural resources, and fish and wildlife habitat; 3) Maintain and enhance the quality of surface and ground water; 4) Protect the health and safety of persons involved in the food and farm system; 5) Promote the well-being of animals; and 6) Increase employment opportunities in agriculture.

Funds are competitively awarded for grants for sustainable agriculture and education as follows:

Sections 1621 and 1622 of the FACT Act ([7 U.S.C. 5811](#) and [7 U.S.C. 5812](#) respectively) work to increase knowledge and help farmers and ranchers adopt practices that are productive, profitable, environmentally sound, and good for people and communities. Grants are awarded by four regional host institutions working with their administrative councils for projects that address crop and livestock production and marketing, stewardship of natural resources, economics, and quality of life.

Funds are also used to disseminate information about sustainable agricultural practices. The program supports the development of technical guides and handbooks plus education and training ([7 U.S.C. 5831](#) and [7 U.S.C. 5832](#)) for Cooperative Extension System agents, and other university, private sector and agency agricultural professionals engaged in the education and transfer of technical information concerning sustainable agriculture. Funds are also used for statewide planning of sustainable agriculture programs.

Farm Business Management

Section 1672D of the FACT Act ([7 U.S.C. 5925f](#)), as amended by Section 7211 of the 2018 Farm Bill (Pub. L. 115-334) authorizes a competitive program to make research and extension grants for the purpose of improving the farm management knowledge and skills of agricultural producers by maintaining and expanding a national, publicly available farm financial management database to support improved farm management.

NIFA provides funds that improve the farm management knowledge and skills of agricultural producers by maintaining and expanding a national, publicly available farm financial management database. Priorities within the program include: 1) Maintaining and expanding the already established national, publicly available farm financial management database to support improved farm management knowledge and skills. For producers of a variety of crops and livestock throughout multiple regions of the United States; and 2) Establishing or expanding collaborative farm management educational programs with farm organizations or associations that will contribute data to the existing national farm financial management and benchmarking database to improve the farm management knowledge and skills of all agricultural producers.

Sun Grant Program

Section 7526 of FCEA ([7 U.S.C. 8114](#)), as amended by section 7516 of the 2014 Farm Bill (Pub L. 113-79) and reauthorized by section 7414 of the 2018 Farm Bill (Pub. L. 115-334), established this competitive program to enhance national energy through the development, distribution, and implementation of biobased energy technologies. The program provides a consortium of universities made up of a university from each of the five Sun Grant regions and subcenter region with a grant to support a North-Central, Southeastern, South-Central, Western, and Northeastern Sun Grant Center and a Western Insular Pacific Subcenter. A Sun Grant Center or Subcenter will use 75 percent of grant funds to provide competitive grants within each region that are multi-institutional and integrated, multistate research, Extension, and education programs on technology development and technology implementation, and address bioenergy, biomass, or bioproducts research priorities. Through biobased energy and product technologies, activities are supported that promote diversification, and the environmental sustainability of, agricultural production in the United States, and economic diversification in rural areas of the United States. Funds are also used to enhance the efficiency of bioenergy and biomass research and development programs through improved coordination and collaboration among USDA, Department of Energy, and land-grant colleges and universities.

Research Equipment Grants (EGP)

Section 1462A of the National Agricultural Research, Extension and Teaching Policy Act of 1977 ([7 U.S.C. 3310](#)), as added by section 7126 of the 2018 Farm Bill (Pub. L. 115-334) established this program for competitive grants to eligible institutions for the acquisition of special purpose scientific research equipment for use in the food and agricultural sciences programs of eligible institutions. Grants may not exceed \$500,000.

The program seeks to strengthen the quality and expand the scope of fundamental and applied research at eligible institutions, by providing them with opportunities to acquire one major piece of equipment/instrument that support their research, training, and extension goals and may be too costly and/or not appropriate for support through other NIFA grant programs. The program emphasizes shared-use instrumentation that will enhance the capabilities of researchers, educators, and extension agents both within and outside the proposing organization. An instrument acquired with support from the EGP program is expected to be fully operational by the end of the award period.

Projects supported by EGP should demonstrate institutions' commitment to undertake the responsibility of maintaining and operating the instrument for the benefit of a community of users engaged in research, training, and/or extension.

Alfalfa Seed and Alfalfa Forage Systems Research Program (AFRP)

The AFRP is an integrated research and extension program that supports technology transfer to improve overall agricultural productivity, profitability, and conservation of natural resources through conventional and organic alfalfa seed and forage production systems. AFRP encourages applicants to establish interdisciplinary and multi-location regional research and extension networks to address national priorities or regional science needs of the U.S. alfalfa industry. By bringing together expertise across multiple university, federal agency, and industry organizations and states, AFRP projects seek to enhance the effectiveness of limited state, federal, and industry resources and to produce greater long-lasting impacts.

The authority for this program is contained in [7 U.S.C. 5925\(d\)\(8\)](#): High-priority research and extension initiatives as amended by Section 7209 of the Agricultural Improvement Act of 2018 (2018 Farm Bill).

Minor Crop Pest Management (IR-4)

The Minor Crop Pest Management Program - Interregional Research Project #4 (IR-4) is authorized under the Competitive, Special, and Facilities Research Grant Act, ([7 U.S.C. 3157\(e\)](#)). The IR-4 Program provides expert assistance for the development and registration of crop protection products needed for minor agricultural use and use on specialty crops. For the past 57 years, the program has facilitated cooperation between producers, grower organizations, state Cooperative Extension Services, land-grant universities, and federal agencies to ensure the availability of safe, effective, and economical pest management tools for specialty crops, minor crops, and minor uses.

The purpose of the IR-4 program is to enable the availability of safe, effective, and economical pest management products for growers of specialty crops and for minor agricultural uses. The crop protection industry cannot justify the costs associated with the research, development, and registration of crop protection products for these uses due to small market size and limited sales potential. The IR-4 program provides the assistance needed to ensure that new and more effective crop protection products are tested and registered for these uses. This requires effective collaborations between federal science agencies, federal regulatory agencies, crop producers, the crop protection industry, and land-grant colleges and universities.

Per statute, the overarching goals and objectives of the IR-4 program are to assist in the collection of residue and efficacy data in support of the registration or reregistration of pesticides for minor agricultural use and for use on specialty crops (as defined in section 3 of the Specialty Crops Competitiveness Act of 2004 ([7 U.S.C. 1621 note](#)), under the Federal Insecticide, Fungicide, and Rodenticide Act ([7 U.S.C. 136 et seq.](#)); and tolerances for residues of minor use chemicals in or on raw agricultural commodities under sections 346a and 348 of title 21.

The IR-4 program provides support for efforts to develop reduced-risk products, bio-pesticides, and other chemicals with characteristics that are deemed lower risk to humans, non-target organisms, and the environment. In addition, the program concentrates on internal processes that reduce the time needed to complete successful regulatory packages.

Agricultural Genome to Phenome Initiative

Section 1671 of the Food, Agriculture, Conservation, and Trade Act of 1990 ([7 U.S.C. 5924](#)), as amended by section 7208 of the 2018 Farm Bill (Pub. L. 115-334) authorizes a program for competitive awards to build on genomic research and expand knowledge concerning genomes and phenomes of crops and animals of importance to the agriculture sector of the United States. The National Institute of Food and Agriculture's Agricultural Genome to Phenome Initiative (AG2PI) is intended to: 1) Study agriculturally significant crops and animals in production environments to achieve sustainable and secure agricultural production; 2) Ensure that current gaps in existing knowledge of agricultural crop and animal genetics and phenomics are filled; 3) Identify and develop a functional understanding of relevant genes from animals and agronomically relevant genes from crops that are of importance to the agriculture sector of the United States; 4) Ensure future genetic improvement of crops and animals of importance to the agriculture sector of the United States; 5) Study the relevance of diverse germplasm as a source of unique

genes that may be of importance in the future; 6) Enhance genetics to reduce the economic impact of pathogens on crops and animals of importance to the agriculture sector of the United States; and 7) Disseminate findings to relevant audiences.

The priorities of this program are to:

- 1) Promote effective collaborations across academic disciplines by integrating diverse perspectives and expertise through team science and communication.
- 2) Develop models connecting traits such as yield, feed conversion efficiency, production efficiency and nutritional quality with environmental variability, genetics, and climate.
- 3) Employ common data architectures across crop and animal systems consistent with FAIR data principles (<https://www.go-fair.org/fair-principles/>).
- 4) Engineer novel hardware, computing, and information systems to improve and democratize acquisition, interpretation, and analysis of large datasets of high periodicity imagery, spectra, phenotypes, genotypes and accompanying metadata.
- 5) Study the potential relevance of diverse germplasm as a source of unique genes that may be of importance in the future genetic improvement of crops and animals of importance to the agriculture sector of the United States.
- 6) Improve the quality and availability of crop and animal genetic resources that may reduce the economic impacts of climate change on the agriculture sector of the United States

Laying Hen and Turkey Research Program

Section 1672 of the Food, Agriculture, Conservation, and Trade Act of 1990 ([7 U.S.C. 5925\(d\)\(5\)](#)) authorized competitive grants to support research projects to improve efficiency and sustainability of laying hen and turkey production. The Laying Hen and Turkey Research Program will support one or more research projects for improving the efficiency and sustainability of laying hen and turkey production through integrated collaborative research and technology transfer.

Emphasis in one or more of the following priority areas is required:

- 1) Disease prevention, including vaccine development and administration, diagnostics and early detection, disease resistance, and reducing pathogen transmission.
- 2) Antimicrobial resistance, including alternatives to antimicrobials, such as probiotics or prebiotics; antimicrobial technologies; and mitigation of multidrug resistance.
- 3) Nutrition, including alternative and sustainable feeds and ingredients.
- 4) Gut health, including improvements to gut health that promote animal health, and impacts of pathogens, commensals, and the microbiome.
- 5) Alternative housing systems under extreme seasonal weather conditions, including use of precision technologies, enhanced monitoring to improve indoor air quality and biosecurity, and to control the spread of disease.

Open Data Standards for Neutral Data Repositories

P.L. 117-328 of the Consolidated Appropriations Act of 2023 provides funding for Open Data Standards for Neutral Data Repository, a public-private cooperative open framework based on open data standards for neutral data repository solutions to preserve and share the big data generated by technological advancements in the agriculture industry and for the preservation and curation of data in collaboration with land-grant universities. The data framework supports development of advanced technologies and practices to meet the increasingly complex agricultural challenges of farmers and ranchers.

The Open Data Framework builds a repository needed to create a neutral and secure data repository and cooperative where producers, universities and nonprofit entities can store and share data in ways that will foster agricultural innovation and will support technological progress, production efficiencies, and environmental stewardship. Projects include details of the existing data storage and sharing landscape, communication plans for sharing knowledge of the existing cyberinfrastructure facilities, and details of how the project will leverage existing infrastructure and knowledge.

Research Facilities Act

Pursuant to Section 4 of the Research Facilities Act ([7 U.S.C. 390 et seq.](#)) and as amended by the 2018 Farm Bill (Pub. L. 115-334), supports competitive grants to college, university, or nonprofit institution that have a facility supportive of research in food and agricultural sciences to assist in the construction, alteration, acquisition, modernization, renovation, or remodeling of the facility.

Special Research Grants

Section 2(c) of the 1965 Act ([7 U.S.C. 3157\(c\)](#)), as amended; and subject to provisions of NARETPA; Pub. L. 97-98; Critical Agricultural Materials Act, (Pub. L. 98-284); Pub. L. 99-198; FACT Act; FAIR Act; and AREERA authorizes Special Research Grants for periods not to exceed three years to SAES, all colleges and universities, other research institutions and organizations, Federal agencies, private organizations or corporations, and individuals. Grants are made available for the purpose of conducting research to facilitate or expand promising breakthroughs in areas of the food and agricultural sciences. AREERA expanded the purposes under this authority to include extension or education activities. Special Grants are awarded on a non-competitive or competitive basis involving scientific peer and merit review processes. Included in Special Grants are:

Global Change UV-B Monitoring

The purpose of the Global Change, Ultraviolet Radiation Monitoring and Research Program (UVMRP) is to support research and research infrastructure which: generates an uninterrupted stream of climatology data; determines mechanisms and symptoms of plant and animal response; and applies tightly integrated models to assess regional and national impacts (both biological and economic) of multiple plant stressors. The USDA has long been concerned about high levels of ultraviolet radiation (UV-B) from the Sun, which are known to have harmful effects on agricultural crops, rangelands, forest ecosystems, livestock, humans, and built infrastructure.

To understand better the impacts of UV-B radiation on U.S. agricultural production systems, NIFA solicits applications that can generate and deliver high-quality UV-B radiation data for use by USDA and plant and animal scientists nationally. To be useful, multi-band and broadband UV-B data must be collected at a minimum of 25 locations around the continental U.S., covering different eco-regions, elevations, and land-use types.

These special grant funds provide continuing support for the three on-going operational and research components of the UVMRP:

- 1) The Climatological Network: to collect an uninterrupted stream of ultraviolet and visible radiation measurements across the entire USA: a) to establish long term records of ultraviolet irradiance necessary to assess trends; and b) to provide this data in near real time via a web-based portal to the agricultural community and researchers working on the climatological and geographical impacts of ultraviolet irradiance;
- 2) The Effects Research: to support research that assesses the potential crop and forest impacts from changing levels of ultraviolet radiation in combination with other environmental stress factors; and
- 3) The Integrated Climate-Crop Models: to provide data to support development of the integrated climate-crop models to assess regional and national impacts (both biological and economic) of multiple plant stressors.

Potato Research

Potato Research supports regional potato (*Solanum tuberosum* L.) research and extension that focuses on the development, testing, and release of superior commercial potato varieties using classical breeding and advanced molecular and biotechnological approaches. The development and utilization of high-throughput methods that address significant or emergent issues is of importance to the U.S. potato industry. Aspects of evaluation, screening, and testing must support commercial variety development and release of superior materials to commercial producers as soon as possible. Further, a program aspect is to develop technologies to rapidly identify potential pest and disease threats, allowing producers a better opportunity to reduce losses. Funds are awarded on a competitive basis under the program. The Special Research Grants Program--Potato Research (Potato Research) is authorized under Section 2(c)(1)(B) of the Competitive, Special, and Facilities Research Grant Act as amended [[7 U.S.C. 3157\(c\)\(1\)\(B\)](#)].

Aquaculture Research

The purpose of the Special Research Grants for Aquaculture Research program is to support the development of an environmentally and economically sustainable aquaculture industry in the United States by generating new, science-based information and technology to address industry constraints. Applied research is needed to develop practical solutions that will facilitate growth and remove limitations to expansion of the United States aquaculture industry. Results of projects supported by this program are intended to help improve the profitability of the United States aquaculture industry, reduce the multi-billion-dollar United States seafood trade deficit, increase domestic food security, expand markets for United States-produced products, and provide more jobs for rural and coastal America.

The authority for the Special Research Grants for Aquaculture Research competitive grants program is contained in the Competitive, Special, and Facilities Research Grant Act, Pub. L. No. 89-106 Section 2(c), as amended ([7 USC 3157 \(c\)\(1\)\(A\)](#)).

Necessary Expenses of Research and Education Activities

Grants Management System

Funds are used to operate and maintain multiple grants management systems. Today, NIFA uses the legacy grants system Cooperative Research, Education, and Extension Management System (CREEMS) and the USDA ezFedGrants (eFG) Grants and Agreements System. NIFA uses both systems to administer, reconcile, and report on federal assistance awards because eFG is limited to capacity/formula grants management. To replace these legacy systems, NIFA has selected the National Institutes of Health (NIH) Quality Service Management Offices grants solution Electronic Records Administration (eRA) as an end-to-end grants management solution intended to simplify and streamline operations and ensure a singular customer experience.

For over two decades, NIH and several other Department of Health and Human Services operating divisions have recognized eRA as the leading grants management service provider. As a trans-agency shared services provider, eRA has partnered with external federal agencies since 2003 for their end-to-end grants management needs, including but not limited to the Agency for Healthcare Research and Quality, Centers for Disease Control and Prevention, Food and Drug Administration, Substance Abuse and Mental Health Services Administration, Veterans Administration, Department of Defense Uniformed Services University and Department of Commerce. This grants and financial management transformation supports USDA Strategic Plan Goal 6 to fully leverage modern human-centered design, data, technology, and digital services to provide our internal and external customers with easy-to-navigate online tools to increase access to our critical programs and services. Specifically, NIFA's Grants Management Initiative aligns with the USDA IT Strategic Plan Goal 1 to Accelerate Digital Transformation, Objectives 1-3; Goal 2 to Drive Innovation in Support of USDA Mission, Objectives 1-2; Goal 3 to Improve IT Organizational Agility with a Skilled Workforce, Objective 1; and Goal 5 to Enable Data-Driven Decision-Making, Objectives 1-2. It also addresses the President's Management Agenda, Priority 2, Strategy 3, to identify and prioritize the development of Federal shared products, services, and standards that enable simple, seamless, and secure customer experiences across the Federal Government.

Federal Administration—Other Necessary Expenses for Research and Education Activities

Authority for direct appropriations is provided in the annual Agriculture appropriations act. These funds are used to provide support services in connection with the planning and coordination of all research and education programs administered by NIFA, including grants management and reporting services, Department of Homeland Security facility security services, and General Services Administration rent.

Native American Institutions Endowment Fund

The program, authorized by the 1994 Act ([7 U.S.C. 301 note](#)), provides for the establishment of an endowment for the legislatively eligible 1994 Institutions (Tribally-controlled colleges). The interest derived from the endowment is distributed to the 1994 Institutions on a formula basis. This program will enhance educational opportunities for Native Americans by building educational capacity at these institutions. The institutions are also able to use the funding for facility renovation and construction. On the termination of each fiscal year, the Secretary shall withdraw the income from the endowment fund for the fiscal year, and after adjusting for the cost of administering the endowment fund, at 4 percent, distribute the adjusted income as follows: Sixty percent of the adjusted income is

distributed among the 1994 Institutions on a pro rata basis, the proportionate share being based on the Indian student count. Forty percent of the adjusted income is distributed in equal shares to the 1994 Institutions.

Small Business Innovation Research (SBIR) Program / Small Business Technology Transfer (STTR) Program

The Small Business Innovation Development Act of 1982 (Pub. L. 97-219, as amended) ([15 U.S.C. 638](#)), authorizes a competitive program for SBIR. The purpose of the Small Business Innovation Development Act is to stimulate technological innovation in the private sector; strengthen the role of small business to meet Federal research and development needs; to foster and encourage participation by minority and disadvantaged persons in technological innovations; and to increase private sector commercialization innovations derived from Federally funded research and development. The SBIR and STTR Extension Act of 2022 (Pub. L. 117-183) reauthorized SBIR and STTR programs and pilot programs through 2025 with a set aside of not less than 3.2 percent of appropriations in fiscal year 2017 and each fiscal year thereafter for the SBIR program and a set aside of not less than 0.45 percent for fiscal year 2016 and each fiscal year thereafter for the STTR program for extramural research and development for awards to eligible small firms.

The SBIR/STTR Programs are a three-phased effort, but only Phase I and Phase II, the feasibility and follow-on research and development phases respectively, are eligible for support with USDA funds. Firms are encouraged to secure Phase III funding for the commercialization phase from other public or private sources. The research areas supported under the SBIR/STTR programs address critical issues for USDA SBIR/STTR, including forestry, animal and plant health and production, aquaculture, rural communities, small to mid-size farms including urban agriculture, sustainable bioenergy, food science and natural resource conservation. Addressing these critical issues will engage small businesses with expertise in a number of areas including plant and animal production and protection; forests and related resource sciences; air, water, and soil resources; food and nutrition sciences; rural and community development; biofuels and biobased products; aquaculture; and small and mid-sized farms. NIFA administers the SBIR/STTR programs for USDA, including the funds set aside from other USDA agencies.

Biotechnology Risk Assessment Research Grants Program (BRAG)

Section 1668 of the FACT Act ([7 U.S.C. 5921](#)) as amended authorizes competitively awarded research grants to identify and develop appropriate management practices to minimize physical and biological risks associated with genetically engineered animals, plants, and microorganisms. USDA NIFA, Agricultural Research Service (ARS), and Forest Service contribute to BRAG funding, whereby at least 2 percent of appropriations for biotechnology related research is set aside for awards under this program. NIFA and the ARS jointly administer this program.

BRAG supports the generation of new information that assists Federal regulatory agencies in making science-based decisions about the effects of introducing into the environment genetically engineered organisms, including plants, microorganisms (including fungi, bacteria, and viruses), arthropods, fish, birds, mammals, and other animals excluding humans. The program also supports applied and fundamental risk assessment research, which is defined as the science-based evaluation and interpretation of information in which a given hazard, if any, is identified, and the consequences associated with the hazard are explored.

Bioproducts Pilot Program

The Infrastructure Investment and Jobs Act, 2022 (Pub. L. 117-58, Division J, Title I, Sec.101) provided \$10,000,000 to carry out section 70501 of division G, to remain available until expended. The Bioproducts Pilot Program supports early-stage research and development of consumer and construction products derived from agricultural commodities. Covered agricultural commodities of interest include agricultural commodity, food, feed, fiber, livestock, oil, or a derivative thereof, that the Secretary determines to have been used in the production of materials that have demonstrated market viability and benefits.

The Bioproduct Pilot Program advances the development of cost-competitive bioproducts with environmental benefits compared to incumbent products and addresses the following priorities:

- 1) Bioproduct development and production scale-up
- 2) Cost savings relative to other commonly used materials
- 3) Greenhouse gas emission reductions and other environmental and climate benefits relative to other commonly used materials

- 4) Landfill quantity and waste management cost reductions, including life-cycle and longevity-extending or longevity-reducing characteristics relative to other commonly used materials.

Inflation Reduction Act from Learning to Leading

The primary goal of the From Learning to Leading: Cultivating the Next Generation of Diverse Food and Agriculture Professionals Program (NEXTGEN) is to enable 1890 institutions, 1994 institutions, Alaska Native-serving institutions and Native Hawaiian-serving institutions, Hispanic-serving institutions and insular area institutions of higher education located in the U.S. territories to build and sustain the next generation of the food, agriculture, natural resources, and human sciences (FANH) workforce including the future USDA workforce primarily through providing student scholarship support, meaningful paid internships, fellowships, and job opportunity matching, and also facilitating opportunities to learn the processes and pathways leading to training and employment in the federal sector. Section 22007(d) of the Inflation Reduction Act appropriated \$250 million in funding for 1890 Institutions, 1994 Institutions, Alaska Native serving institutions and Native Hawaiian serving institutions, Hispanic-serving institutions and insular area institutions of higher education located in the U.S. territories.

American Rescue Plan NEXTGEN Technical Assistance and Outreach

Approximately \$2.5 million of American Rescue Plan Section 1006 funding supports Next Generation of Diverse Food and Agriculture Professionals Program (NEXTGEN) Technical Assistance and Outreach, to provide funding for minority-serving institutions to support and supplement agricultural research, education, and extension, as well as scholarships and programs that provide internships and pathways to Federal employment.

American Rescue Plan Meat and Poultry Processing (MPP) Workforce Development (WFD) Sustainable Agriculture Research and Education (SARE)

Approximately \$2.625 million of American Rescue Plan Section 1001(b)(4) is allocated to the National Institute of Food and Agriculture (NIFA) to support funding solely for the existing SARE National Reporting, Coordinating, and Communications Office, in collaboration with the four regional SARE host institutions, to apply for funds to carry out meat and poultry processing research and educational activities. Work in this program will support the development of training and educational materials in meat and poultry processing for place-based needs, particularly relevant to the workforce needs of small farmers and ranchers. Additionally, training local and/or regional meat and poultry workers has the unique opportunity to address the demand from niche markets including but not limited to small flocks/herds, mobile processing units that will fulfill market demand from fresh markets, on-site processing, farm-to-fork (restaurateurs), and boutique grocers. Additional resources were allocated to NIFA to support the operational expenses for administration of this program.

American Rescue Plan Meat and Poultry Processing (MPP) Workforce Development (WFD) Agricultural Workforce Training

Approximately \$5 million of American Rescue Plan Section 1001 was allocated to the National Institute of Food and Agriculture (NIFA) to support Agriculture and Food Research Initiative's Agricultural Workforce Training - Meat and Poultry Processing Workforce Training Program Area Priority 2022 Meritorious Grants. Safe and resilient meat and poultry supply chains require a trained, credentialed, and diverse workforce with the right skills at the right location. Based on stakeholder feedback, an expanded workforce is one of the most common and persistent needs across the beef, pork, poultry, and other specialty meat sectors. The goals for the meat and poultry processing workforce development program are to build a pipeline of well-trained workers and support safe workplaces with fair wages. Creating the pipeline of well-trained workers requires the development, expansion, and standardization of training and job-readiness; therefore, competitive grants made through this investment will support such development, expansion and/or improvement of workforce training programs or stackable-credential frameworks at community, junior, and technical colleges supportive of workforce development for the meat and poultry processing sector. These frameworks will include experiential learning opportunities that will provide on-the-job training, and exposure to work environments. Projects that involve partnerships with industry, local government, economic development organizations, and/or workforce-focused nonprofit organizations will be encouraged as well as those targeting high-unemployment geographic areas or underrepresented groups. Additional resources were allocated to NIFA to support the operational expenses for administration of this program.

American Rescue Plan Meat and Poultry Processing (MPP) Workforce Development (WFD) Centers of Excellence

Approximately \$15 million of American Rescue Plan Section 1001 is allocated to the National Institute of Food and Agriculture (NIFA) to support the Meat and Poultry Processing Workforce Development Centers of Excellence at Minority-Serving Institutions. Safe and resilient meat and poultry supply chains require a trained, credentialed, and diverse workforce with the appropriate skills. Based on stakeholder feedback, an expanded workforce is one of the most common and persistent needs across the beef, pork, poultry, and other specialty meat sectors. The goal for the meat and poultry processing workforce development program is to build a pipeline of well-trained workers and support safe workplaces with fair wages at Minority-Serving Institutions (MSIs). The MSIs receiving funding include 1890s Land Grant Universities, 1994 Tribal Colleges and Universities, Hispanic-Serving Institutions, Alaska Native-Serving and Native Hawaiian-Serving Institutions, and Institutions of Higher Education in the Insular Areas. Creating a pipeline of well-trained workers requires the development, expansion, and standardization of training and job-readiness; therefore, grants made through this investment will support such development, expansion and/or improvement of workforce training programs supportive of workforce development for the meat and poultry processing sector. Grants will be made through competitive Requests for Applications, non-competitive Directed Supplemental Requests for Applications, and supplements to existing awards. These frameworks will include experiential learning opportunities that will provide on-the-job training, and exposure to work environments. Projects that involve partnerships with industry, local government, economic development organizations, and/or workforce-focused nonprofit organizations will be encouraged as well as those targeting high-unemployment geographic areas or underrepresented groups.

American Rescue Plan Centers of Excellence for Meat and Poultry Processing and Food Safety Research and Innovation Phase III

Approximately \$15 million of American Rescue Plan Section 1001(b)(4) is allocated to the National Institute of Food and Agriculture (NIFA) to support Phase III funding of 15 competitive grants pre-selected from previous Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) Phase I and Phase II awards to small businesses with promising technology efficacy. The Phase III award will provide grants as equity-free (non-diluted) funding to promote private sector companies with Phase II or Phase I success to translate and integrate technology that has been developed, with minimal additional research, for advancement and adoption to benefit supply chain resilience of Small and Mid-size Meat and Poultry processors. Solicited technologies will fit three priorities to enable supply chain resiliency: Monitoring and improving complex processes, Worker safety, and Food safety. Awards made to eligible Phase III companies require cooperation with eligible meat and poultry processing channels which include independent business owners, entrepreneurs, producers, and other groups, such as cooperatives and worker associations who are less resourced.

American Rescue Plan Centers of Excellence for Meat and Poultry Processing and Food Safety Research and Innovation

Approximately \$5 million of American Rescue Plan Section 1001(b)(4) is allocated to the National Institute of Food and Agriculture (NIFA) to support funding of one competitive grant as a Center of Excellence for Meat and Poultry Processing and Food Safety Research and Innovation awarded through the Agriculture and Food Research Initiative (AFRI) program. The Center of Excellence award will integrate innovative research on advance technology in meat and poultry processing and food safety with extension outreach to the meat and poultry processing community. Through translation of research to the end-user, the AFRI Center of Excellence award will enhance supply chain resilience of small and medium-size meat and poultry processors while also improving food safety and worker safety. Innovative research in meat and poultry processing will emphasize development of scale-neutral technologies that are affordable and adaptable for use by small and medium-size meat and poultry processors.

American Rescue Plan Community Foods Projects

Approximately \$10 million of American Rescue Plan Section 1001(b)(4) is allocated to the National Institute of Food and Agriculture (NIFA) to support funding 27 additional competitive, highly ranked Community Foods Projects competitive grant applications received in 2022, which could not be funded in 2022 due to NIFA's budget constraints. Community Foods Projects have a maximum budget of \$400,000 over 4 years with a 1:1 matching requirement. The additional 27 CFP awards will support projects that reduce or alleviate food and nutrition insecurity, with a long-term goal of reducing reliance on emergency food assistance. Projects include work in rural

and urban farming, sustainable landscaping, and sustainable building technologies to support a more holistic, healthy, and resilient food systems. Projects also support small or disadvantaged farmers and/or processors, reduce language access disparities, increase local food access, increase consumption of nutritious foods, enhance workforce development, support entrepreneurship, and strengthen the support structures for agricultural producers. Overall, this program provides communities a voice in food system decisions, and an opportunity for local food markets to fully benefit the community, increase food and nutrition security, and stimulate local economies.

Extension Activities

The mission of the Cooperative Extension System, a national educational network, is to help people improve their lives through an educational process that uses scientific knowledge focused on issues and needs. Cooperative Extension work was established by the Smith-Lever Act of May 8, 1914, as amended ([7 U.S.C. 341 et seq](#)). This work is further emphasized in Title XIV of NARETPA to fulfill the requirements of the Smith-Lever Act, the Cooperative Extension Service in each State, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, the Northern Marianas and Micronesia, conduct educational programs to improve American agriculture, communities of all sizes, and strengthen families throughout the U.S. This publicly funded, out-of-the-classroom educational network combines the expertise and resources of Federal, State, and local partners. The partners in this unique system are:

- NIFA of USDA;
- Cooperative Extension Services at land-grant universities throughout the United States and its territories; and
- Cooperative Extension Services in nearly all the 3,143 counties or county equivalents in the United States.

Thousands of Extension employees and volunteers support this partnership and magnify its impact. Strong linkages with both public and private external groups are also crucial to the Extension System's strength and vitality.

Smith-Lever, Section 3(b) and (c) programs and Cooperative Extension

Smith-Lever 3 (b) & (c) formula funds of the Smith-Lever Act, [7 U.S.C. 343\(b\)\(c\)](#), as amended, comprise approximately two-thirds of the total Federal funding for extension activities. These funds are allocated to the States based on the rural and farm population of each State and the territories. States can utilize funds for locally determined programs, as well as for high priority regional and national concerns.

In accordance with section 4 of the Smith-Lever Act, eligible State institutions are required to submit a Plan of Work to NIFA for approval before Smith-Lever 3 (b) & (c) formula funds are distributed. Of the funds authorized under section 3(c), four percent shall be allotted for Federal administrative, technical, and other services, and for coordinating the extension work of the Department and the several States, Territories, and possessions. The remaining balance of funds formula distribution is:

- 1) 20 percent is divided equally among the States;
- 2) 40 percent is paid to the several States in the proportion that the rural population of each bears to the total rural population of the several States as determined by the census; and
- 3) 40 percent shall be paid to the several States in the proportion that the farm population of each bears to the total farm population of the several States as determined by the census.

States must expend 25 percent, or two times the level spent in fiscal year 1997 (whichever is less), on cooperative extension activities in which two or more States cooperate to solve problems that concern more than one State. This also applies to activities that integrate cooperative research and extension.

Smith-Lever 3(b) and (c) funding provided to an 1862 Land-Grant Institution must be matched with non-Federal funding on a dollar-for-dollar basis. Matching requirements for the insular areas of the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, Micronesia, American Samoa, and the Northern Mariana Islands are subject to the matching requirements of an amount equal to not less than 50 percent of the formula funds distributed to each insular area. These provisions also state that the Secretary may waive the matching funds requirement of an insular area for any fiscal year if the Secretary determines the government of the insular area will be unlikely to meet the matching requirement for the fiscal year.

Extension Services at 1890 Institutions

Section 1444 of NARETPA, ([7 U.S.C. 3221](#)), provides support to the 1890 Land-Grant Colleges and Universities for fostering, developing, implementing and improving extension educational programs to benefit their clientele. The general provisions, section 753, of Pub. L. 107-76 designated West Virginia State College as eligible to receive funds under any Act of Congress authorizing funding to 1890 Institutions, including Tuskegee University. Section 7129 of the 2014 Farm Bill (Pub. L. 113-79) designates Central State University as an eligible 1890 Land-Grant Institution and Section 7115 of the 2018 Farm Bill (Pub. L. 115-334) establishes a minimum additional funding amount for eligible entities in the fiscal years following certain eligible entities' qualification should the funding level increase by \$3 million. If there are insufficient funds appropriated for Section 1444 (or Section 1445) to continue the minimum additional funding amounts for eligible institutions, the provision provides for a reduction in allocations made to eligible institutions. Eligible State institutions are required to submit a five-year Plan of Work to NIFA for approval before these formula funds are distributed. Section 7121 of FCEA amended section 1444(a)(2) ([7 U.S.C. 3221\(a\)\(2\)](#)) to require that at least 20 percent of the total appropriations for each fiscal year under the Smith-Lever Act be allocated for payments to 1890 Institutions for extension activities. Funds will be distributed as follows, unless the funding amount is increased by \$3 million in any fiscal years, in which case Section 7115 of the 2018 Farm Bill includes additional directives regarding allocation of that increase:

- 4 percent to NIFA for administrative, technical, and other services;
- Payments to States in fiscal year 1978 are a fixed base. Of funds in excess of this amount:
- 20 percent is distributed equally to each State;
- 40 percent is distributed in an amount proportionate to the rural population of the State in which the eligible institution is located to the total rural population of all States in which eligible institutions are located; and
- 40 percent is distributed in an amount proportionate to the farm population of the State in which the eligible institution is located to the total farm population of all States in which eligible institutions are located.

In accordance with section 1449(c) of NARETPA ([7 U.S.C. 3222d](#)), Federal funds provided under section 1444 must be matched by the State from non-Federal sources. Section 1449(c) provides that the Secretary of Agriculture may waive the matching funds requirement above the 50 percent level for any fiscal year for an eligible institution of a State if the Secretary determines that the State will be unlikely to satisfy the matching requirement. Section 7114 of the 2018 Farm Bill amends section 1444(a) of NARETPA to allow 1890 colleges to carry forward to the succeeding fiscal year 100 percent of the funds they receive under this program in a given fiscal year. Allotments to Tuskegee University and Alabama A&M University shall be determined as if each institution were in a separate State. Four percent of the funds appropriated under this program is set-aside for Federal Administration.

Extension Services at 1994 Institutions

The 1994 Act ([7 U.S.C. 301 note](#)) authorizes appropriations for Native American communities and Tribal Colleges for extension activities as set forth in the Smith Lever Act. Funding is awarded on a competitive basis to legislatively eligible institutions as authorized ([7 U.S.C 343\(b\)\(3\)](#)). Section 7402 of the 2014 Farm Bill (Pub. L. 113-79) amended section 532 of the 1994 Act by adding College of the Muscogee Nation and Keweenaw Bay Ojibwa Community College, effective October 2014. Section 7502 of the 2018 Farm Bill (Pub. L. 115-334) amended section 532 of the 1994 Act by updating eligible institutions' names and adding Red Lake Nation College.

Facility Improvements at 1890 Institutions

Section 1447 of NARETPA, [7 U.S.C. 3222b](#), funds are used to upgrade research, extension, and teaching facilities at the eligible 1890 land-grant colleges, including Tuskegee University, West Virginia State College, and Central State University (per Section 7129 of the 2014 Farm Bill (Pub. L. 113-79)). NIFA awards as a formula based on legislation in Section 1444(b)(2)(B) of NAREPTA [7 U.S.C. § 3221\(b\)\(2\)](#). Distribution will be as follows: Sixty percent of grant funds in equal amounts among eligible 1890 institutions, and the remaining forty percent in accordance with the formula set forth in the legislation.

For the Facilities Projects which are awarded on a continuation basis, Institutions provide a five-year plan of work, including a description of anticipated equipment, land needs, new construction, and renovations of existing facilities. The plan should include general methodology, an estimate of the total funds required per year, and a tentative timetable in which to accomplish the projects. The obligation and expenditure of funds awarded under these grants

are limited to equipment, land, and buildings that will be used in the administration and conduct of approved Research, Teaching, and Extension work.

Renewable Resources Extension Act

Renewable Resources Extension Act of 1978, [16 U.S.C. 1671 et seq.](#), was established to provide the basis for federal funding for an expanded and comprehensive extension program on forest and rangeland renewable resources. The extension program of the Department of Agriculture and the extension activities of each State provide useful and productive educational programs for private forest and range landowners and processors and users of forest and rangeland renewable resources. Forests and rangelands provide the nation with invaluable ecosystem, socioeconomic, and cultural services including foods, water, carbon sequestration, wood and agricultural products and recreational benefits. Forests and rangelands play significant role in arresting and successfully combating climate change. Funds are distributed primarily by formula to 1862 and 1890 Land-Grant Institutions to deliver programs to achieve RREA's mandates by maximizing the capacity, reach, and impacts of the Cooperative Extension System to ensure appropriate management and conservation of natural resources and to ensure resilience of these ecosystems against threats from climate change, invasive species and diseases, wildfire, and land conversion.

Guided by the RREA strategic plan, the RREA program has four strategic goals:

- 1) Ensuring healthy ecosystem
- 2) Enhancing economic benefits
- 3) Enhancing resource management on working forests and rangelands
- 4) Building capacity through enhanced connections

Rural Health and Safety Education Programs

Rural Health and Safety Education Act of 1990, section 2390 of the FACT Act ([7 U.S.C. 2662\(i\)](#)). Per authorizing language, this program competitively awards projects that focus on issues related to 1) individual and family health education; 2) farm safety education; and/or 3) rural health leadership development. Per section 6101 of the 2018 Farm Bill (115-334), priority is to be given to an applicant that will use the grant for substance use disorder education and treatment and the prevention of substance use disorder. Land-grant colleges and universities are eligible to receive funds under the Act of July 2, 1862, including the University of the District of Columbia ([7 U.S.C. 301 et seq.](#)), and the Act of August 30, 1890 ([7 U.S.C. 321 et seq.](#)), including Tuskegee University, West Virginia State College, and Central State University. Applications may also be submitted by any of the Tribal colleges and universities designated as 1994 Land-Grant Institutions under the Educational Land-Grant Status Act of 1994.

The Rural Health and Safety Education (RHSE) Program seeks to foster quality of life in rural communities by providing the essential knowledge necessary for successful programs of rural development, improving coordination among Federal agencies, other levels of government, and institutions and private organizations in rural areas, and developing and disseminating information about rural conditions. The RHSE program proposals in the individual and family health education area are expected to be health education and capacity-building projects that provide individuals and families living in rural areas with: 1) Information about the value of good health at any age; 2) Information to increase individual or families' motivation to take more responsibility for their own health; 3) Information about and access to health promotion activities; 4) Information to support the utilization of telehealth, telemedicine, and distance learning plans for opioid and substance education and training in rural communities; and 5) Training for volunteers and health services providers concerning health promotion and health care services for individuals and families in cooperation with state, local and community partners.

Food Animal Residue Avoidance Database Program (FARAD)

NIFA administers the funding that establishes and maintains FARAD, authorized within Section 7642 of AREERA ([7 U.S.C. 7642](#)) to be a decision support system that provides an array of science-based information resources for the stewards of our nation's expansive commercial food animal industries and the rapidly growing number of small backyard livestock operations. FARAD is supported and staffed by highly trained veterinary pharmacologists, toxicologists, pharmacists, mathematical modelers, and food animal specialists at five colleges of veterinary medicine: North Carolina State University, Kansas State University, University of California-Davis, University of

Florida, and Virginia Tech. As a cooperative multistate program, recognized as an independent non-governmental entity, FARAD is available nationwide to offer free and timely advice regarding residue avoidance and protect our nation's food sources against accidental or intentional contamination of animal-derived foods.

FARAD aids veterinarians in the safe use of approved drugs in a legal extra-label manner and helps producers mitigate accidental chemical exposures resulting from natural disasters, such as flooding or fracking operations, agro-terrorism, or accidental exposure to other agricultural chemicals as may occur in modern agricultural practice. Since 1982, FARAD has been assisting producers, extension specialists and agents, and veterinarians to help avoid and mitigate residue problems, which indirectly helps ensure animal health and welfare, especially for minor species (such as sheep and goats) which lack drug approvals.

FARAD's work is unique, and for four decades the network has been a leader in promoting and developing big data approaches to answer complex residue questions. Since its inception, FARAD has also developed quantitative tools, recently using artificial intelligence approaches to estimate US withdrawal intervals using drug data obtained from global regulatory approvals and mathematical animal models to precisely estimate withdrawal intervals and to better aid the U.S. producers and reduce the economic impacts of medication use.

FARAD also provides assistance when new drug use legislation is enacted and for trade matters related to foreign drug approvals. FARAD also trains future veterinarians, pharmacists, and food safety specialists in the principles of drug and chemical residue avoidance. The FARAD program manages, shares, and uses information from the most comprehensive database containing drug and pesticide residue data worldwide.

Women and Minorities in Science, Technology, Engineering, and Mathematics (STEM) Fields

Section 7204 of FCEA amended section 1672 of the FACT Act ([7 U.S.C. 5925\(d\)\(7\)](#)), which provides for competitively awarded grants to increase participation by women and underrepresented minorities from rural areas in the field of science, technology, engineering, and mathematics. Additionally, priority is extended to eligible institutions that carry out continuing programs funded by the Secretary. The goal of the WAMS program is to develop and implement robust collaborations to increase the representation, participation, and entrepreneurial skills and abilities of rural women and underrepresented minorities from rural areas in STEM careers, thereby contributing to economic prosperity in rural areas across the nation. WAMS project activities must support the creation, adaptation, and adoption of learning materials and teaching strategies to operationalize what we know about how students learn. Projects also focus on imparting both technical knowledge as well as leadership and interpersonal skills, such as communication, teamwork, and problem solving. It is an expectation that investment of public funds through the WAMS Grant Program will lead to: Gains in STEM knowledge, skills and capabilities, as well as new participants in USDA mission science through outreach activities, new careers or entrepreneurial enterprise; Increased documentation of outputs, significant activities, including dissemination activities, events, services or products that contribute toward achieving the goals and objectives of WAMS; Increased change in knowledge, actions or conditions; and Increased capacity for carrying out the USDA mission by rural women and underrepresented minorities.

Food Safety Outreach Program

Section 405 of AREERA ([7 U.S.C. 7625](#)) authorizes this program. The Food Safety Outreach Program awards competitive grants to eligible recipients for projects that improve public health by increasing the understanding and adoption of established food safety standards, guidance, and protocols. Projects develop and implement new and expand upon existing Food Safety Modernization Act-related food safety training, education, extension, outreach, and technical assistance prioritizing owners and operations of small and medium-sized farms, beginning farmers, socially disadvantaged farmers, veteran farmers and ranchers, small processors or small fresh fruit and vegetable merchant wholesalers. Awards provide food safety education which integrates standards and guidance relevant to a variety of agricultural production systems encompassing conventional, sustainable, organic, and conservation and environmental practices in diverse geographic locations. Community Outreach and Collaborative Education and Training projects address knowledge and resource gaps for target communities in the areas of pre- and post-harvest water testing and sampling, soil amendments, developing supply chain programs, and/or developing food safety plans. The program supports outreach to underserved audiences through technical assistance resource awards and projects that develop bilingual, accessible, and culturally appropriate training. Awardees are required to report project outcomes to the respective Sustainable Agriculture Research and Education Regional Center to ensure integration with the national Food Safety Outreach Program infrastructure.

Section 7301 of the 2018 Farm Bill strikes the prohibition on funding that restricts USDA from providing additional grant funding once an entity has received three years of grant funding, although individual grants are limited to a maximum of three years.

Food & Ag Service Learning (FASLP)

A 2014 amendment to Title IV of AREERA added Section 413 ([7 U.S.C. 7633](#)) which authorizes this program. FASLP awards competitive grants to increase the knowledge of agriculture and improve the nutritional health of children, and to bring together stakeholders from the distinct parts of the food system to increase the capacity for food, garden, and nutrition education within host organizations or entities, such as school cafeterias and classrooms, while fostering community engagement and expanding service and volunteer opportunities. The initiative is part of a broader effort to not only increase access to school meals for low-income children, but also to dramatically improve their quality. FASLP is also focused on the development of leadership skills, knowledge, and qualities necessary to prepare students for food and agricultural and related careers in the private sector, government, and academia. All projects must involve underserved rural and/or urban communities and facilitate a connection between elementary schools and secondary schools with agricultural producers in the local and regional area. This program prioritizes expansion of existing farm-to-school initiatives with proven success track records, experiential learning in nutrition, cooking, and food origins.

The Request for Application (RFA) references Purpose and Priority: “Complement efforts by the Department and school food authorities to implement the school lunch programs established under the Richard B. Russell National School Lunch Act ([42 U.S.C. 1751 et seq.](#)) and the school breakfast program established by section 4 of the Child Nutrition Act of 1966 ([42 U.S.C. 1773](#))” this is also seen in the [7 USC 7633](#) Purpose.

Farm and Ranch Stress Assistance Network (FRSAN)

The 2018 Farm Bill (Section 7412 of the Agricultural Improvement Act of 2018) amended ([7 U.S.C. 5936](#)), which authorizes competitive grants to establish a FRSAN that provides stress assistance programs to individuals who are engaged in farming, ranching, and other agriculture-related occupations. Funds will be used to initiate, expand, or sustain programs that provide professional agricultural behavioral health counseling and referral or other forms of assistance as necessary through farm telephone helplines and websites, support groups, and training programs and workshops for a) advocates for individuals who are engaged in farming, ranching, and other occupations relating to agriculture; and b) other individuals and entities that may assist individuals who are engaged in farming, ranching, and other occupations relating to agriculture; and are in crisis. Funds also may be used in outreach service and activities, including the dissemination of information and materials.

Enhancing Agricultural Opportunities for Military Veterans Competitive Grants Program

Section 739 of the Consolidated Appropriations Act, 2023 ([Pub. L. 117-328](#)) provides approximately \$5 million through September 30, 2024 for competitive grants to non-profit organizations. The program seeks to increase the number of military veterans gaining knowledge and skills through comprehensive, hands-on training, classroom education, and experience with model farm and ranch programs. Which are offered locally or regionally and intended to lead to a comprehensive understanding of successful farm and ranch operations and management practices. This program is designed to achieve two major goals:

- 1) To increase the number of military veterans in food and agriculture careers.
- 2) To increase capacity, sustainability, and economic vitality in rural and tribal communities

The project type must be identified as extension projects that involve informal educational programming. Projects also may offer workforce readiness and employment prospects for service-disabled veterans.

Smith-Lever, Section 3(d)

These funds are allocated to the States to address special programs or concerns of regional and national importance. Section 7403 of FCEA amended section 3(d) of the Smith-Lever Act ([7 U.S.C. 343\(d\)](#)) to expand eligibility to the 1890 Land-Grant Institutions and required that funds be awarded on a competitive basis with the exception of the Expanded Food and Nutrition Education Program in which funds are distributed on a formula basis. Section 7417 of FCEA provided eligibility for these programs to the University of the District of Columbia. Section 7609 of the

2018 Farm Bill (Pub. L. 115-334) provided 1994 Institutions as eligible for certain competitively awarded Smith-Lever 3(d) programs (see below). The following extension programs are supported under the Smith-Lever 3(d) funding mechanism and other specific authorizations:

Expanded Food and Nutrition Education Program

The Expanded Food and Nutrition Education Program (EFNEP) is the nation's first nutrition education program for low-income populations and remains at the forefront of nutrition education efforts to reduce nutrition insecurity of low-income families and youth. These funds are awarded to the 1862 and 1890 Land-Grant Institutions according to a statutory formula provided in section 1425 of NARETPA ([7 U.S.C. 3175](#)) as amended. Funds are used to employ and train professional and paraprofessional aides (hired from indigenous target populations when practicable) to provide direct nutrition education enabling low-income youth and families to increase nutrition knowledge and improve food purchasing and preparation practices. EFNEP assists low-income families and youth acquire knowledge, skills, attitudes, and changed behaviors necessary for nutritionally sound diets and contributes to their personal development and family diet improvement. Funds are awarded to the eligible institutions as follows: (1) 1981 bases; (2) \$100,000 to each 1862 and 1890 institution; (3) a percentage of the increase in funding that exceeds the 2007 appropriated level (i.e., 15 percent for 2014 and thereafter) distributed to the 1890 Land-Grant Institutions according to the pro rata population for each institution at or below 125 percent of the poverty level; and the remainder to the 1862 Land-Grant Institutions according to the pro rata population for each institution at or below 125 percent of the poverty level. Annual data confirms EFNEP graduates improve their diets and nutrition practices, stretch their food dollars farther, handle food more safely, and increase their physical activity levels.

Farm Safety and Youth Farm Safety Education

The Rural Health and Safety Education Act of 1990, section 2390 of the FACT Act ([7 U.S.C. 2662i](#)) – The Farm Safety program provides competitively awarded projects to Extension working with non-profit disability organizations in conducting AgrAbility projects designed to assist farmers and ranchers with disabilities to stay in agricultural production. The competitively awarded Youth Farm Safety Education and Certification Program provides funding to states to conduct training and certification needs of youth working in agriculture. Section 7214 of the 2018 Farm Bill reauthorizes appropriations through fiscal year 2023 for demonstration grants to provide agricultural education and assistance to individuals with disabilities engaged in farming or farm-related occupations. It adds language to clarify that this provision applies to veterans engaged in farming or farm-related occupations, or who are pursuing new farming opportunities.

New Technologies for Agricultural Extension

Competitively awarded projects that increase the capacity of the Cooperative Extension System (CES) to adopt new and innovative technology applications for delivering science-based educational resources from land-grant and other partner institutions about matters of high importance to the public. Through awards, projects provide state of the art technology and software applications, high quality leadership training, legally binding contractual and financial instruments, comprehensive evaluation, communications, and marketing activities. Projects promote governance, collaboration and organization, a toolkit of evidence-based delivery models, and an entrepreneurial resource base. Projects are on subjects that include food safety, homeland security, natural resources and environment, youth development, families, nutrition and health, and other agricultural related topics.

Children, Youth, and Families at Risk

This program focuses on America's children, youth, and families to help promote and provide positive, productive, secure environments and contributions to communities and the Nation. Projects are awarded competitively to focus on the national outcomes for youth and families which includes early childhood, school age youth, teens, and parent/family outcomes with emphasis on science and reading literacy and building youth and family programs and community capacity. Section 7609 of the 2018 Farm Bill provided 1994 Institutions as eligible to receive funds from this program by amending [7 U.S.C. 343\(d\)](#).

Federally Recognized Tribes Extension Program

Section 1677 of the FACT Act, [7 U.S.C. 5930](#) as amended, authorizes competitively awarded projects to State Extension Services to provide assistance and educational programs in agriculture, community development, youth

development, and other societal issues facing Native Americans on reservations. The purpose of this program is to support Extension education on Federally Recognized Indian Reservations and Tribal jurisdictions of Federally Recognized Tribes. This program seeks to continue the Land Grants' mission of inclusion--providing education and research-based knowledge to those who might not otherwise receive it. Section 7609 of the 2018 Farm Bill deemed 1994 Institutions as eligible to receive funds from this program.

The main priorities of the FRTEP include but are not limited to: 1) Positive youth development programs, including 4-H for tribal youth; 2) Native Farmer and Rancher Productivity and Management; 3) Native Community Development, including: a. Economic and Workforce Development, b. Food Systems, Farm and Community Markets, and Food Sovereignty, c. Natural Resource Conservation and Adaptation to Environmental Changes, d. Human Nutrition and Reduction of Childhood and Adolescent Obesity, e. Native Language and Culture Preservation, f. Traditional Ecological Knowledge sharing and learning, or knowledge held by indigenous cultures about the environment or cultural practices.

Necessary Expenses of Extension Activities

Provides a portion of the general operating funds for the Federal staff, and national program planning, coordination, and program leadership for the extension work in partnership with the States and territories.

Agriculture in the K–12 Classroom

Funds are appropriated under the administration line to support the Agriculture in the Classroom (AIRC) program administered under [7 U.S.C 3152\(j\)](#). AIRC advances agricultural literacy through a grassroots network of State coordinators, schoolteachers, agribusiness leaders, and other educators by supporting initiatives that include expanding outreach to underrepresented populations; regional demonstration projects; integration of information technology to reduce program delivery costs; and outstanding teacher recognition initiatives. The program serves nearly 5 million students and 60,000 teachers annually through workshops, conferences, field trips, farm tours, and other educational activities. AIRC programs include working with state AIRC activities engaged in a variety of issues relating to agricultural literacy. Other programs emphasized by the NIFA AIRC office include: Science literacy, Agricultural careers, Nutrition, Pre-service and professional development opportunities for teachers.

Federal Administration—Other Necessary Expenses for Extension Activities

Provides a portion of the general operating funds for the Federal staff, and national program planning, coordination, and program leadership for the extension work in partnership with the States and territories.

Agriculture Risk Management Education Program

Section 524(a) of the Federal Crop Insurance Act ([7 U.S.C. 1524\(a\)](#)), as amended by section 133 of the Agricultural Risk Protection Act of 2000 and section 11125 of the 2018 Farm Bill (Pub. L. 115-334), establishes a competitive grants program for educating agricultural producers and providing technical assistance to agricultural producers on a full range of farm viability and risk management activities. These activities include futures, options, agricultural trade options, crop insurance, business planning, enterprise analysis, transfer and succession planning, management coaching, market assessment, cash flow analysis, cash forward contracting, debt reduction, production diversification, farm resources risk reduction, farm financial benchmarking, conservation activities, and other appropriate risk management strategies. This program brings the existing knowledge base to bear on risk management issues faced by agricultural producers and expands the program throughout the Nation on a regional and multi-regional basis. Mandatory funding in the enacted amount of \$10 million is to be made available annually for competitive awards.

Gus Schumacher Nutrition Incentive Program (formerly Food Insecurity Nutrition Incentive)

Section 4205 of the 2018 Farm Bill (Pub. L. 115-334), which amended section 4405 of the FCEA of 2008 ([7 U.S.C. 7517](#)), authorizes the Gus Schumacher Nutrition Incentive Program to support projects to increase the purchase of fruits and vegetables among low-income consumers participating in the Supplemental Nutrition Assistance Program (SNAP) by providing incentives at the point of purchase. Priority is given to projects which maximize direct incentives, provide locally and regionally produced fruits and vegetables, include coordination with multiple stakeholders, and offer supplemental services in high-need communities. Projects which serve underrepresented

communities and geographies are encouraged. The Produce Prescription Program provides competitive grants to projects which partner with healthcare providers to implement and evaluate projects aiming to reduce individual and household food insecurity, improve dietary health, and reduce healthcare need and costs. Nutrition Incentive Program Training, Technical Assistance, Evaluation, and Information Centers assist applicants/grantees and collect and compile standardized outcome data sets from grantees. Mandatory funding was made available in the enacted amount of \$45 million for 2019, \$48 million for 2020 and 2021, \$53 million for 2022, and \$56 million for 2023 and each year thereafter to carry out the program.

Beginning Farmer and Rancher Development Program (BFRDP)

The primary goal of BFRDP is to help beginning farmers and ranchers in the United States and its territories enter and/or improve their successes in farming, ranching, and management of nonindustrial private forest lands, through support for projects that provide education, mentoring, and technical assistance to give beginning farmers and ranchers the knowledge, skills, and tools needed to make informed decisions for their operations and enhance their sustainability. The term “farmer” is used in the broadest sense and may be interpreted to include agricultural farmers, ranchers, and non-industrial private forest owners and managers. The term "beginning farmer or rancher" means a person that (A)(i) has not operated a farm or ranch; or (ii) has operated a farm or ranch for not more than 10 years; and (B) meets such other criteria as the Secretary may establish.

Section 12301 of the 2018 Farm Bill (Pub. L. 115-334) amended Section 2501 of the Food, Agriculture, Conservation, and Trade Act of 1990 ([7 U.S.C. 2279](#)) and made available the enacted amount of \$15 million for 2019 and 2020, \$17.5 million for 2021, \$20 million for 2022, and \$25 million for 2023 and each year thereafter to carry out the program. In addition to the mandatory funds provided under the 2018 Farm Bill, Section 747 of the Consolidated Appropriations Act, 2023, provided \$2 million for the program. The purpose of this competitive program is to support the nation’s beginning farmers and ranchers by making competitive grants to new and established local and regional training, education, outreach, and technical assistance initiatives that address the needs of beginning farmers and ranchers. To be eligible for a grant under this authority, an applicant must be a collaborative State, tribal, local, or regionally-based network or partnership of public or private entities which may include a State cooperative extension service; a Federal, state, or tribal agency; a community-based or non-governmental organization; a college or university (including an institution offering associate’s degree) or a foundation maintained by a college or university; or any other appropriate partner.

All grantees are required to provide a 25 percent match in the form of cash or in-kind contributions. The maximum amount of an award is \$250,000 per year and the maximum project period is three years. In accordance with Section 12301 of the 2018 Farm Bill, not less than 5 percent of the funds used to carry out the program for a fiscal year shall be used to support programs and services that address the needs of limited resource beginning farmers or ranchers; socially disadvantaged farmers or ranchers who are beginning farmers or ranchers; and farmworkers desiring to become farmers or ranchers. Not less than 5 percent of the funds used to carry out the program for a fiscal year shall be used to support programs and services that address the needs of veteran farmers and ranchers.

American Rescue Plan Technical Assistance Investment Program

Funds will be used for technical assistance partnerships focused on socially disadvantaged farmers and ranchers, including Black, Hispanic, Indigenous, Hawaiian/Pacific Islander, women, beginning farmers and ranchers, and veteran producers. USDA is creating opportunities to ensure that socially disadvantaged communities of farmers, ranchers, forest landowners, and operators have the tools, programs, and support they need to succeed in agriculture. Approximately \$73.569 million of American Rescue Plan Section 1006 funding will support technical assistance to connect underserved producers with USDA programs and services. Cooperative Agreements will support organizations with proven track records working with economically distressed and/or underserved communities, to provide an array of technical assistance specialized services that could include outreach, technical assistance, cooperative development training and support, financial training, mediation access, capacity building training, technical assistance concerning agriculture production, agriculture credit, and rural development to underserved farmers, ranchers or forest landowners.

American Rescue Plan Meat and Poultry Processing (MPP) Workforce Development (WFD) Extension Risk Management Education (ERME)

Approximately \$2.625 million of American Rescue Plan Section 1001(b)(4) is allocated to the National Institute of Food and Agriculture (NIFA) to support funding for the four host institutions of Agriculture Risk Management Education (ARME) regional centers and its support center. ARME program brings the existing knowledge base to bear on risk management issues faced by agricultural producers and expands the program throughout the Nation on a regional and multi-regional basis. Work already started under a previous award to the four (4) regional centers nationwide and one (1) Risk Management Education Electronic Support Center is based upon the centers continued work on risk management education. These activities include educating agricultural producers on futures, options, agricultural trade options, crop insurance, cash forward contracting, debt reduction, production diversification, marketing plans and tactics, farm resources risk reduction, and other appropriate risk management strategies related to meat and poultry processing. Additional resources were allocated to NIFA to support the operational expenses for administration of this program.

American Rescue Plan Gus Schumacher Nutrition Incentive Program (GusNIP) Produce Prescription Project (PPP)

Approximately \$42 million of American Rescue Plan Section 1001(b)(4) is allocated to the National Institute of Food and Agriculture (NIFA) to support funding 65 additional competitive, highly ranked GusNIP Produce Prescription competitive grant applications received in 2022, which otherwise could not be funded due to NIFA's budget constraints. PPP leverages existing medical assistance programs. This safety net supports individuals and families with limited financial resources. Federally supported medical assistance programs aim to ensure income eligible individuals and families have access to the healthcare services they need through providing comprehensive health insurance coverage. PPP supports grants to conduct and evaluate projects that provide "prescriptions" to procure fresh fruits and vegetables by limited resource individuals managing, or at risk for diet-related health condition(s). These 65 awards will build capacity among organizations serving historically underserved communities, increase the reach of PPP projects, and establish a foundation for enhanced efficacy and sustained success in a nascent program. A variety of emerging research illustrates how GusNIP supports farmers, increases access to nutritious foods particularly fresh fruits and vegetables, aids in economic recovery, and contributes to the resilience of communities. Overall, this Food as Medicine initiative improves health outcomes through access to more nutritious food. Additional resources were allocated to NIFA to support the operational expenses for administration of this program.

American Rescue Plan Food Loss and Waste Prevention and Reduction

Approximately \$25 million of American Rescue Plan Section 1001 is allocated to the National Institute of Food and Agriculture (NIFA) for Food Loss and Waste Reduction. Of the total, \$15 million will be to fund the Community Food Projects (CFP) Grants to reduce FLW, get surplus wholesome food to individuals, and develop linkages between food producers, providers, and food recovery organizations. The remaining \$10 million will be to fund the Food and Agriculture Service Learning Program (FASLP) Grants for FLW-reduction efforts on school grounds to engage in and scale up FLW efforts: 1) increase capacity for student to learn how to prevent food waste; 2) change the school environment; and 3) use cafeterias and other parts of school grounds as classrooms.

Inflation Reduction Act Technical Assistance Investment Program

Approximately \$39 million of Inflation Reduction Act Section 22007(a) and (f) is allocated to the National Institute of Food and Agriculture (NIFA) to provide resources for administration of a cooperative agreement. Work supported through this agreement will provide outreach, mediation, financial training, capacity building training, cooperative development and agricultural credit training and support, and other technical assistance on issues concerning food, agriculture, agricultural credit, agricultural extension, rural development, or nutrition to underserved farmers, ranchers, or forest landowners, including veterans, limited resource producers, beginning farmers and ranchers, and farmers, ranchers, and forest landowners living in high poverty areas.

Inflation Reduction Act Sovereign Equity Fund – Tribal Extension

Approximately \$5 million of Inflation Reduction Act Section 22007(a) is allocated to the National Institute of Food and Agriculture (NIFA) to award resources that provide administrative oversight to single-function Extension

Projects that advance Tribal extension by increasing understanding of cultural heritage and agricultural traditions of the tribal community served, engage tribal community members and students to build on the knowledge and skills of the local cultural communities, and offer learning activities that are based on traditional ways of knowing and the associated dissemination of that knowledge. The Extension Projects must address one or more of the following key strategic actions: A) Support non-formal education to increase food and agricultural literacy of youth and adults; B) Promote science-based agricultural literacy by increasing understanding and use of food and agricultural science data, information, and programs; C) Build science-based capability in tribal people and communities to engage audiences and enable informed decision making; D) Develop new applications of instructional tools and curriculum structures that increase technical competency and ensure global competitiveness of tribal people; E) Offer non-formal learning programs that increase accessibility to new audiences at the rate at which new ideas and technologies are tested and/or developed at the community-scale; and F) Develop programs that increase public knowledge and citizen engagement leading to actions that protect or enhance the nations' food supply, agricultural productivity, environmental quality, community vitality, and/or public health and well-being.

Integrated Activities

The following programs are provided pursuant to the authority found in section 406 ([7 U.S.C. 7626](#)). Funding for all programs is provided on a competitive basis.

Methyl Bromide Transition Program

Methyl bromide is an odorless, colorless gas that is used as an agricultural soil and structural fumigant to control a wide variety of pests. Methyl bromide depletes the stratospheric ozone layer and is classified as a Class 1 ozone-depleting substance. In accordance with the Montreal Protocol on Substances that Deplete the Ozone Layer and the Clean Air Act (Overview of the Clean Air Act and Air Pollution), the United States government agreed to reduce methyl bromide production and net imports incrementally from the 1991 baseline until the complete phase-out in 2005. Since 2005, the only allowable exemptions are critical use exemptions (CUE), quarantine and pre-shipment exemptions (QPS).

The primary goal and objective of the MBT program is to support the discovery and implementation of practical pest management alternatives to methyl bromide. The MBT program seeks to solve pest problems in key agricultural production and post-harvest management systems, processing facilities, and transport systems for which methyl bromide has been withdrawn or withdrawal is imminent. Integrated projects focus on research for new alternatives and extension to encourage adoption and implementation of methyl bromide alternatives. Extension-only projects facilitate the adoption and implementation of practices that will result in effective management of pests without the use of methyl bromide and will lead to measurable behavior changes in the identified audience or stakeholder group.

Organic Transition Program

The Organic Transition (ORG) program supports the development and implementation of biologically based management practices that mitigate the ecological, agronomic, economic, and socioeconomic risks associated with a transition from conventional to organic agricultural production systems.

One of the primary goals and objectives of the ORG program is to address practices and systems particularly associated with organic crop production, organic animal production, and organic systems that integrate crop and animal production. The ORG program strongly encourages applicants to develop partnerships that include collaboration with small- or mid-sized, accredited colleges and universities; 1890 Land-Grant Institutions, 1994 Land-Grant Institutions, Hispanic-serving institutions, and/or other institutions that serve high-risk, under-served, or hard-to-reach audiences as well as Non-Governmental Organizations (NGOs) that are engaged in organic agriculture research, education, and outreach.

Crop Protection/Pest Management Program

The purpose of the Crop Protection and Pest Management (CPPM) program is to provide funding for integrated pest management (IPM) activities through multifunctional agricultural research, extension, and education. The goals and objectives of CPPM are to address high priority issues related to pests including insects, nematodes, pathogens, weeds, and other pests and their management using IPM approaches at the state, regional and national levels. The CPPM program supports projects that will ensure food security and respond effectively to other major societal pest

management challenges with comprehensive IPM approaches that are economically viable, ecologically prudent, and safe for human health. In addition, the CPPM program encourages proposals that develop new IPM strategies and tools to mitigate the effects of existing or new pests becoming more prevalent due to climate change and proposals that address management aspects of invasive species. The CPPM program also addresses IPM challenges for emerging issues and existing priority pest concerns that can be addressed more effectively with new and emerging technologies. The outcomes of the CPPM program are effective, affordable, and environmentally sound IPM practices and strategies needed to maintain agricultural productivity and healthy communities.

The CPPM program provides support via three linked program areas that emphasize research and development for discovery of IPM knowledge (Applied Research and Development Program); extension activities for IPM adoption and implementation (Extension Implementation Program); and enhanced coordination, collaboration, and communications among related CPPM programs and awardees (Regional Coordination Program). The above three program areas represent a comprehensive approach for developing and implementing IPM practices and strategies in all 50 states and several insular areas, and extending this new knowledge in this area across many diverse environments.

Regional Rural Development Centers

The RRDCs play a unique role in USDA's service to rural America, linking timely research and educational outreach capacity of the nation's public universities with communities, local decision-makers, entrepreneurs, families, communities and farmers and ranchers to help address a wide range of development issues. Section 2(c)(1)(B) of the Act of 1965 ([7 U.S.C. 3157 \(c\)\(1\)\(B\)](#)) provides base funding, split equally among the four Centers, hosted housed at Land Grant institutions in the Northeast, North Central, South, and West regions, with tailored programs to address particular needs in its region, with programs designed to improve the social and economic well-being of rural communities. Centers also serve as national facilitators, collaborating on national issues that span regions like rural broadband and infrastructure, community well-being, climate adaptation strategies, and workforce and entrepreneurial development.

The Regional Rural Development Centers (RRDCs) link the research and educational outreach capacity of the nation's public universities with communities, local decision-makers, entrepreneurs, families, and farmers and ranchers to help address a wide range of development issues. They collaborate on national issues that span regions like e-commerce, the changing interface between rural, suburban, and urban places, and workforce quality and jobs creation. Each tailors programs to address unique needs in its region.

Food and Agriculture Defense Initiative

Section 1484 of NARETPA ([7 U.S.C. 3351](#)) provides for the support and enhancement of nationally coordinated plant and animal disease diagnostic networks and activities to reduce the vulnerability of the United States food and agricultural system to chemical or biological attack. Protect the integrity, reliability, sustainability, and profitability of the food and agricultural system against biosecurity threats from pests, diseases, contaminants, and disasters. With special emphasis on planning, training, outreach, and research activities that relate to vulnerability analyses, incident response, and detection and prevention technologies through competitive grants and cooperative agreements. The diagnostic networks currently supported are the National Plant Diagnostic Network (NPDN) and the National Animal Health Laboratory Network (NAHLN). These networks are State/Federal partnerships that are used to increase the ability to protect the U.S. from plant and animal disease threats by providing surveillance, early detection, mitigation, and recovery functions that serve to minimize these threats. The Extension Disaster Education Network (EDEN) is also supported under this program. EDEN is a collaborative national effort led by State Cooperative Extension Services (CES) to provide disaster education resources for CES educators, to help farmers and other public sectors in the event of disasters, including agricultural disasters. EDEN also improves the delivery of services to citizens affected by disasters and reduces the impact of disasters through research-based education.

Institute of Rural Partnerships

Section 778 and Section 780 of the Consolidated Appropriations Act, 2022 (Pub. L 117-103) provided, to remain available until expended, appropriated funding to support establishment of multiple Institute of Rural Partnerships. Section 778 appropriated \$30 million to establish a grant program and distribution of funds to three geographically diverse established land-grant universities. Section 780 appropriated \$10 million for costs associated with the establishment of an Institute for Rural Partnership located at the University of Vermont. Provided that the Institute

for Rural Partnerships shall dedicate resources to researching the causes and conditions of challenges facing rural areas and develop community partnerships to address such challenges. Publishing a coordinated annual report is also required.

Organic Agriculture Research and Extension Initiative

The Organic Agriculture Research and Extension Initiative (OREI), ([7 U.S.C. 5925b](#)) seeks to solve critical organic agricultural issues, priorities, or problems through the integration of research, education, and extension activities. The purpose of this program is to fund high priority integrated projects that will enhance the ability of producers and processors who have already adopted organic standards to grow and market high quality organic agricultural products, mitigate, and adapt to climate change, build resilience of the organic farming system, and protect water and other resources. Priority concerns include biological, physical, and social sciences, including economics.

OREI has eight goals:

- 1) Facilitating the development and improvement of organic agriculture production, breeding, and processing methods;
- 2) Evaluating the potential economic benefits of organic agricultural production and methods to producers, processors, and rural communities;
- 3) Exploring international trade opportunities for organically grown and processed agricultural commodities;
- 4) Determining desirable traits for organic commodities;
- 5) Identifying marketing and policy constraints on the expansion of organic agriculture;
- 6) Conducting advanced on-farm research and development that emphasizes observation of, experimentation with, and innovation for working organic farms, including research relating to production, marketing, food safety, socioeconomic conditions, and farm business management;
- 7) Examining optimal conservation, soil health, and environmental outcomes relating to organically produced agricultural products; and
- 8) Developing new and improved seed varieties that are particularly suited for organic agriculture.

Specialty Crop Research Initiative

Section 7305 of the 2018 Farm Bill (Pub L. 115-334) reauthorized and amended Section 412 of AREERA of 1998 ([7 U.S.C. 7632](#)). Section 412 of the AREERA of 1998 established a specialty crop research and extension initiative to address the critical needs of the specialty crop industry by developing and disseminating science-based tools to address needs of specific crops and their regions. The Specialty Crop Research Initiative (SCRI) competitive grants program was established to solve critical industry issues through research and extension activities. Specialty crops are defined as fruits and vegetables, tree nuts, dried fruits, and horticulture and nursery crops including floriculture. SCRI will give priority to projects that are multistate, multi-institutional, or trans-disciplinary; and include explicit mechanisms to communicate results to producers and the public.

Projects must address at least one of the following five focus areas:

- Research in plant breeding, genetics, and genomics to improve crop characteristics;
- Efforts to identify and address threats from pests and diseases, including threats to pollinators;
- Efforts to improve production efficiency, productivity, and profitability over the long term;
- New innovations and technology, including improved mechanization and technologies that delay or inhibit ripening; and
- Methods to prevent, detect, monitor, control, and respond to potential food safety hazards in the production and processing of specialty crops.

Eligible applicants for grants under this authority include Federal agencies, national laboratories, colleges and universities, research institutions and organizations, private organizations or corporations, State agricultural experiment stations, individuals, and groups consisting of two or more entities defined in this sentence. Mandatory funding in the enacted amount of \$80 million is to be made available for 2014 and each year thereafter to carry out SCRI. Section 7306 of the 2014 Farm Bill (Pub. L. 113-79) added a requirement that, in addition to the scientific peer review NIFA regularly conducts, a panel of specialty crop industry representatives' review and rank SCRI applications for merit, relevance, and impact. In addition, Section 7306 requires increased consultation between

NIFA and the Specialty Crops Committee of the National Agricultural Research, Extension, Education and Economics Advisory Board.

Urban, Indoor, and Other Emerging Agricultural Production Research, Education, and Extension Initiative

Section 7212 of the 2018 Farm Bill (Pub. L. 115-334) amended section 1672 of the FACT Act (Pub. L. 101-624) to add [7 U.S.C. 5925g](#), in consultation with the Urban Agriculture and Innovative Production Advisory Committee, established under section [7 U.S.C. 6923\(b\)](#), to make 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. In 2019, \$10 million of mandatory funding was enacted, available until expended, to carry out this program. One of the focuses of UIE projects is to strengthen and develop income or employment; enhanced quality of life and access to safe nutritious food for urban and Native American communities; estimated or actual economic return for UIE food production systems; private industry investment; and site selection and reduce barriers to land access.

The eight topic areas of interest identified in the authorization include:

- Assessing and developing strategies to remediate contaminated sites.
- Determining and developing the best production management and integrated pest management practices.
- Identifying and promoting the horticultural, social, and economic factors that contribute to successful urban, indoor, and other emerging agricultural production systems.
- Analyzing how new agricultural sites are determined, including an evaluation of soil quality, condition of a building, or local community needs.
- Exploring new technologies that minimize energy, improve lighting systems, improve water management, and other inputs for increased food production.
- Examining building material efficiencies and structural upgrades for the purpose of optimizing growth of agricultural products.
- Developing new crop varieties and agricultural products to connect to new markets.
- Examining the impacts of crop exposure to urban elements on environmental quality and food safety.

Emergency Citrus Disease Research and Extension Program

The purpose of the Emergency Citrus Disease Research and Extension Program (ECDRE) is to fund a competitive research and extension grant program to combat the deadly citrus disease, Huanglongbing (HLB) or citrus greening disease, through projects that integrate research and extension activities and use systems-based, trans-disciplinary approaches to provide solutions to U.S. citrus growers. The ECDRE program also combats HLB by supporting the dissemination and commercialization of relevant information, techniques, and technologies.

Proposals funded by the ECDRE program will provide a plan for addressing one or more of the following priority needs (listed in order of importance to target grower needs with a focus on producer implementation), established in consultation with the Citrus Disease Subcommittee (CDS) of the National Agricultural Research, Education, Extension and Economics (NAREEE) Advisory Board:

- 1) Development of commercial citrus varieties (rootstocks and scions) for both fresh and processed markets, with genetic tolerance and resistance to HLB using traditional breeding techniques and/or gene editing.
- 2) Regional management or eradication of the Asian Citrus Psyllid (ACP), the insect vector of HLB, on commercial citrus groves and residential plantings; management strategies should incorporate appropriate pesticide resistance management measures.
- 3) Optimized detection and surveillance programs for ACP and/or HLB. Detection and surveillance programs should incorporate all effective tools and tactics, including psyllid attractants, predictive models of psyllid movement and dispersal, and early detection of HLB/ CLAs (based on an understanding of mechanisms).
- 4) A cure for HLB-infected trees and strategies for maintaining their productivity. Progress in this area can be made through the development of nutritional materials and their delivery, antimicrobials and their delivery, or commercialization of molecules that improve citrus production and along with large scale field trials.
- 5) A delivery system for therapeutics, nutrition and other HLB solutions. Most therapies available are not adequately delivered via foliar application. The citrus industry needs an engineered delivery system for phloem to access the *Candidatus Liberibacter asiaticus* (CLAs) systemic infection.

- 6) Consolidation of screening efforts for intervention targets and reduction of candidate lists to include only those most worthy of advanced testing and commercialization. High priority screening efforts are needed to identify: 1) Host plant defense or resistance; 2) Asian Citrus Psyllid (ACP) suppression, reduced transmission, or behavior modification (e.g., attract and kill); or 3) Pathogen CLAs titer reduction, competition, or acquisition/transmission prevention.
- 7) A reliable technique for culturing CLAs bacteria.
- 8) A better understanding of the HLB/vector/citrus pathosystem, including phloem biology, the movement of CLAs and therapy into and through phloem, and the interaction of host, pathogen, and vector (disease triangle).
- 9) Greater understanding of the ecology and interactions of the citrus production system and the citrus greening disease complex (HLB and ACP). These studies are needed to answer basic questions regarding how climate and other environmental factors in different regions impact tree health and the spread of HLB and ACP.

The ECDRE program will address these needs through the promotion of collaboration, open communication, the exchange of information, and the development of resources that accelerate application of scientific discovery and technology to farm-level solutions for HLB. Section 12605 of the 2018 Farm Bill (Pub. L. 115-334) also established the Citrus Trust Fund and provides \$25 million, available until expended, for each of 2019 through 2023, to carry out the ECDRE Program in section 412 of AREERA ([7 U.S.C. 7632\(j\)](#)).

Community Food Projects

Section 25 of the Food Stamp Act of 1977 ([7 U.S.C. 2034](#)), as amended in 1996, authorizes funding in support of competitively awarded Community Food Projects (CFP). The CFP program provides one-time contributions of Federal funds to enable projects to become self-sustaining. The program requires matching non-federal funds. Projects improve food access of low-income individuals, increase the food self-reliance of communities, and promote comprehensive responses to local food, farm, and nutrition issues. Projects which develop links between the public, for-profit, and nonprofit food sectors, support entrepreneurial projects, encourage long-term planning, and develop resources and strategies to reduce and prevent future food insecurity are prioritized, the program provides communities a voice in food system decisions and supports local food markets to fully benefit the community, increase food and nutrition security, and stimulate local economies. These projects meet specific state, tribal, insular, local or neighborhood food and agricultural needs for infrastructure improvement and development, while reducing barriers to food access and increasing food and nutrition security for communities across the nation. Mandatory funding is made available annually in the amount of \$5 million for fiscal year 2019 and each fiscal year thereafter.

Inflation Reduction Act Next Generation of Diverse Food and Agriculture Professionals Program (NEXTGEN) Evaluation

Approximately \$2.5 million of Inflation Reduction Act Section 22007(f) is allocated to the National Institute of Food and Agriculture (NIFA) to provide resources to support an external evaluation team, who will capture and translate the portfolio's impact and project-level impact, as well as best practices, and lessons learned through developing standardized approach to data collection and analysis. This work will support grantees in refining their initial evaluation plan and providing capacity-building resources for effective evaluation among the grantees. This evaluation is vital to understanding and communicating the NEXTGEN's success. Additionally, the evaluation team can provide consultation to USDA regarding a learning agenda for NEXTGEN as the department is currently transforming its approach to professional development and training opportunities.

Inflation Reduction Act Discrimination Financial Assistance

Approximately \$15 million of Inflation Reduction Act Section 22007(e) is allocated to the National Institute of Food and Agriculture (NIFA) to fund cooperative agreements that support the implementation and application period for the financial assistance program, that supports producers who experienced discrimination.

Headquarters of the Service is in Washington, D. C. As of September 30, 2023, there were 412 permanent full-time employees, including 13 in the headquarters office and 352 in field offices. There are 47 other employees.

OIG AND GAO REPORTS

Table NIFA-1. Closed, Implemented OIG Reports

ID	Date	Title	Result
13601-0001-22	08/07/19	NIFA Formula Grant Programs' Controls Over Fund Allocations to States	The OIG made 11 recommendations to NIFA. NIFA has implemented corrective actions, and all the recommendations were closed as of the end of 2023.
13801-0001-22	07/27/23	Infrastructure Investment Jobs Act - Bioproduct Pilot Program	The OIG did not make any recommendations to NIFA.

Table NIFA-2. Closed, Implemented GAO Reports

ID	Date	Title	Result
GAO-22-104436	02/14/22	Compacts of Free Association: Implications of Planned Ending of Some U.S. Economic Assistance	GAO did not make any recommendations to USDA.
GAO-22-105088	07/28/22	Persistent Chemicals: Technologies for PFAS Assessment, Detection, and Treatment	GAO did not make any recommendations to USDA.
GAO-22-104449	06/15/22	Water Quality: Agencies Should Take More Actions to Manage Risks from Harmful Algal Blooms and Hypoxia	GAO did not make any recommendations to USDA.
GAO-23-105913	10/04/22	Tracking the Funds: Specific Fiscal Year 2022 Provisions for U.S. Department of Agriculture	GAO did not make any recommendations to USDA.
GAO-23-105591	10/12/22	Small Business Research Programs: Reporting on Award Timeliness Could Be Enhanced	GAO did not make any recommendations to USDA.
GAO-23-106318	09/28/23	Tracking the Funds: Agencies Have Begun Executing FY 2022 Community Project Funding/Congressionally Directed Spending	GAO did not make any recommendations to USDA.
GAO-23-106561	09/28/23	Tracking the Funds: Specific FY 2023 Provisions for Federal Agencies	GAO did not make any recommendations to USDA.
GAO-23-106338	09/29/23	Small Business Research Programs: Most Agencies Allow Applicants to Define Needs and Propose Solutions	GAO did not make any recommendations to USDA.
GAO-23-106400	11/16/23	Small Business Research Programs: Agencies are Implementing Programs to Manage Foreign Risks and Plan Further Refinement	GAO did not make any recommendations to USDA.
GAO-23-106237	11/16/23	Federal Spending Transparency: Opportunities Exist to Improve COVID-19 and Other Grant Subaward Data on USAspending.gov	GAO did not make any recommendations to USDA.

AVAILABLE FUNDS AND FTEs

Table NIFA-3. Available Funds and FTEs (thousands of dollars, FTEs)

Item	2022		2023		2024		2025	
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE
National Institute of Food and Agriculture								
Research and Education Activities								
Discretionary Appropriations.....	\$1,046,244	-	\$1,094,121	-	\$1,094,121	-	\$1,106,070	-
Native American Endowment Interest Earned	4,825	-	4,463	-	5,407	-	5,199	-
Mandatory Appropriations.....	-	-	-	-	10,000	-	-	-
Supplemental Appropriations	255,000	-	5,000	-	-	-	-	-
General Provisions.....	6,300	-	-	-	-	-	-	-
Extension Activities:								
Discretionary Appropriations.....	550,605	-	565,410	-	565,410	-	610,605	-
Mandatory Appropriations.....	78,269	-	85,813	-	85,813	-	85,813	-
Supplemental Appropriations	-	-	-	-	-	-	-	-
General Provisions.....	7,000	-	7,000	-	7,000	-	-	-
Integrated Activities:								
Discretionary Appropriations.....	40,000	-	41,500	-	41,500	-	15,000	-
Mandatory Appropriations.....	103,730	-	122,590	-	124,590	-	122,590	-
General Provisions.....	10,000	-	-	-	-	-	-	-
Emergency Citrus Disease								
Total Discretionary Appropriations	1,664,974	-	1,712,494	-	1,713,438	-	1,736,874	-
Total Mandatory Appropriations	206,999	-	233,403	-	245,403	-	208,403	-
Total Supplemental Appropriations.....	255,000	-	5,000	-	-	-	-	-
Total Offsetting Collections.....	-	-	1,750	-	2,350	-	-	-
Total Adjusted Appropriation	2,126,973	-	1,952,767	-	1,961,191	-	1,945,277	-
Balance Available, SOY	609,614	-	897,734	-	458,180	-	-	-
Recoveries, Other.....	33,992	-	31,896	-	-	-	-	-
Total Available.....	2,770,579	-	2,882,277	-	2,419,371	-	1,945,277	-
Lapsing Balances	-412	-	-536	-	-	-	-	-
Balance Available, EOY	-897,734	-	-458,718	-	-	-	-	-
Total Obligations	1,872,433	372	2,423,023	416	2,419,371	422	1,945,277	422
Other Funding:								
ARP Supp, Center of Excellence for Meat and Poultry Processing and Food Safety								
Research and Innovation.....	5,000	-	-	-	-	-	-	-
ARP Supp, Community Foods Projects Competitive 2022 Meritorious Grants	10,000	-	-	-	-	-	-	-
ARP Supp, GusNIP Produce Prescription Project.....	42,000	-	-	-	-	-	-	-
ARP Supp, MPP-WFD-Centers of Excellence.....	14,998	-	-	-	-	-	-	-
ARP Supp, MPP-WFD-Agricultural Workforce Training Grants.....	4,778	-	-	-	-	-	-	-
ARP Supp, Center of Excellence for Meat and Poultry Processing and Food Safety								
Research and Innovation Phase III	15,000	-	-	-	-	-	-	-
ARP Supp, MPP-WFD-ERME.....	2,625	-	-	-	-	-	-	-
ARP Supp, Meat and Poultry Processing Workforce Development -SARE.....	2,625	-	-	-	-	-	-	-
ARP Supp, NEXTGEN Technical Assistance and Outreach	2,500	-	-	-	-	-	-	-
ARP Supp, Technical Assistance Investment Program	73,569	-	-	-	-	-	-	-

2025 USDA EXPLANATORY NOTES – NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Item	2022		2023		2024		2025	
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE
ARP Supp, Food Loss and Waste Prevention and Reduction-Community Food Projects.....	-	-	14,755	-	-	-	-	-
ARP Supp, Food Loss and Waste Prevention and Reduction-Food and Ag Service-Learning Program	-	-	10,000	-	-	-	-	-
Community Food Projects Program.....	5,000	-	5,000	-	5,000	-	5,000	-
GP Institute for Rural Partnerships	30,000	-	15,000	-	-	-	-	-
Human Health and Soil Study.....	1,000	-	-	-	-	-	-	-
IRA Supp, Additional USDA Rural Development Administrative Funds	-	-	17	-	-	-	-	-
IRA Supp, Administrative Costs.....	-	-	40	-	-	-	-	-
IRA Supp, Conservation Technical Assistance- Administrative Costs	-	-	45	-	-	-	-	-
IRA Supp, Discrimination Financial Assistance	-	-	15,000	-	1,700	-	-	-
IRA Supp, NEXTGEN Evaluation	-	-	2,500	-	-	-	-	-
IRA Supp, Sovereign Equity Fund (Tribal Extension Program)	-	-	5,000	-	-	-	-	-
IRA Supp, Technical Assistance Investment Program (Cohort 2)	-	-	37,708	-	-	-	-	-
IRA Supp, Technical Assistance Investment Program Administrative Costs	-	-	1,985	-	-	-	-	-
Total Appropriation, Other Funding	209,094	-	107,050	-	6,700	-	5,000	-
Total Available, Other Funding	209,094	-	107,050	-	6,700	-	5,000	-
Total Obligations, Other funding	209,094	-	107,050	-	6,700	-	5,000	-
Total Obligations, NIFA	2,081,527	372	2,530,073	416	2,426,071	422	1,950,277	422
Other USDA:								
NRCS - Compost and Food Waste Reduction (CFWR).....	-	-	19,808	-	-	-	-	-
HHS- Employee Assistance Program / Work4Life	8	-	11	-	11	-	11	-
FPC - Salary Transfer	-	-	30	-	30	-	30	-
USDA/Employee Detail.....	427	-	607	-	221	-	-	-
Biotechnology Risk Assessment ARS	1,527	-	1,665	-	1,600	-	1,600	-
National Atmospheric Deposition Program ARS	6	-	26	-	26	-	26	-
Biotechnology Risk Assessment FS	108	-	108	-	108	-	108	-
National Atmospheric Deposition Program FS	218	-	222	-	222	-	222	-
OCE - Food Loss and Waste Activities Support	-	-	1,900	-	-	-	-	-
OPPE - Farming Opportunities Training and Outreach.....	-	-	22,505	-	-	-	-	-
Small Business Innovation Research Program (SBIR).....	6,650	-	8,838	-	8,838	-	8,838	-
Information System (CRIS)	533	-	248	-	248	-	248	-
Total, Other USDA.....	9,477	-	55,968	-	11,304	-	11,083	-
Total, NIFA Available	2,989,150	-	3,045,295	-	2,437,375	-	1,961,360	-
Other Federal Funds:								
Research and Education Activities:								
NOAA National Atmospheric Deposition Program	76	-	68	-	68	-	68	-
Geological Survey, National Atmospheric Deposition Program.....	754	-	571	-	571	-	571	-
National Park Service, National Trends Network (NPS).....	-	-	-	-	-	-	-	-
National Park Service, National Atmospheric Deposition Program.....	386	-	356	-	356	-	356	-
USDA/Small Business Technology Transfer (STTR).....	-	-	1,243	-	-	-	-	-
Bureau of Land Management, National Atmospheric Deposition Program.....	68	-	64	-	64	-	64	-
APHIS- ARPA Grants	24,000	-	-	-	-	-	-	-

2025 USDA EXPLANATORY NOTES – NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Item	2022		2023		2024		2025	
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE
Rural Development-MPPEP Application Review	358	-	-	-	-	-	-	-
ERS- Building Security.....	500	-	530	-	530	-	530	-
FPS- Building Security	1,082	-	1,159	-	1,159	-	1,159	-
Subtotal, Research and Education Activities	27,224	-	3,991	-	2,748	-	2,748	-
Extension Activities:								
Army OneOp.....	-	-	3,000	-	3,000	-	3,000	-
FPC - Farm Stress Training	-	-	1,350	-	1,350	-	1,350	-
FPC - Farm Technical Loans Assistance	-	-	3,000	-	2,850	-	5,000	-
Army - Youth Internship (YSIP)	500	-	1,000	-	950	-	950	-
Army -Youth Program Evaluation.....	-	-	500	-	-	-	-	-
Office of Tribal Relations 4H	-	-	-	-	80	-	-	-
U.S. Air Force 4-H Programs	-	-	750	-	750	-	750	-
Army- 4-H Connected Youth Development Extension Educator.....	-	-	200	-	190	-	190	-
Clearinghouse for Military Family Readiness	4,698	-	4,282	-	4,282	-	4,282	-
Military Family Learning Network.....	3,000	-	-	-	-	-	-	-
Defense Programs Family Support - Youth Extension Services	500	-	-	-	-	-	-	-
Military Community & Family Policy - Military REACH.....	737	-	799	-	799	-	799	-
Military Community & Family Policy - Teen Adventure Camps	1,200	-	1,200	-	-	-	-	-
Virtual Lab School.....	2,730	-	2,415	-	2,415	-	2,415	-
HUD, Healthy Homes.....	500	-	-	-	-	-	-	-
CDC-Vaccine Messaging.....	7,950	-	500	-	500	-	500	-
Army- Early Learning Matters.....	658	-	821	-	821	-	821	-
Army- FAP.....	2,000	-	2,500	-	2,500	-	2,500	-
Army- Relocation Readiness	-	-	-	-	-	-	-	-
DOJ- 4H Programs.....	-	-	2,000	-	-	-	-	-
Army- 4H Programs.....	700	-	700	-	750	-	750	-
USDA/FSA- Employee Risk	500	-	-	-	-	-	-	-
FNS-WIC National Workforce Strategy.....	-	-	10,500	-	-	-	-	-
Subtotal, Extension Activities	25,673	-	35,517	-	21,237	-	23,307	-
Total, Other Federal	52,897	-	39,508	-	23,985	-	26,055	-
Total Available, NIFA	3,042,047	-	3,084,803	-	2,461,360	-	1,987,415	-

PERMANENT POSITIONS BY GRADE AND FTES

Table NIFA-4. Permanent Positions by Grade and FTES

Item	2022			2023			2024			2025		
	D.C.	Field	Actual Total	D.C.	Field	Actual Total	D.C.	Field	Estimated Total	D.C.	Field	Estimated Total
ES.....	1	6	7	2	4	6	2	4	6	2	4	6
SES.....	-	-	-	-	-	-	-	-	-	-	-	-
SL.....	-	-	-	-	-	-	-	-	-	-	-	-
GS-15.....	6	58	64	27	57	84	27	57	84	27	57	84
GS-14.....	1	46	47	16	33	49	16	33	49	16	33	49
GS-13.....	-	75	75	22	68	90	22	68	90	22	68	90
GS-12.....	1	101	102	19	113	132	19	113	132	19	113	132
GS-11.....	-	40	40	10	29	39	10	29	39	10	29	39
GS-10.....	-	-	-	-	1	1	-	1	1	-	1	1
GS-9.....	-	25	25	3	23	26	3	23	26	3	23	26
GS-8.....	-	8	8	5	4	9	5	4	9	5	4	9
GS-7.....	-	12	12	4	14	18	4	14	18	4	14	18
GS-6.....	-	2	2	-	1	1	-	1	1	-	1	1
GS-5.....	-	2	2	-	-	-	-	-	-	-	-	-
GS-4.....	-	1	1	1	-	1	1	-	1	1	-	1
GS-3.....	-	0	0	0	6	6	0	6	6	0	6	6
Total Permanent	9	376	385	109	353	462	109	353	462	109	353	462
Unfilled, EOY.....	-	-	54	-	-	50	-	-	50	-	-	50
Total Perm. FT												
EOY.....	9	376	439	109	353	412	109	353	412	109	353	412
FTE*.....	-	-	372	-	-	416	-	-	422	-	-	422

*Total FTEs are all inclusive of workforce categories including temporary positions.

VEHICLE FLEET

There are no contracts or expenses for vehicle fleet to report.

SHARED FUNDING PROJECTS**Table NIFA-5. Shared Funding Projects (thousands of dollars)**

Item	2022 Actual	2023 Actual	2024 Estimated	2025 Estimated
Working Capital Fund:				
Administrative Services:				
Material Management Service	\$15	\$15	\$33	\$31
Mail and Reproduction Services	152	117	75	75
AskUSDA Contact Center	-	18	32	33
Integrated Procurement Systems.....	20	18	17	-
Procurement Operations Services	-	-	-	17
Human Resources Enterprise Management Systems.....	12	14	11	12
Subtotal	199	182	168	168
Communications:				
Creative Media & Broadcast Center	31	44	30	43
Finance and Management:				
National Finance Center	78	96	121	112
Financial Shared Services	2,227	1,685	1,364	1,352
Internal Control Support Services.....	101	126	97	92
Personal Document Security.....	-	18	21	21
Subtotal	2,406	1,925	1,603	1,577
Information Technology:				
Client Experience Center	1,655	1,919	1,750	1,711
Department Administration Information Technology Office	406	424	126	119
Digital Infrastructure Services Center	672	764	643	607
Enterprise Cybersecurity Services	-	113	230	255
Enterprise Data and Analytics Services.....	-	222	178	173
Enterprise Network Services.....	365	329	476	470
Subtotal	3,098	3,771	3,403	3,335
Correspondence Management Services				
Office of the Executive Secretariat	45	50	52	49
Total, Working Capital Fund	5,779	5,972	5,256	5,172
Department-Wide Shared Cost Programs:				
Diversity, Equity, Inclusion and Accessibility	-	7	10	10
Agency Partnership Outreach	17	27	28	28
Employee Experience	-	12	14	14
Human Resources Self-Service Dashboard	-	15	-	-
Intertribal Technical Assistance Network.....	9	13	13	13
Medical Services	8	6	3	3
Office of Customer Experience	23	12	12	12
Personnel and Document Security Program	5	-	-	-
Physical Security.....	11	16	17	17
Security Detail	12	18	20	20
Security Operations Program.....	16	25	28	28
Talent Group	-	13	12	12
TARGET Center	3	6	7	7
National Capital Region Interpreting Services	3	6	1	1
USDA Enterprise Data Analytics Services.....	12	-	-	-
Total, Department-Wide Reimbursable Programs.....	119	176	165	165
E-Gov:				
Budget Formulation and Execution Line of Business	3	2	3	3
E-Rulemaking	20	7	8	10
Hiring, Assessment Tool.....	1	-	-	-
Financial Management Line of Business	1	1	1	1
Geospatial Line of Business.....	13	13	13	13
Benefits.gov	48	44	48	-
Grants.gov	312	378	343	413
Human Resources Line of Business	1	1	1	1

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Item	2022 Actual	2023 Actual	2024 Estimated	2025 Estimated
Integrated Acquisition Environment.....	25	52	50	49
Total, E-Gov	424	498	467	490
Agency Total.....	6,322	6,646	5,504	5,827

ADVERTISING EXPENDITURES

There are no contracts for advertising expenses to report.

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ACCOUNT 1: NATIONAL INSTITUTE OF FOOD AND AGRICULTURE**APPROPRIATIONS LANGUAGE**

The appropriations language follows (new language underscored; deleted matter enclosed in brackets):

1 National Institute of Food and Agriculture

2 For payments to agricultural experiment stations, for cooperative forestry and other research, for facilities, for
 3 payments to States, the District of Columbia, Puerto Rico, Guam, the Virgin Islands, Micronesia, the Northern
 4 Marianas, and American Samoa for cooperative extension activities, for integrated activities, for research,
 5 education, and extension grant programs, including necessary administrative expenses, and for other expenses,
 6 [\$1,868,461,000]\$1,731,675,000: *Provided*, That [\$728,724,000]\$641,724,000 to remain available until
 7 expended, shall be for research grants for 1994 institutions, education grants for 1890 institutions, the agriculture
 8 and food research initiative, veterinary medicine loan repayment, multicultural scholars, graduate fellowship and
 9 institution challenge grants, grants management systems, Hispanic serving institutions education grants, tribal
 10 colleges education equity grants, scholarships at 1890 institutions, extension services at 1994 institutions, facility
 11 improvements at 1890 institution, the research facilities act, new beginning for Tribal students, and 1890s
 12 institutions centers of excellence: *Provided further*, That each institution eligible to receive funds under the
 13 Evans-Allen program shall receive no less than \$1,000,000: *Provided further*, That \$5,000,000 to remain
 14 available until September 30, [2025]2026, shall be for providing grants food and agricultural sciences for Alaska
 15 Native- and Native Hawaiian-Serving Institutions: *Provided further*, That [\$2,700,000]\$2,500,000 to remain
 16 available until September 30, [2025]2026, shall be for providing grants for food and agricultural sciences for
 17 Insular Areas: *Provided further*, That funds for education grants for 1890 institutions shall be made available to
 18 institutions eligible to receive funds under [7 U.S.C. 3221](#) and [3222](#): *Provided further*, That institutions eligible to
 19 receive funds under [7 U.S.C. 3221](#) for cooperative extension shall each receive not less than \$1,000,000:
 20 *Provided further*, That funds for cooperative extension under sections 3(b) and (c) of the Smith-Lever Act ([7](#)
 21 [U.S.C. 343\(b\) and \(c\)](#)) and section. 208(c) of Public Law 93–471 shall be available for retirement and
 22 employees' compensation costs for extension agents: *Provided further*, That \$5,000,000 is available for
 23 Enhancing Agriculture Opportunities for Military Veterans and shall remain available until September 30, [2025]:
 24 *Provided Further*, That \$2,000,000, to remain available until expended, is available for Agriculture Business
 25 Innovation Centers at Historically Black Colleges and Universities]2026: *Provided further*, that \$8,000,000 is
 26 available for the Food and Agriculture Defense Initiative and shall remain available until September 30,
 27 [2025]2026: *Provided further*: That notwithstanding any other provision of law, indirect costs shall not be
 28 charged against any Extension Implementation Program Area grant awarded under the Crop Protection/Pest
 29 Management Program ([7 U.S.C. 7626](#)): *Provided further*, that appropriations hereunder shall be available for the
 30 Experienced Services Program at NIFA ([16 U.S.C 3851](#)).

Native American Institutions Endowment Fund

For the Native American Institutions Endowment Fund authorized by Public Law 103-382 ([7 U.S.C. 301 note](#)), \$11,880,000, to remain available until expended.

Change Description

The Budget proposes a continuation of the President’s Budget 2024 change in language, specifically to eliminate appropriations language contained in separate research and education, extension, and integrated accounts to incorporate the language into one agency account.

The first change (line 6 of paragraph 1) deletes the 2024 appropriation amount and replaces it with the 2025 appropriation amount.

The second change (lines 14 thru 16 of paragraph 1) deletes 2024 appropriation and replaces it with the 2025 appropriation amount, as well as updates the period of availability end date to maintain the two-year period of availability.

The third change (lines 23 thru 25 of paragraph 1) deletes language authorizing funding for the Agriculture Business

Innovation Centers at Historically Black Colleges and Universities, no funding is requested for this program in 2025. As well as updates the period of availability end date to maintain the two-year period of availability for Enhancing Agriculture Opportunities for Military Veterans.

The fourth change (line 27 of paragraph 1) updates the period of availability end date to maintain the two-year period of availability for Food and Agriculture Defense Initiative.

LEAD-OFF TABULAR STATEMENT

Table NIFA-6. Lead-Off Tabular Statement (In dollars)

National Institute of Food and Agriculture	Amount
Estimate, 2024	\$1,708,031,000
Change in Appropriation	+23,644,000
Budget Estimate, 2025	<u>1,731,675,000</u>
Research and Education Activities	Amount
Estimate, 2024	\$1,094,121,000
Change in Appropriation	-1,094,121,000
Budget Estimate, 2025	<u>-</u>
Extension Activities	Amount
Estimate, 2024	\$572,410,000
Change in Appropriation	-572,410,000
Budget Estimate, 2025	<u>-</u>
Integrated Activities	Amount
Estimate, 2024	\$41,500,000
Change in Appropriation	-41,500,000
Budget Estimate, 2025	<u>-</u>

PROJECT STATEMENTS

Table NIFA-7. Project Statement on Basis of Appropriations (thousands of dollars, FTEs)

Item	2022		2023		2024		2025		FTE Inc.	
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE	Inc. or Dec.	or Dec. Chg Key
Discretionary Appropriations:										
Research and Education Activities										
Hatch Act	\$260,000	-	\$265,000	-	\$265,000	-	\$265,000	-	-	-
McIntire-Stennis Cooperative Forestry Act.....	36,000	-	38,000	-	38,000	-	36,000	-	-\$2,000	(1)
Research at 1890 Institutions (Evans-Allen)	80,000	-	89,000	-	89,000	-	98,000	-	+9,000	(2)
Payments to 1994 Institutions (Tribal Colleges Ed. Equity).....	5,500	-	7,000	-	7,000	-	15,000	-	+8,000	(3)
Education Grants for 1890 Institutions (Capacity Building Grants)	28,500	-	30,000	-	30,000	-	30,000	-	-	-
Scholarships at 1890 Institutions	10,000	-	10,000	-	10,000	-	10,000	-	-	-
Centers of Excellence at 1890 Institutions	10,000	-	10,000	-	10,000	-	10,000	-	-	-
Education Grants for Hispanic Serving Institutions	14,000	-	16,000	-	16,000	-	16,000	-	-	-
Education Grants for Alaska Native and Native Hawaiian-Serving Institutions	4,000	-	5,000	-	5,000	-	5,000	-	-	-
Research Grants for 1994 Institutions	4,500	-	5,000	-	5,000	-	5,000	-	-	-
Capacity Building Non-Land Grant Colleges of Agriculture.....	5,000	-	6,000	-	6,000	-	-	-	-6,000	(4)
New Beginning for Tribal Students.....	5,000	-	5,000	-	5,000	-	5,000	-	-	-
Grants for Insular Areas (Combined Program)	2,000	-	2,500	-	2,500	-	2,500	-	-	-
Agriculture and Food Research Initiative.....	445,000	-	455,000	-	455,000	-	475,000	-	+20,000	(5)
Veterinary Medicine Loan Repayment (Medical Services Act Program)	9,500	-	10,000	-	10,000	-	10,000	-	-	-
Veterinary Services Grant Program.....	3,500	-	4,000	-	4,000	-	4,000	-	-	-
Continuing Animal Health and Disease Research Program (Sec. 1433)	4,000	-	4,000	-	4,000	-	-	-	-4,000	(6)
Supplemental and Alternative Crops (Sec. 1437D).....	2,000	-	2,000	-	2,000	-	-	-	-2,000	(7)
Multicultural Scholars, Graduate Fellowship and Institution Challenge Grants	10,000	-	10,000	-	10,000	-	10,000	-	-	-
Secondary and 2-year Post-Secondary Education	900	-	1,000	-	1,000	-	1,000	-	-	-
Aquaculture Centers (Sec. 1475).....	5,000	-	5,000	-	5,000	-	5,000	-	-	-
Sustainable Agriculture Research and Education.....	45,000	-	50,000	-	50,000	-	50,000	-	-	-
Farm Business Management.....	2,000	-	2,500	-	2,500	-	-	-	-2,500	(8)
Sun Grant Program	3,500	-	3,500	-	3,500	-	-	-	-3,500	(9)
Research Equipment Grants	5,000	-	5,000	-	5,000	-	5,000	-	-	-
Alfalfa Seed and Alfalfa Forage Systems Research Program	3,500	-	4,000	-	4,000	-	4,000	-	-	-
Minor Crop Pest Management (IR-4).....	14,500	-	15,000	-	15,000	-	15,000	-	-	-
Agricultural Genome to Phenome Initiative.....	2,000	-	2,500	-	2,500	-	-	-	-2,500	(10)
Laying Hen and Turkey Research Program.....	-	-	1,000	-	1,000	-	-	-	-1,000	(11)
Open Data Standards for Neutral Data Repository.....	-	-	1,000	-	1,000	-	-	-	-1,000	(12)
Research Facilities Act	-	-	2,000	-	2,000	-	2,000	-	-	-
Special Research Grants:										
Global Change/UV Monitoring	1,400	-	1,400	-	1,400	-	1,400	-	-	-
Potato Research	3,000	-	4,000	-	4,000	-	4,000	-	-	-
Aquaculture Research.....	2,000	-	2,200	-	2,200	-	-	-	-2,200	(13)
Subtotal, Special Research Grants.....	6,400	-	7,600	-	7,600	-	5,400	-	-2,200	-
Federal Administration (Direct Appropriations):										
Grants Management Systems	7,924	-	7,924	-	7,924	-	7,924	-	-	-
General Administration / Other	12,020	-	12,597	-	12,597	-	14,246	-	+1,649	(14)
Subtotal, Federal Administration.....	19,944	-	20,521	-	20,521	-	22,170	-	+1,649	-
General Provisions:										
GP-Blue Ribbon Panel.....	300	-	-	-	-	-	-	-	-	-
GP-Farm of the Future	5,000	-	-	-	-	-	-	-	-	-
GP-Open Data Standards for Neutral Data Repository	1,000	-	-	-	-	-	-	-	-	-
Subtotal, General Provisions	6,300	-	-	-	-	-	-	-	-	-
Total, Research and Education.....	1,052,544	-	1,094,121	-	1,094,121	-	1,106,070	-	+11,949	-
Extension Activities										
Smith-Lever 3(b&c) Programs and Cooperative Extension.....	320,000	-	325,000	-	325,000	-	325,000	-	-	-
Extension Services at 1890 Institutions.....	65,000	-	72,000	-	72,000	-	76,000	-	+4,000	(15)
Extension Services at 1994 Institutions.....	9,500	-	11,000	-	11,000	-	21,000	-	+10,000	(16)

2025 USDA EXPLANATORY NOTES – NATIONAL INSTITUTE OF FOOD AGRICULTURE

Item	2022		2023		2024		2025		FTE Inc. or Dec.	Chg Key
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE Inc. or Dec.		
Facility Improvements at 1890 Institutions	21,500	-	21,500	-	21,500	-	24,800	-	+3,300	(17)
Renewable Resources Extension Act	4,060	-	4,060	-	4,060	-	4,060	-	-	-
Rural Health and Safety Education Programs	5,000	-	5,000	-	5,000	-	5,000	-	-	-
Food Animal Residue Avoid. Database Program	2,500	-	2,500	-	2,500	-	2,000	-	-500	(18)
Women and Minorities in STEM Fields.....	1,000	-	2,000	-	2,000	-	2,000	-	-	-
Food Safety Outreach Program	10,000	-	10,000	-	10,000	-	10,000	-	-	-
Food and Ag Service Learning	2,500	-	2,000	-	2,000	-	2,000	-	-	-
Farm and Ranch Stress Assistance Network	10,000	-	10,000	-	10,000	-	10,000	-	-	-
Enhancing Ag Opportunities Military Veterans (Ag Vets)	-	-	-	-	-	-	5,000	-	+5,000	(19)
Smith-Lever Act, Section 3(d):										
Expanded Food and Nutrition Program	70,000	-	70,000	-	70,000	-	90,000	-	+20,000	(20)
Farm Safety and Youth Farm Safety Education Programs.....	5,000	-	5,000	-	5,000	-	5,000	-	-	-
New Technologies for Ag Extension.....	3,550	-	3,550	-	3,550	-	3,550	-	-	-
Children, Youth, and Families at Risk.....	8,395	-	8,395	-	8,395	-	8,395	-	-	-
Federally Recognized Tribes Extension Program	3,500	-	4,305	-	4,305	-	7,700	-	+3,395	(21)
Subtotal, Smith-Lever Act Section 3(d)	90,445	-	91,250	-	91,250	-	114,645	-	+23,395	
Federal Administration (Direct Appropriations):										
Agriculture in the K12 Classroom	1,000	-	1,000	-	1,000	-	1,000	-	-	-
Federal Administration - Other Necessary Expenses	8,100	-	8,100	-	8,100	-	8,100	-	-	-
Subtotal, Federal Administration.....	9,100	-	9,100	-	9,100	-	9,100	-	-	
General Provisions:										
GP-Enhancing Agricultural Opportunities for Military Veterans	5,000	-	5,000	-	5,000	-	-	-	-5,000	(22)
GP-Beginning Farmers and Ranchers Development Program (under FOTO).....	2,000	-	2,000	-	2,000	-	-	-	-2,000	(23)
Subtotal, General Provisions	7,000	-	7,000	-	7,000	-	-	-	-7,000	
Total, Extension Activities	557,605	-	572,410	-	572,410	-	610,605	-	+38,195	
Integrated Activities										
Methyl Bromide Transition	2,000	-	2,000	-	2,000	-	-	-	-2,000	(24)
Organic Transition Program	7,500	-	7,500	-	7,500	-	4,000	-	-3,500	(25)
Regional Rural Development Centers	2,500	-	3,000	-	3,000	-	-	-	-3,000	(26)
Food & Agriculture Defense Initiative (Homeland Security)	8,000	-	8,000	-	8,000	-	8,000	-	-	-
Crop Protection/Pest Management	20,000	-	21,000	-	21,000	-	3,000	-	-18,000	(27)
General Provisions:										
GP-Institute for Rural Partnership - University of Vermont	10,000	-	-	-	-	-	-	-	-	-
Subtotal, General Provisions	10,000	-	-	-	-	-	-	-	-	
Total, Integrated Activities	50,000	-	41,500	-	41,500	-	15,000	-	-26,500	
Subtotal, Discretionary Appropriations	1,660,149	-	1,708,031	-	1,708,031	-	1,731,675	-	+23,644	
Mandatory Appropriations:										
Extension Risk Management Education	9,430	-	9,430	-	9,430	-	9,430	-	-	-
Gus Schumacher Nutrition Incentive Program (GusNIP) /Food Insecurity Nutrition Program	49,979	-	52,808	-	52,808	-	52,808	-	-	-
Beginning Farmer & Rancher Development Program	18,860	-	23,575	-	23,575	-	23,575	-	-	-
Organic Agriculture Research and Extension Initiative	28,290	-	47,150	-	47,150	-	47,150	-	-	-
Specialty Crop Research Initiative	75,440	-	75,440	-	75,440	-	75,440	-	-	-
Emergency Citrus Disease Research and Extension Trust Fund.....	25,000	-	25,000	-	25,000	-	-	-	-25,000	-
Urban, Indoor & Other Emerging Ag Production, Sec. 7212	-	-	-	-	2,000	-	-	-	-	-
Scholarships for Students at 1890 Institutions, Sec. 1446.....	-	-	-	-	10,000	-	-	-	-	-
Subtotal, Mandatory.....	206,999	-	233,403	-	245,403	-	208,403	-	-25,000	
Supplemental Appropriations:										
IRA Supp, From Learning to Leading	250,000	-	-	-	-	-	-	-	-	-
IIJA Supp, Bioproduct Pilot Program (Section 70501).....	5,000	-	5,000	-	-	-	-	-	-5,000	-
Subtotal, Supplemental Appropriations.....	255,000	-	5,000	-	-	-	-	-	-5,000	
Endowment Funding:										
Tribal Colleges Endowment Fund (Native American Endowment Fund)	-11,880	-	-11,880	-	-11,880	-	-11,880	-	-	-
Interest on Tribal College Endowment Fund (Endowment - Interest Earned)	4,825	-	4,463	-	5,407	-	5,199	-	+736	-
Subtotal, Endowment Funding.....	4,825	-	4,463	-	5,407	-	5,199	-	+736	
Offsetting Collections:										
Commodity Board	-	-	1,750	-	2,350	-	-	-	-1,750	-

2025 USDA EXPLANATORY NOTES – NATIONAL INSTITUTE OF FOOD AGRICULTURE

Item	2022		2023		2024		2025		FTE Inc. or Dec.	Chg Key
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE		
Subtotal, Offsetting Collections	-	-	1,750	-	2,350	-	-	-	-1,750	-
Total Adjusted Appropriations.....	2,126,973	-	1,952,647	-	1,961,191	-	1,945,277	-	-7,370	-
Add back:										
Transfers In and Out, Rescissions	1,137	-	-	-	-	-	-	-	-	-
Sequestration	11,001	-	12,597	-	12,597	-	12,597	-	-	-
Total Appropriation.....	2,139,111	-	1,965,244	-	1,973,788	-	1,957,874	-	-7,370	-
Transfers In:										
Total Transfers In.....	-	-	-	-	-	-	-	-	-	-
Transfers Out:										
Working Capital Fund Transfer	-1,137	-	-	-	-	-	-	-	-	-
Total Transfers Out.....	-1,137	-	-	-	-	-	-	-	-	-
Sequestration.....	-11,001	-	-12,597	-	-12,597	-	-12,597	-	-	-
Recoveries, Other.....	33,992	-	31,896	-	-	-	-	-	-31,896	-
Bal. Available, SOY	609,614	-	897,734	-	458,180	-	-	-	-897,734	-
Total Available.....	2,770,579	-	2,882,277	-	2,419,371	-	1,945,277	-	-937,000	-
Lapsing Balances	-412	-	-536	-	-	-	-	-	-	-
Bal. Available, EOY	-897,734	-	-458,718	-	-	-	-	-	+458,718	-
Total Obligations.....	1,872,433	372	2,423,023	416	2,419,371	422	1,945,277	422	-478,282	-

Note: The details associated with Supplemental appropriations provided to the Office of the Secretary, but implemented in this account, is found in the USDA Budget Summary, and is not reflected above.

2025 USDA EXPLANATORY NOTES – NATIONAL INSTITUTE OF FOOD AGRICULTURE

Table NIFA-8. Project Statement on Basis of Obligations (thousands of dollars, FTEs)

Item	2022		2023		2024		2025		Inc. or Dec.	FTE Inc. or Dec.
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE		
Discretionary Obligations:										
Research and Education Activities										
Hatch Act.....	\$260,000	-	\$265,000	-	\$265,000	-	\$265,000	-	-	-
McIntire-Stennis Cooperative Forestry Act.....	36,000	-	38,000	-	38,000	-	36,000	-	-\$2,000	-
Research at 1890 Institutions (Evans-Allen).....	80,000	-	89,000	-	89,000	-	98,000	-	+9,000	-
Payments to 1994 Institutions (Tribal Colleges Ed. Equity).....	5,500	-	6,800	-	7,200	-	15,000	-	+7,800	-
Education Grants for 1890 Institutions (Capacity Building Grants).....	24,852	-	34,417	-	62,116	-	30,000	-	-32,116	-
Scholarships at 1890 Institutions.....	9,600	-	9,600	-	10,000	-	10,000	-	-	-
Centers of Excellence at 1890 Institutions.....	10,000	-	10,000	-	10,000	-	10,000	-	-	-
Education Grants for Hispanic Serving Institutions.....	13,440	-	15,777	-	16,037	-	16,000	-	-37	-
Education Grants for Alaska Native and Native Hawaiian-Serving Institutions...	3,884	-	2,962	-	6,911	-	5,000	-	-1,911	-
Research Grants for 1994 Institutions.....	10	-	2,253	-	13,246	-	5,000	-	-8,246	-
Capacity Building Non-Land Grant Colleges of Agriculture.....	7,043	-	7,025	-	6,185	-	-	-	-6,185	-
New Beginning for Tribal Students.....	3,863	-	4,908	-	5,000	-	5,000	-	-	-
Grants for Insular Areas (Combined program).....	2,000	-	2,343	-	2,543	-	2,500	-	-43	-
Agriculture and Food Research Initiative.....	427,400	-	604,405	-	829,702	-	475,000	-	-354,702	-
Veterinary Medicine Loan Repayment (Medical Services Act Program).....	6,582	-	13,436	-	23,887	-	10,000	-	-13,887	-
Veterinary Services Grant Program.....	3,500	-	4,000	-	4,000	-	4,000	-	-	-
Continuing Animal Health and Disease Research Program (Sec. 1433).....	4,000	-	4,000	-	4,000	-	-	-	-4,000	-
Supplemental and Alternative Crops (Sec. 1437D).....	2,000	-	2,000	-	2,000	-	-	-	-2,000	-
Multicultural Scholars, Graduate Fellowship and Institution Challenge Grants ...	3,826	-	7,579	-	21,549	-	10,000	-	-11,549	-
Secondary and 2-year Post-Secondary Education.....	900	-	1,000	-	1,000	-	1,000	-	-	-
Aquaculture Centers (Sec. 1475).....	5,000	-	5,000	-	5,000	-	5,000	-	-	-
Sustainable Agriculture Research and Education.....	45,000	-	50,000	-	50,000	-	50,000	-	-	-
Farm Business Management.....	2,000	-	2,500	-	2,500	-	-	-	-2,500	-
Sun Grant Program.....	3,500	-	3,500	-	3,500	-	-	-	-3,500	-
Research Equipment Grants.....	5,000	-	5,000	-	5,000	-	5,000	-	-	-
Alfalfa Seed and Alfalfa Forage Systems Research Program.....	3,500	-	4,000	-	4,000	-	4,000	-	-	-
Minor Crop Pest Management (IR-4).....	14,500	-	15,000	-	15,000	-	15,000	-	-	-
Agricultural Genome to Phenome Initiative.....	2,000	-	2,500	-	2,500	-	-	-	-2,500	-
Laying Hen and Turkey Research Program.....	-	-	1,000	-	1,000	-	-	-	-1,000	-
Open Data Standards for Neutral Data Repository.....	-	-	1,000	-	1,000	-	-	-	-1,000	-
Research Facilities Act.....	-	-	2,000	-	2,000	-	2,000	-	-	-
Special Research Grants:										
Global Change/UV Monitoring.....	1,400	-	1,400	-	1,400	-	1,400	-	-	-
Potato Research.....	3,000	-	4,000	-	4,000	-	4,000	-	-	-
Aquaculture Research.....	2,000	-	2,200	-	2,200	-	-	-	-2,200	-
Subtotal, Special Research Grants.....	6,400	-	7,600	-	7,600	-	5,400	-	-2,200	-
Federal Administration (Direct Appropriations):										
Grants Management Systems.....	4,503	-	7,924	-	7,924	-	7,924	-	-	-
General Administration / Other.....	12,020	-	12,597	-	12,597	-	14,246	-	+1,649	-
Subtotal, Federal Administration.....	16,523	-	20,521	-	20,521	-	22,170	-	+1,649	-
General Provisions:										
GP-1890 Institutions, Centers of Excellence.....	9,600	-	-	-	-	-	-	-	-	-
GP-Agriculture Business Innovation Center at HBCU.....	2,000	-	-	-	-	-	-	-	-	-
GP-Blue Ribbon Panel.....	300	-	-	-	-	-	-	-	-	-
GP-Farm of the Future.....	4,000	-	4,698	-	-	-	-	-	-	-
GP-Open Data Standards for Neutral Data Repository.....	1,000	-	-	-	-	-	-	-	-	-
Subtotal, General Provisions.....	16,900	-	4,698	-	-	-	-	-	-	-
Total, Research and Education.....	1,024,723	-	1,248,824	-	1,536,997	-	1,106,070	-	-430,927	-
Extension Activities										
Smith-Lever 3(b&c) Programs and Cooperative Extension.....	320,000	-	325,000	-	325,000	-	325,000	-	-	-
Extension Services at 1890 Institutions.....	65,000	-	72,000	-	72,000	-	76,000	-	+4,000	-
Extension Services at 1994 Institutions.....	9,500	-	10,552	-	11,000	-	21,000	-	+10,000	-

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Item	2022		2023		2024		2025		Inc. or Dec.	FTE Inc. or Dec.
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE		
Facility Improvements at 1890 Institutions	23,763	-	47,105	-	22,303	-	24,800	-	+2,497	-
Renewable Resources Extension Act	4,060	-	4,060	-	4,060	-	4,060	-	-	-
Rural Health and Safety Education Programs	5,000	-	5,000	-	5,000	-	5,000	-	-	-
Food Animal Residue Avoid. Database Program	2,500	-	2,500	-	2,500	-	2,000	-	-500	-
Women and Minorities in STEM Fields.....	1,000	-	2,000	-	2,000	-	2,000	-	-	-
Food Safety Outreach Program.....	10,000	-	10,000	-	10,000	-	10,000	-	-	-
Food and Ag Service Learning	2,500	-	2,000	-	2,000	-	2,000	-	-	-
Farm and Ranch Stress Assistance Network	10,000	-	10,000	-	10,000	-	10,000	-	-	-
Enhancing Ag Opportunities Military Veterans (Ag Vets)	-	-	-	-	-	-	5,000	-	+5,000	-
Smith-Lever Act, Section 3(d):										
Expanded Food and Nutrition Program	70,000	-	70,000	-	70,000	-	90,000	-	+20,000	-
Farm Safety and Youth Farm Safety Education Programs.....	5,000	-	5,000	-	5,000	-	5,000	-	-	-
New Technologies for Ag Extension	3,550	-	3,550	-	3,550	-	3,550	-	-	-
Children, Youth, and Families at Risk.....	8,395	-	8,395	-	8,395	-	8,395	-	-	-
Federally Recognized Tribes Extension Program	3,500	-	4,305	-	4,305	-	7,700	-	+3,395	-
Subtotal, Smith-Lever Act Section 3(d)	90,445	-	91,250	-	91,250	-	114,645	-	+23,395	-
Federal Administration (Direct Appropriations):										
Agriculture in the K12 Classroom	1,000	-	1,000	-	1,000	-	1,000	-	-	-
Federal Administration - Other Necessary Expenses	8,100	-	8,100	-	8,100	-	8,100	-	-	-
Subtotal, Federal Administration.....	9,100	-	9,100	-	9,100	-	9,100	-	-	-
General Provisions:										
GP-Enhancing Agricultural Opportunities for Military Veterans	2,707	-	5,069	-	7,103	-	-	-	-7,103	-
GP-Beginning Farmers and Ranchers Development Program (under FOTO)	2,000	-	2,000	-	2,000	-	-	-	-2,000	-
Subtotal, General Provisions	4,707	-	7,069	-	9,103	-	-	-	-9,103	-
Total, Extension Activities	557,575	-	597,636	-	575,316	-	610,605	-	+35,289	-
Integrated Activities										
Methyl Bromide Transition program	2,000	-	2,000	-	2,000	-	-	-	-2,000	-
Organic Transition Program	7,500	-	7,500	-	7,500	-	4,000	-	-3,500	-
Regional Rural Development Centers	2,500	-	3,000	-	3,000	-	-	-	-3,000	-
Food & Agriculture Defense Initiative (FADI) (Homeland Security)	7,984	-	8,933	-	8,017	-	8,000	-	-17	-
Crop Protection/Pest Management (CP/PM).....	20,000	-	21,000	-	21,000	-	3,000	-	-18,000	-
International Science and Education Grants	-	-	-	-	717	-	-	-	-717	-
General Provisions:										
GP Institute for Rural Partnership - University of Vermont.....	-	-	10,000	-	-	-	-	-	-	-
Subtotal, General Provisions	-	-	10,000	-	-	-	-	-	-	-
Total, Integrated Activities	39,984	-	52,433	-	42,234	-	15,000	-	-27,234	-
Subtotal, Discretionary Obligations.....	1,622,282	-	1,898,893	-	2,154,547	-	1,731,675	-	-423,410	-
Mandatory Obligations:										
Extension Risk Management Education	18,860	-	9,430	-	9,430	-	9,430	-	-	-
Gus Schumacher Nutrition Incentive Program (GusNIP) /Food Insecurity Nutrition Program	49,979	-	52,808	-	52,808	-	52,808	-	-	-
Beginning Farmer & Rancher Development Program	15,023	-	26,308	-	25,656	-	23,575	-	-2,081	-
Organic Agriculture Research and Extension Initiative	28,433	-	46,184	-	47,272	-	47,150	-	-122	-
Specialty Crop Research Initiative	75,120	-	75,939	-	76,499	-	75,440	-	-1,059	-
Emergency Citrus Disease Research and Extension Trust Fund	26,532	-	25,777	-	27,107	-	-	-	-27,107	-
Urban, Indoor & Other Emerging Ag Production, Sec. 7212.....	-	-	9,961	-	2,050	-	-	-	-2,050	-
Emergency Citrus Research and Extension Program	1,915	-	949	-	1,350	-	-	-	-1,350	-
Scholarships for Students at 1890 Institutions, Sec. 1446.....	10,481	-	10,519	-	10,000	-	-	-	-10,000	-
Biomass Research and Development.....	-	-	-	-	3,656	-	-	-	-3,656	-
Subtotal, Mandatory Obligations.....	226,343	-	257,875	-	255,828	-	208,403	-	-43,769	-
Supplemental Obligations:										
Emergency Supp-COVID, Farming Opportunities & Outreach (Section 754, OPPE)	7,394	-	-	-	-	-	-	-	-	-
Emergency Supp-COVID, GusNIP/Food Insecurity Nutrition Program (Section 756)	6,000	-	-	-	-	-	-	-	-	-
Emergency Supp-COVID, Farm Stress (Section 766)	3,465	-	-	-	156	-	-	-	-156	-

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Item	2022		2023		2024		2025		FTE Inc.	
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE	Inc. or Dec.	or Dec.
IRA Supp. From Learning to Leading	-	-	250,000	-	-	-	-	-	-	-
IIJA Supp. Bioproduct Pilot Program (Section 70501) (GP)	-	-	10,000	-	-	-	-	-	-	-
Subtotal, Supplemental Obligations.....	16,859	-	260,000	-	156	-	-	-	-156	-
Offsetting Collections:										
Commodity Board	-	-	1,870	-	2,350	-	-	-	-	-
Subtotal Offsetting Collections	-	-	1,870	-	2,350	-	-	-	-	-
Endowment Funding:										
Tribal Colleges Endowment Fund (Native American Endowment Fund)	(11,880)	-	(11,800)	-	(11,880)	-	(11,880)	-	-	-
Interest on Tribal College Endowment Fund (Endowment - Interest Earned)	6,949	-	4,385	-	6,490	-	5,199	-	-1,291	-
Subtotal, Endowment	6,949	-	4,385	-	6,490	-	5,199	-	-1,291	-
Total Obligations	1,872,433	-	2,423,023	-	2,419,371	-	1,945,277	-	-468,088	-
Add back:										
Lapsing Balances	412	-	536	-	-	-	-	-	-	-
Balances Available, EOY	+897,734	-	+458,718	-	-	-	-	-	-	-
Total Bal. Available, EOY	897,734	-	458,718	-	-	-	-	-	-	-
Total Available	2,770,579	-	2,882,277	-	2,419,371	-	1,945,277	-	-468,088	-
Less:										
Total Transfers Out	1,137	-	-	-	-	-	-	-	-	-
Sequestration	11,001	-	12,597	-	12,597	-	12,597	-	-	-
Recoveries, Other	-33,992	-	-31,896	-	-	-	-	-	+31,896	-
Bal. Available, SOY	-609,614	-	-897,734	-	-458,180	-	-	-	+897,734	-
Total Appropriation	2,139,111	372	1,965,244	416	1,973,788	422	1,957,874	422	+461,542	-

Note: The details associated with Supplemental appropriations provided to the Office of the Secretary, but implemented in this account, is found in the USDA Budget Summary, and is not reflected above.

JUSTIFICATION OF CHANGES**National Institute of Food and Agriculture**

The numbers and letters of the following listing relates to values in the Change (Chg) Key column of the Project Statement:

- (1) A decrease of \$2,000,000 for the McIntire-Stennis Forestry Act (\$38,000,000 available in 2024).

The McIntire-Stennis Research Program supports development of new knowledge and innovations to sustain healthy and productive forests, agroforests, rangelands, and grasslands and address challenges facing forest owners and the forest products industry. The McIntire-Stennis Research Program develops critical research-based knowledge that enables researchers and land managers (along with their advisors such as the Cooperative Extension System) to develop plant materials and management practices that can maintain the flow of services and products the U.S. relies upon from these forests, agroforests, rangelands, and grasslands. As climate change continues to destabilize these lands, the resilience and productivity of forests and rangelands are also threatened, and the well-being of rural America is impacted through lost income, jobs, and resources. McIntire-Stennis is the only capacity fund that is directed exclusively to support forestry, range, and the forest products industry, and supports programs in the 1890 and 1862 Land-grant and non-Land-grant colleges of forestry, while strengthening the pipeline of new foresters, researchers, and range managers in the forestry workforce. The support is crucial to ensuring the continued success of these programs that provide researchers with the resources to deal with issues of local and regional importance; issues that other federal research programs have difficulty addressing.

- (2) An increase of \$9,000,000 for Research at 1890 Institutions (Evans-Allen) (\$89,000,000 available in 2024).

Evans-Allen capacity funds authorized by section 1445 of the National Agriculture Research, Extension, and Teaching Policy Act of 1977 (NARETPA) provide support for agricultural research at the 1890 land-grant universities (LGUs). There are currently nineteen eligible institutions, and this increased funding is crucial for 1890 LGUs to adequately support agricultural research, improve the ability of scientists to compete for research funding, and encourage innovative and applied agricultural research that suits the needs of state populations. The program enhances the research capabilities of 1890 LGUs, thereby addressing issues of equity. The increase in program funding will enable the 1890 LGUs to obtain cutting-edge research equipment and to recruit skilled scientists. Funds will be used to purchase and lease land, as well as develop, modify, or restore structures essential for agricultural research. The program fund is used annually by the 1890 LGUs to pursue internal research initiatives to address agricultural research issues in the United States, to promote innovation, and to empower leaders, inventors, and researchers from underserved communities. In addition to addressing issues pertinent to populations with limited resources, the research focuses on small-scale agriculture. The additional funding will increase the quantity, caliber, and scope of research projects supported by this fund.

- (3) An increase of \$8,000,000 for Payments to 1994 Institutions (Tribal Colleges Education Equity Grants Program) (\$7,000,000 available in 2024).

The 1994 Land-Grants use Tribal Colleges Education Equity grants to support faculty to develop courses and degree programs that teach science and math to Native Americans. The program's focus is on agriculture, natural resources, and social sciences. Currently with 35 eligible Institutions, an increase in annual appropriations will expand participation of eligible entities, and the number of students they could educate by bringing on more faculty and needed resources. The funds distributed on a formula basis may be used to support teaching programs in the food and agricultural sciences in the key need areas of: 1) curricula design and instructional materials development; 2) faculty development and preparation for teaching; 3) instruction delivery systems and strategic partnerships; 4) student experimental learning; 5) equipment and instrumentation for teaching; and 6) student recruitment and retention. The program is a Justice40 covered program that contributes to Environmental Justice efforts. Increased funding will help drive benefits to underserved communities.

- (4) A decrease of \$6,000,000 for Capacity Building Non-Land Grant Colleges of Agriculture (\$6,000,000 available in 2024).

The research goals of this program can be more effectively addressed through application to higher priority programs as described in the Agriculture and Food Research Initiative (AFRI) Foundational and Applied Science and Sustainable Agricultural Systems Programs. The education and extension portions of the NLGCA grants program may similarly be supported by applying to other funding sources such as the AFRI Education and Workforce Development Programs, Higher Education Challenge Grant Program, and when applicable, the Hispanic-Serving Education Grants Program. The Equipment Grants Program may support to the acquisition of equipment for shared research, but would not support the independent research, nor instrumentation for primary educational activities.

(5) An increase of \$20,000,000 for the Agriculture and Food Research Initiative (\$455,000,000 available in 2024).

NIFA proposes to increase its investment to \$475 million in AFRI, America’s flagship competitive grants program for food and agricultural sciences. This investment is critical for supporting systems-level work, as well as foundational research in agricultural production and products, coordinated Extension activities to transfer research findings to producers and consumers, and continued development of the skilled workforce needed to spur the agricultural enterprise. Increased funding for the AFRI program will support increased funding rates (i.e., the number of grants awarded) for highly meritorious applications, especially for new investigators and minority-serving institutions. This essential support of the pipeline for the next generation of diverse scientists is critical for maintaining a vigorous research enterprise in food and agricultural science.

Past AFRI investments have directly benefited agricultural producers by providing improved crop cultivars, creating climate-smart decision tools, and developing high-value uses of agricultural products. For example, a multi-institutional AFRI award made in 2022 has produced a cohort of more than 20 new plant breeders to help address workforce needs in private and public plant breeding programs in the near term. Associated plant breeding activities resulted in the release of 33 new public wheat varieties with their associated Plant Variety Protection Certification submitted. Another AFRI award made in 2022 resulted in a new, web-based Drought Irrigation Response Tool. This integrative platform assists farmers in making irrigation scheduling decisions during the crop season, not only during drought years, but every year. The tool was developed using feedback from farmers as they learned to install, use, and interpret soil moisture sensors. Availability of this tool has resulted in farmers’ application of site-specific water-use strategies, leading to more efficient water management, higher quality crops, and increased economic benefits.

Through AFRI grants, NIFA will support the 2025 Administration priorities of promoting climate-smart agriculture and forestry practices, mitigating agricultural greenhouse gas emissions (including further reduction of enteric methane from domestic ruminants), improving food and nutrition security, expanding markets for agricultural products, and promoting prosperity in America’s underserved communities.

AFRI supports the following [USDA Strategic Plan 2022 - 2026](#) Goals:

Goal 1: Combat climate change to support America’s working lands, natural resources, and communities

Goal 2: Ensure America’s agricultural system is equitable, resilient, and prosperous

Goal Priority 3.1: Foster Sustainable Economic Growth by Promoting Innovation, Building Resilience to Climate Change, and Expanding Renewable Energy

Goal Priority 3.2: Expand Markets for Emerging Technologies, Sustainable Products, and Novel Products

Goal Priority 4.2: Encourage Healthy Dietary Choices through Data-Driven, Flexible, Customer-Focused Approaches

Goal Priority 4.3: Prevent Foodborne Illness and Protect Public Health

Goal Priority 5.3: Increase Capacity, Sustainability, and Economic Vitality in Rural and Tribal Communities

Goal Priority 5.4: Promote Environmental Justice by Maximizing Sustainable and Green Economic Development in Rural and Tribal Communities

The AFRI Program will continue to invest heavily in grants that fall directly within the six priority areas for AFRI identified in the Farm Bill. In 2025, in support of the six Farm Bill Priority Areas, the AFRI program proposes to also invest in:

- Climate science research that develops climate-smart agriculture and forestry and carbon-neutral agricultural practices to support adaptation to climate change and to achieve net-zero greenhouse gas emissions by 2050

- Innovations in clean energy production from, and use in, food and agricultural systems
- Increased support for bioconversion of agricultural feedstocks to bioproducts
- Increased funding to mitigate food loss and waste
- Increased support for environmental justice, consistent with Executive Order 14096 (<https://www.federalregister.gov/documents/2023/04/26/2023-08955/revitalizing-our-nations-commitment-to-environmental-justice-for-all>)
- Increased support for precision nutrition and the Administration’s Cancer Moonshot Initiative
- Integration of Traditional Ecological Knowledge in agriculture and food production systems

NIFA will invest \$20 million in 2025 to support the Administration’s efforts on the Cancer Moonshot. This will fund research to reduce diet-related chronic disease, produce healthy foods that reduce the risk of cancer, and create biobased agricultural products as anticancer supplements and therapeutic agents.

NIFA will also invest \$10 million in integrated projects on Precision Nutrition. These projects will inform National dietary guidance, help tackle food and nutrition insecurity, and prevent and control diet-related chronic diseases. They will support and encourage healthy dietary choices at the individual, family, community, and population levels sustained across all life-stages. Approaches will be data-driven, flexible, culturally- and contextually-relevant, and customer-focused.

Throughout the AFRI program, NIFA will continue to emphasize development of climate-smart agriculture and forestry practices, mitigation of agricultural greenhouse gas emissions, climate science research and innovation in clean energy technology development and application. NIFA will invest \$23 million in climate science research (USGCRP), \$12 million (Climate Hubs) in efforts to measure and monitor greenhouse gas from agricultural and food production systems, and \$134 million for innovative approaches to producing clean energy from agricultural sources.

Focused investments in these topics will be made in the three major complementary components of AFRI: 1) Sustainable Agricultural Systems, 2) Foundational and Applied Science, and 3) Education and Workforce Development.

NIFA proposes to invest \$88.2 million of appropriated funds in the Sustainable Agricultural Systems program to support large, integrated projects that develop technological solutions to challenges in major agricultural systems. These investments will focus on climate-smart agriculture and forestry (including climate science, reduction of enteric methane from domestic ruminants, and innovations in clean energy production), enhancing the bioeconomy, and food and nutrition security. This will enable NIFA’s goal of advancing the convergence of agricultural sciences with engineering, data science, nutritional and food sciences, social sciences, and other disciplines, including nanotechnology, computational sciences and advanced manufacturing, to generate new scientific discoveries, new products, new markets and, consequently, new high-skill jobs.

The agency proposes to invest \$339.3 million in the Foundational and Applied Science programs, which includes support for interagency partnerships to develop advanced technologies such as robotics, sensors, and cyber-physical systems. The agency will maintain increased investments made in previous years in plant and animal breeding that support classical breeding efforts to improve crop and animal productivity, and will increase funding to support emerging technologies such as gene editing, autonomous systems, precision animal agriculture, application to agriculture of big data, artificial intelligence and machine learning, as well as addressing economic implications and social acceptance of these advanced agricultural technologies. NIFA will continue to invest in research on the microbiomes of foods, food animals, plants, human gut and soils, and on food and nutrition security, food safety, and agricultural biosecurity to protect our Nation’s food supply and the agricultural economy. NIFA will maintain support for research on climate change, environmental systems, and adoption of technologies and management practices to support climate-smart agriculture and forestry. NIFA also will continue recent investments to promote environmental justice and to reduce food loss and waste.

The agency proposes to invest \$47.5 million in Education and Workforce Development programs to promote growth and skill improvement in the workforce needed to spur innovations in the agricultural economy, enhance rural prosperity, and advance competitiveness of U.S. agriculture. To connect rural skillsets to jobs of the future, investments will be increased in positive youth development programs, K-14 curricula development and

training/retraining of workers for developing a technology- and data-savvy workforce ready for the field and industrial jobs. The AFRI Education and Workforce Development program contributes towards the OMB and OSTP guidance for future STEM education activities.

- (6) A decrease of \$4,000,000 for Continuing Animal Health and Disease Research Program (\$4,000,000 available in 2024).

The goals of this program can be better addressed if the funding is reallocated to larger programs such as the Agriculture and Food Research Initiative Program (AFRI). This reallocation in funding would allow for greater focus on national priorities, and efficiency in program management and implementation through consolidation of program.

- (7) A decrease of \$2,000,000 for Supplemental and Alternative Crops (\$2,000,000 available in 2024).

The broad research goals of this relatively small program can be better addressed if the funding is reallocated to larger programs such as the Agriculture and Food Research Initiative Program (AFRI) where similar projects are supported through program areas that include: Plant, Health, and Production and Plant Products (PHPPP); Bioenergy, Natural Resources and Environment (BNRE); and Agriculture, Economics, and Rural Communities (AERC). This reallocation in funding would allow for greater focus on national priorities, and efficiency in program management and implementation through consolidation of program.

- (8) A decrease of \$2,500,000 for Farm Business Management and Benchmarking (\$2,500,000 available in 2024).

The research goals of this relatively small program can be more effectively addressed through higher priority programs in this request. Including Agriculture and Food Research Initiative (AFRI). This would allow for greater focus on national priorities, and efficiency in program management and implementation.

- (9) A decrease of \$3,500,000 for the Sun Grant Program (\$3,500,000 available in 2024).

The goals of this program can be better addressed if the funding is reallocated to the Agriculture and Food Research Initiative (AFRI) Program. This change will improve the level of reporting on project accomplishments and the impacts, as current reporting is limited to the administrative conduct of the program. With funding provided through AFRI, the projects awarded will provide greater project information utilizing the NIFA Reporting Portal.

- (10) A decrease of \$2,500,000 for Agriculture Genome to Phenome Initiative (\$2,500,000 available in 2024).

The goals of this program, which initiated in 2021 through a general provision, can be better addressed if the funding is reallocated to larger programs such as the Agriculture and Food Research Initiative Program (AFRI). This reallocation in funding would encourage greater focus on national priorities, and efficiency in program management and implementation through consolidation of program activities.

- (11) A decrease of \$1,000,000 for Laying Hen and Turkey Research Program (\$1,000,000 available in 2024).

The goals of this program can be better addressed if the funding is reallocated to larger programs such as the Agriculture and Food Research Initiative Program (AFRI). This reallocation in funding would allow for greater focus on national priorities, and efficiency in program management and implementation through consolidation of program activities and avoiding duplicated funding opportunities.

- (12) A decrease of \$1,000,000 for the Open Data Standards for Neutral Data Repository (\$1,000,000 available in 2024).

The goals of this program, which initiated in 2021 through a general provision, can be better addressed if the funding is reallocated to larger programs such as AFRI where similar projects are supported thru Foundational and Applied Science program areas such as A1541 Data Science for Food and Agricultural Systems. This

reallocation in funding would allow for greater focus on national priorities, and efficiency in program management and implementation through consolidation of program activities.

- (13) A decrease of \$2,200,000 for Aquaculture Research (\$2,200,000 available in 2024).

The goals of this relatively small, special research grant, program can more effectively be addressed thru the Agriculture and Food Research Initiative Program (AFRI) where similar projects are supporting U.S. aquaculture systems climate adaptation and resiliency. This reallocation in funding would allow for greater focus on national priorities, and efficiency in program management and implementation through consolidation of program activities.

- (14) An increase of \$1,649,000 for the National Institute of Food and Agriculture – Federal Administration R&E General Administration/Other (\$12,597,000 available in 2024).

This increase consists of \$889,000 in 2025 pay and employee costs, for continuation of the 2024 pay cost increase of 5.2 percent and 2025 pay cost increase of 2 percent. In addition, the increase includes an additional increase of \$761,000 for 2024 pay and employee costs from what was requested in the 2024 President’s Budget. Further reduction in base funding for administration and pay costs will limit the agency’s ability to recruit, retain, or develop new staff, provide for travel and participation in scientific meetings to represent the agency, and provide mission support.

- (15) An increase of \$4,000,000 for Extension Services at 1890 Institutions (\$72,000,000 available in 2024).

With a \$4 million increase in funding that will be allocated to the 19 Historically Black Colleges and Universities, the Cooperative Extension Service at 1890 Land-grant Institutions will have the capacity to reach additional underrepresented agricultural producers and communities. The agricultural and forestry extension activities support one or more of the following extension base program areas: Agriculture, Community Resources and Economic Development, Family Resource Management, 4-H and Youth Development, Leadership and Volunteer Development, Natural Resources and Environmental Management, and Nutrition, Diet, and Health. The capacity grant formula funds distributed to the Historically Black Colleges and Universities are leveraged with matching funding from non-federal sources to support USDA’s strategic goals, such as, meeting global food and clothing demands, enhancing private land management, supporting productive and sustainable use of national forest system lands, and providing safe, cheap, and nutritious food to all Americans. The 1890 Land-grant Institutions Extension Fund, one of 14 NIFA Justice40 initiatives, directly supports environmental justice.

- (16) An increase of \$10,000,000 for Extension Services at 1994 Institutions (\$11,000,000 available in 2024).

Within this grant program are two types of funds: Capacity grants and Special Emphasis. Capacity grants fund an entire Extension office which can have many mission areas and clients. Special Emphasis are targeted, short-term pilot projects that allow Extension educators to explore new ways to better serve their community. Increased funding will help provide the additional funds needed for extension offices within the 35 eligible 1994 Institutions to increase staff and programming. Extension offices work with reservation communities to build programs that target local needs including traditional foods, food sovereignty, agriculture, traditional ecological knowledge, health and wellness, and youth leadership development. This program is a Justice40 covered program that contributes to Environmental Justice efforts.

- (17) An increase of \$3,300,000 for 1890’s Facilities Grant Program (\$21,500,000 available in 2024).

Annually, each 1890 institution is eligible to receive one award. As there are currently nineteen Institutions that qualify, this increased funding is imperative for 1890 institutions to fully serve current students and faculty, as well as attract and retain the best available talent. This program is designed to help 1890 Land-grant Institutions acquire and improve agricultural and food sciences facilities and equipment, including libraries, so that the 1890 Land-grant Institutions may fully participate in developing the talent pool of the future for food, agricultural, natural resource, and human (FANH) science workforce. The Facilities Improvements at 1890 Institutions Program has enabled the 1890 LGUs to acquire new technology for research, construct new buildings for

education, and develop educational programs to teach individuals in rural communities new skills. However, this program continues to address disparities in the technology, equipment and building facilities of the 1890 Land-grant universities vis-à-vis 1862 Land-Grant Universities. This program is a Justice40 covered program that contributes to Environmental Justice efforts.

(18) A decrease of \$500,000 for Food Animal Residue Avoidance Database (\$2,500,000 available in 2024).

The broad FARAD program goals of providing data infrastructure for practical information on how to avoid drug, pesticide, and environmental contaminant residue problems may be supported through AFRI as a part of its Food and Agricultural Cyberinformatics and Tools initiative. This decrease in funding would allow for greater focus on national priorities, and efficiency in program management and implementation through consolidation of program activities.

(19) An increase of \$5,000,000 for the Enhancing Ag Opportunities for Military Veterans Program (\$0 available in 2024).

The USDA and NIFA continue to take a leadership role in assisting veterans who are interested in pursuing careers in agriculture, while also supporting military families in rural America. As military members from diverse backgrounds complete their tours of duty or transition to Veteran status, many return to rural America ready to farm, ranch, and start new businesses. Job and career opportunities can be difficult to locate. Connecting interested military veterans with meaningful employment is key. The need for workforce development opportunities for Veterans in rural areas corresponds to the need to train a new generation of farmers and ranchers in areas dominated by an aging farm population. Along with higher percentages of rural youth enlisting in the Army when compared to those from more urban areas, America is experiencing demographic changes such as increased numbers of women and minorities serving, and a greater reliance on the National Guard and Reserve in overseas deployments. The overarching goal of AgVets is to increase the number of military veterans pursuing knowledge and skills development through comprehensive, hands-on, and immersive model farm/ranch programs offered locally or regionally that lead to successful careers in the food and agricultural sector. This program addresses the USDA priority of Creating More and Better Markets.

(20) An increase of \$20,000,000 in the National Institute of Food and Agriculture – Expanded Food and Nutrition Education Program: (\$70,000,000 available in 2024).

The Expanded Food and Nutrition Program (EFNEP) is the nation's first nutrition education program for low-income populations and remains at the forefront of education efforts to tackle food and nutrition security. EFNEP is a Federal Extension program that operates through the 1862 and 1890 Land-Grant Universities (LGUs) in every state, the District of Columbia, and the six U.S. territories. Funded through NIFA, EFNEP uses education to support participants' efforts toward self-sufficiency, nutritional health, and well-being. This increase is the first year of a 2-year proposal, with funding increased to \$90 million in 2025, and distributed by adjusting the formula to include: (1) baseline for the 1890s equivalent to the respective 1862s baseline for 1981, (2) 4 percent off the top for Federal Administration, and (3) \$150K for a beginning baseline for DC and Insular Areas (excluding PR which already has an established baseline). Proposed for the second year is \$106 million. After this second year this option sees the 1890s equal dollar for dollar with the 1862s. Funding would need to be maintained at \$106 million per year to continue to ensure distributions to the 1890s equals distributions to the 1862s.

In August 2019, the Office of the Inspector General (OIG) published findings from an audit that reviewed controls to determine whether NIFA allocated its Capacity program funds accurately and used funding calculation methods that complied with statutory formulas. In the report the OIG recommended that NIFA perform an analysis and make a recommendation on whether to submit a legislative proposal to revise the EFNEP statutory formula that would allow the use of the most recent decennial Census poverty data to calculate its distribution of funds to States. NIFA convened a workgroup to develop a response to the OIG audit, which includes options for a legislative change to the current EFNEP formula. Based on their findings, options were presented to the Subcabinet and the Secretary to determine a path forward. This proposal is in response to the OIG Audit and aligns with the USDA Strategic Plan Fiscal Years 2022-2026, specifically supporting advancing racial justice, equity, and opportunity; and tackling food and nutrition security while maintaining a safe food

supply. Furthermore, it aligns with the NIFA Strategic Plan to enhance opportunities in underserved communities and tackling food and nutrition security.

- (21) An increase of \$3,395,000 for the Federally Recognized Tribes Extension Program (\$4,305,000 available in 2024).

Currently, FRTEP supports 37 Extension offices in 19 states and serves over 100 of the 574 Federally Recognized Indian Tribes in the contiguous 48 states and Alaska. The average funding level for a FRTEP extension office in 2023 is \$110,500 which generally supports a full-time educator and extension outreach and programming activities. During the 2021-2022 USDA Tribal Consultation & Listening Session on Equity/Barriers, Tribal stakeholders expressed concern that mandatory four-year recompetes and limited funding prevented FRTEP agents from building trusted relationships with tribal community partners that are needed to fully realize project outcomes. Although NIFA is unable to change Congressional requirements that FRTEP maintain a competitive status, NIFA works to support existing relationships between land-grant institutions and tribes by prioritizing funding for previously funded FRTEP projects deemed to have merit by the review panel. Increased funding will help drive benefits to underserved communities, increasing staff and programming as FRTEP Educators bring a wealth of community-tested and science-based best practices from the 1862, 1890, and 1994 land-grants to provide informal learning in support of youth development and livestock production. FRTEP programs impact Tribal communities by providing programming which includes cattle production workshops, weed management, grassland management, 4-H programs for youth, climate resilience, food sovereignty, Diversity, Equality, Inclusion, and Accessibility (DEIA), and more. FRTEP is a Justice40 covered program that contributes to Environmental Justice efforts.

- (22) A decrease of \$5,000,000 for the GP-Enhancing Ag Opportunities for Military Veterans Program (\$5,000,000 available in 2024).

A decrease to the general provision is proposed to include this program in the NIFA direct appropriated discretionary budget. Program has been appropriated as a discretionary general provision since 2017.

- (23) A decrease of \$2,000,000 for the GP-Beginning Farmers and Ranchers Development Program (under FOTO) (\$2,000,000 available in 2024).

A decrease to the general provision is proposed to include this program in the Office of the Secretary (OSEC) direct appropriated discretionary budget.

- (24) A decrease of \$2,000,000 for Methyl Bromide Transition Program (\$2,000,000 available in 2024).

NIFA proposes to eliminate funding from Methyl Bromide Transition (MBT) Program. The scope of the MBT Program is narrow and restricts the number of proposals submitted. The number of applications received by the program ranged between 7 and 14 in the last 10 years; this is low participation when compared to many other NIFA programs. As the program funds Integrated Pest Management efforts in all states and several territories across US and is critical to continuing services in this area, NIFA is planning a 2024 program evaluation, where we will partner with the IPM Center Directors and an external organization to determine whether the program in its current form has been meeting goals of the authorization and identify gaps that should be addressed going forward.

- (25) A decrease of \$3,500,000 for Organic Transition Program (\$7,500,000 available in 2024).

A decrease is proposed to direct funding to higher priority activities and is consistent with the Administration's policy to redirect available resources, as appropriate, from lower-priority areas to other science and technology activities. This program may be supported by other funding sources, including the AFRI programs. In addition, \$47 million in mandatory funding through the Organic Agriculture Research and Extension Initiative is available for research on organics. The broad research goals of this relatively small program may be more effectively addressed through higher priority programs in this request. This decrease in funding would allow for greater focus on national priorities, and efficiency in program management and implementation through consolidation of program activities.

(26) A decrease of \$3,000,000 for Regional Rural Development Centers (\$3,000,000 available in 2024).

The research goals of this relatively small program can be more effectively addressed through higher priority programs in this request. Including Agriculture and Food Research Initiative (AFRI). This would allow for greater focus on national priorities, and efficiency in program management and implementation.

(27) A decrease of \$18,000,000 for Crop Protection and Pest Management (\$21,000,000 available in 2024).

This reallocation in funding would allow for greater focus on national priorities, and efficiency in program management and implementation through consolidation of program activities and avoiding duplicated funding opportunities.

PROPOSED LEGISLATION

National Institute of Food and Agriculture

Experienced Services Program

Current legislative authority to be amended: 16 U.S.C 3851

The reason for this proposed legislative language is that funding must be authorized, in accordance with the authorizing legislation at 16 U.S.C 3851(c)3. NIFA seeks authorization to use Research and Education, Extension, and Integrated Activities resources for the Experienced Services Program.

The proposed change will achieve the Secretary of Agriculture's requirements set forth in 16 U.S.C. 3851, which specifies that the Secretary shall establish an Experienced Services Program (program) to enter into agreements on behalf of the National Institute of Food and Agriculture (NIFA) with nonprofit private agencies and organizations eligible to receive Cooperative Agreements under the Community Service Senior Opportunities Act (42 U.S.C. 3056 et seq.) Participants for the program are to provide technical, professional, or administrative services, as applicable, to support the Research Education and Economics (REE) Mission Area, including NIFA, and such services include: supporting agricultural research and information; advancing scientific knowledge relating to agriculture; enhancing access to agricultural information; providing statistical information and research results to farmers, ranchers, agribusiness, and public officials; and assisting research, education, and extension programs in land-grant colleges and universities (as defined in section 3103 of Title 7).

Expanded Food and Nutrition Education Program (EFNEP)

Current legislative authority to be amended: 7 U.S.C 3175; Section 1425 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977

This proposal is in response to the OIG Audit recommendations, a NIFA convened workgroup findings, and options presented to the Subcabinet and the Secretary. This proposal establishes a full 1981 baseline for the 1890s. Maintains 1862 funding levels at 2023 levels. Provides a baseline for District of Columbia and the remaining Insular Areas at \$150,000. The revision recommendations align with the USDA Strategic Plan Fiscal Years 2022-2026, specifically supporting advancing racial justice, equity, and opportunity; and tackling food and nutrition security while maintaining a safe food supply. Furthermore, it aligns with the NIFA 2022-2026 Strategic Plan to enhance opportunities in underserved communities and tackling food and nutrition security.

The Food, Conservation, and Energy Act of 2008 (P.L. 110-246) was the last statutory revision made to the Food and Nutrition Education Program, amending the authority to provide the 1862 and 1890 land-grant institutions opportunities to compete for resources. In August 2019, the Office of the Inspector General (OIG) published Audit Report 13601-0001-22, with findings from an audit that reviewed controls to determine whether NIFA allocated its Capacity program funds accurately and used funding calculation methods that complied with statutory formulas. In the report the OIG recommended that NIFA perform an analysis and make a recommendation on whether to submit a legislative proposal to revise the EFNEP statutory formula that would allow the use of the most recent decennial Census poverty data to calculate its distribution of funds to States.

NIFA proposes a revision to the statutory formula, to authorize any funds annually appropriated in excess of the amount appropriated in 2023, with allocation as follows:

- 1) add: “allocated among the states to provide a baseline for 1890s equivalent to the respective 1862s baseline from FY 1981”,
- 2) retain: “four percent (4%) for administrative, technical, and other services necessary for the administration of the program”,
- 3) modify: “\$150,000 to be distributed for District of Columbia and Insular Areas (excluding Puerto Rico which already has an established baseline)”, and
- 4) remove: “7 USC 3175(d)(2)(B)(iii)(I).

Table NIFA-9. Change in Funding Due to Expanded Food and Nutrition Education Program (thousands of dollars)

Item	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	10 Year Total
Budget											
Authority ...	\$20,000	\$16,000	-	-	-	-	-	-	-	-	\$36,000
Outlays	-3,800	-9,040	-8,400	-5,680	-4,040	-2,440	-1,200	-920	-480	-	-36,000

Veterinary Medicine Loan Repayment Program (VMLRP)

Current legislative authority to be amended: National Agricultural Research, Extension, and Teaching Policy Act of 1977 and/or Section 108(f)(4) of the Internal Revenue Code of 1986

The authority currently only allows the Secretary to make payments to participants as determined appropriate for the purpose of providing reimbursement to participants for individual tax liability resulting from participation in the program. With the exclusion this program can fund up to an approximately 35 additional food animal veterinarians to serve rural communities.

The proposed change will increase the applicants received annually and the number of applicants that can be supported. Stakeholders include State Animal Health Officials (SAHOs), food animal veterinarians, farmers, and ranchers. SAHOs will benefit as the program can fill more veterinary shortage areas designated in their states. Rural farmers and ranchers will benefit from having increased access to food animal veterinary services.

Legislative Language Requested: Section 108(f)(4) of the Internal Revenue Code of 1986 needs to be amended in the following manner:

- 1) by striking “or” after “such Act,”
- 2) by striking the period at the end and inserting “, under section 1415A of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3151a), or under any other State loan repayment or loan forgiveness program that is intended to provide for increased access to veterinary services in such State.”; and
- 3) by striking “STATE” in the heading and inserting “OTHER”.

GEOGRAPHIC BREAKDOWN OF OBLIGATIONS**Table NIFA-90. Geographic Breakdown of Obligations 2023 Actuals (thousands of dollars)**

Distribution of Federal Payments for Research at State Agricultural Experiment Stations and Other State Institutions

State/ Territory/ Country	Hatch Formula	Regional Research Multi-State	TOTAL	Coop Forestry (MS)	1890	Animal	Special Rsch & Other Grants	Comp Rsch Grants	Higher Ed Grants	VMLRP	Veterinary Services Grants	Capacity	Total Federal Funds
					Colleges & TUSK (EA)	Health & Disease Rsch						Building for NLGCA	
Alabama	\$4,104	\$1,219	\$5,323	\$1,252	\$8,245	\$58	\$460	\$27,463	\$6,883	\$192	\$245	\$274	\$50,396
Alaska	1,133	207	1,340	650	-	-	-	1,120	20,027	102	-	-	23,239
American Samoa	1,927	-	1,927	48	-	-	-	-	-	-	-	-	1975
Arizona	1,603	1,095	2,698	488	-	37	-	8,337	3,262	370	244	-	15,436
Arkansas	3,488	1,069	4,557	1,043	3,545	99	-	6,546	4,149	262	-	-	20,200
California	4,963	2,341	7,304	904	-	265	3,279	36,276	32,753	163	247	1,465	82,658
Colorado	2,267	1,423	3,690	372	-	186	1,295	7,646	5,099	449	348	262	19,347
Connecticut	1,671	727	2,397	418	-	10	-	2,720	4,500	-	-	-	10,046
Delaware	1,197	544	1,741	210	1,682	18	-	4,966	3,937	9	-	-	12,563
District of Columbia ...	804	157	961	-	-	-	35	2,541	150	-	-	-	3,687
Florida	3,194	969	4,164	1,113	3,496	71	550	21,340	10,224	359	-	150	41,467
Georgia	4,670	1,919	6,589	1,275	4,759	81	12,026	12,713	2,619	116	-	-	40,178
Guam	1,970	177	2,147	48	-	-	-	-	10,600	-	-	-	12,796
Hawaii	1,182	555	1,737	256	-	4	948	2,485	8,674	-	-	-	14,105
Idaho	2,045	863	2,908	789	-	57	830	8,447	3,799	512	-	-	17,341
Illinois	5,729	1,510	7,239	557	-	54	856	17,278	532	384	-	450	27,351
Indiana	5,531	1,289	6,821	627	-	65	460	37,246	1,227	328	-	-	46,774
Iowa	5,700	2,353	8,053	580	-	292	2,303	14,639	1,167	1017	-	-	28,052
Kansas	3,498	1,162	4,660	349	-	150	1,184	8,581	1,282	720	125	-	17,051
Kentucky	5,459	1,289	6,748	789	5,635	51	75	2,983	2,893	472	-	47	19,693
Louisiana	3,136	1,009	4,145	1,205	3,037	44	23	15,752	5,300	116	-	-	29,621
Maine	1,807	758	2,565	974	-	18	725	5,934	258	113	-	-	10,585
Maryland	2,346	953	3,299	465	2,420	30	3,330	10,853	14,884	42	-	-	35,323
Massachusetts	1,950	931	2,881	442	-	42	64	6,453	200	-	-	-	10,081
Michigan	5,555	1,331	6,886	1,043	-	71	2,289	20,156	1,341	252	375	-	32,413
Minnesota	5,419	1,327	6,746	951	-	175	11,824	12,586	10,957	417	-	-	43,656
Mississippi	3,956	1,233	5,189	1,228	3,709	101	1,165	4,666	2,125	209	-	-	18,393
Missouri	5,410	1,185	6,595	766	6,028	92	900	19,968	13,915	377	235	600	49,476
Montana	1,985	967	2,952	673	-	33	11,691	4,905	2,090	569	-	-	22,912
N. Mariana Islands	1,922	-	1,922	-	-	-	-	-	10,349	-	-	-	12,271
Nebraska	3,221	1,491	4,712	372	-	122	1,957	11,824	1,703	582	125	-	21,396
Nevada	1,128	859	1,987	118	-	17	-	3,592	240	116	-	-	6,068
New Hampshire	1,455	545	2,000	534	-	7	-	1,116	230	230	-	-	4,177
New Jersey	1,951	1,101	3,052	511	-	11	-	3,291	5,518	22	-	-	12,406
New Mexico	1,629	583	2,212	326	-	30	406	1,316	4,634	36	-	-	8,959
New York	5,133	2,308	7,441	835	-	93	4,310	13,300	5,282	51	125	-	31,438
North Carolina	6,699	2,295	8,994	1,159	6,363	146	14,669	10,104	22,682	401	-	-	64,518
North Dakota	2,277	893	3,170	187	-	19	227	2,449	5,753	129	125	-	12,059

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State/ Territory/ Country	Hatch Formula	Regional Research Multi-State	TOTAL	Coop Forestry (MS)	1890 Colleges & TUSK (EA)	Animal Health & Disease Rsch	Special Rsch & Other Grants	Comp Rsch Grants	Higher Ed Grants	VMLRP	Veterinary Services Grants	Capacity Building for NLGCA	Total Federal Funds
Ohio.....	6,704	1,438	8,142	719	5,565	93	782	11,923	3,134	262	250	-	30,870
Oklahoma.....	3,505	892	4,397	696	3,980	78	-	8,639	2,978	511	-	-	21,279
Oregon.....	2,683	1,370	4,052	1,182	-	67	300	14,194	847	89	-	-	20,732
Pennsylvania.....	6,312	1,832	8,144	812	-	126	-	16,940	1,258	359	374	-	28,013
Puerto Rico.....	4,470	1,086	5,556	141	-	10	-	1,753	6,828	-	-	-	14,288
Rhode Island.....	1,083	564	1,647	164	-	33	227	2,836	-	-	-	-	4,906
South Carolina.....	3,495	1,152	4,647	1,020	3,418	21	300	15,714	9,978	102	-	-	35,199
South Dakota.....	2,456	901	3,357	303	-	68	3,669	3,504	1,792	442	-	-	13,135
Tennessee.....	5,196	1,249	6,445	858	5,380	52	-	9,110	24,588	297	-	750	47,481
Texas.....	7,572	1,836	9,408	1,090	8,849	260	1,899	36,879	50,334	620	499	1,798	111,636
Utah.....	1,421	1,063	2,484	280	-	29	465	5,046	406	406	125	-	9,240
Vermont.....	1,505	478	1,983	511	-	13	11,737	3,064	32	32	-	149	17,520
Virgin Islands.....	1,944	175	2,119	48	-	-	-	-	199	-	-	-	2,366
Virginia.....	4,414	1,142	5,556	1,136	4,492	59	710	19,044	3,489	426	250	-	35,162
Washington.....	2,915	2,247	5,161	1,066	-	89	2,622	17,925	3,901	116	-	-	30,882
West Virginia.....	2,698	794	3,492	742	2,445	9	-	3,126	7,905	299	-	-	18,018
Wisconsin.....	5,497	1,313	6,810	881	-	93	125	15,169	9,734	211	-	1,079	34,102
Wyoming.....	1,368	772	2,139	256	-	20	-	1,164	153	153	125	-	4,011
Micronesia.....	2,016	-	2,016	-	-	-	-	-	-	-	-	-	2,016
SBIR.....	-	-	-	-	-	-	-	-	-	-	-	-	22,831
STTR.....	-	-	-	-	-	-	-	-	-	-	-	-	1,486
BRAG.....	-	-	-	-	-	-	-	-	-	-	-	-	3,181
Fed Admin Direct.....	-	-	-	-	-	-	-	-	-	-	-	-	20,521
Fed Admin.....	-	-	-	-	-	-	-	-	-	-	-	-	77,255
Obligations.....	186,368	60,940	247,308	35,462	83,047	3,666	100,718	557,620	358,795	12,990	3,818	7,025	1,535,722

Table NIFA-11. Geographic Breakdown of Estimated Obligations 2024 (thousands of dollars)

Distribution of Federal Payments for Research at State Agricultural Experiment Stations and Other State Institutions

State/ Territory/ Country	Hatch Formula	Regional Research Multi-State	TOTAL	Coop Forestry (MS)	1890 Colleges & TUSK (EA)	Animal Disease Rsch	Special Rsch & Other Grants	Comp Rsch Grants	Higher Ed Grants	VMLRP	Veterinary Services Grants	Capacity Building for NLGCA	Total Federal Funds
SBIR.....	\$6,200	\$2,033	\$8,233	\$1,180	\$2,763	\$123	\$2,051	\$10,959	\$707	-	-	-	\$26,016
STTR.....	872	286	1,158	166	388	17	288	1,459	99	-	-	-	3,575
BRAG.....	877	277	1,154	53	132	34	42	1,984	2	-	-	-	3,401
Fed Admin Direct.....	-	-	-	-	-	-	-	-	-	-	-	-	20,521
Fed Admin.....	5,863	1,851	7,714	1,140	2,670	160	4,203	24,410	4,263	\$500	\$189	\$280	45,529
Distribution Unknown.....	185,801	60,940	246,741	35,461	83,047	3,666	94,515	416,188	96,430	9,500	3,811	5,720	995,079
Obligations.....	199,613	65,387	265,000	38,000	89,000	4,000	101,099	455,000	101,501	10,000	4,000	6,000	1,094,121

Table NIFA-12. Geographic Breakdown of Estimated Obligations 2025 (thousands of dollars)

Distribution of Federal Payments for Research at State Agricultural Experiment Stations and Other State Institutions

State/ Territory/ Country	Hatch Formula	Regional Research Multi-State	TOTAL	Coop Forestry (MS)	1890 Colleges & TUSK (EA)	Animal Health & Disease Rsch	Special Rsch & Other Grants	Comp Rsch Grants	Higher Ed Grants	VMLRP	Veterinary Services Grants	Capacity Building for NLGCA	Total Federal Funds
SBIR.....	\$6,200	\$2,033	\$8,233	\$1,117	\$3,042	-	\$1,824	\$11,632	\$707	-	-	-	\$26,555
STTR.....	872	286	1,158	157	428	-	249	1,523	99	-	-	-	3,614
BRAG	877	277	1,154	53	132	-	-	1,984	2	-	-	-	3,325
Fed Admin Direct	-	-	-	-	-	-	-	-	-	-	-	-	22,170
Fed Admin	5,863	1,851	7,714	1,080	2,940	-	3,497	25,410	4,263	\$1,000	\$189	-	46,093
Distribution													
Unknown.....	185,801	60,940	246,741	33,593	91,458	-	80,829	434,451	104,430	9,000	3,811	-	1,004,313
Obligations	199,613	65,387	265,000	36,000	98,000	-	86,399	475,000	109,501	10,000	4,000	-	1,106,070

Table NIFA-13. Geographic Breakdown of Obligations 2023 Actuals (thousands of dollars)

Distribution of Federal Payments for Extension at State Agricultural Experiment Stations and Other State Institutions

State/Territory/ Country	Smith- Lever Form.	1890s and TUSK	Children, Youth, Families at Risk	New Tech at Ag Ext	Fed Recog & Tribes Ext	Farm Safety & Youth Ed & Cert	Food Safety Outreach	Renewable Resources Ext Act	Other	Rural Health Safety Ed	1890 Facilities	Indian Tribal 1994 Colleges	Mandatory	Total Federal Funds
Alabama.....	\$7,582	\$6,578	\$2,250	\$80	-	-	-	\$120	\$221	-	\$4,171	-	\$750	\$21,751
Alaska	1,343	-	267	80	-	\$329	\$184	-	97	-	-	\$273	1,715	4,288
American Samoa	2,041	-	104	-	-	-	-	-	-	-	-	-	-	2,146
Arizona.....	2,333	-	758	367	-	774	-	65	950	-	-	746	750	6,743
Arkansas.....	6,367	2,852	1,440	-	-	-	-	95	1,067	-	1,950	-	2,122	15,893
California	8,678	-	3,779	287	-	-	183	\$150	96	1,717	-	-	8,103	22,992
Colorado.....	3,601	-	683	287	-	-	183	-	58	203	\$350	-	3,197	8,563
Connecticut	2,379	-	556	-	-	111	-	-	46	-	-	-	748	3,840
Delaware	1,453	1,510	421	-	-	-	-	-	60	-	-	1,548	-	2,122
District of Columbia	1,251	-	115	-	-	-	-	-	14	220	-	-	890	2,490
Florida.....	5,228	2,949	2,608	-	-	108	184	300	98	368	699	2,091	-	15,682
Georgia.....	8,805	3,910	2,455	-	-	-	184	945	254	-	350	2,244	-	21,417
Guam.....	2,104	-	106	-	-	-	-	-	14	-	-	-	-	2,223
Hawaii	1,499	-	352	144	-	-	-	-	46	220	-	-	1,717	3,979
Idaho	3,163	-	396	431	-	332	-	-	52	-	-	-	479	4,852
Illinois	10,385	-	2,239	-	-	-	184	150	55	2,477	-	-	3,673	19,163
Indiana.....	9,892	-	1,319	224	-	-	713	-	54	200	350	-	-	12,751
Iowa.....	10,252	-	975	224	-	-	-	150	46	89	350	-	296	12,382
Kansas.....	6,076	-	777	-	-	-	-	-	46	150	-	273	748	8,071
Kentucky	9,998	4,746	1,851	144	-	-	-	-	83	-	-	2,339	1,130	20,290
Louisiana.....	5,555	2,469	2,052	80	-	-	-	-	85	200	-	1,855	-	12,295
Maine	2,618	-	504	144	-	-	184	-	59	200	-	-	-	3,709
Maryland.....	3,693	2,037	1,062	144	-	-	-	300	60	-	350	1,794	-	9,439
Massachusetts	2,918	-	1,066	-	-	-	-	150	46	-	-	-	750	4,931

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State/Territory/ Country	Smith- Lever Form.	1890s and TUSK	EFNEP	Children, Youth, Families at Risk	New Tech at Ag Ext	Fed Recog Tribes Ext	Farm Safety & Youth Ed & Cert	Food Safety Outreach	Renewable Resources Ext Act	Other	Rural Health Safety Ed	1890 Facilities	Indian Tribal 1994 Colleges	Mandatory	Total Federal Funds
Michigan	9,950	-	1,913	-	-	111	184	-	234	-	-	-	819	9,188	22,398
Minnesota.....	9,701	-	1,080	1,469	-	181	-	-	64	508	350	-	1,092	1,504	15,948
Mississippi	7,401	2,922	1,866	-	-	111	-	300	103	-	-	1,934	-	1,474	16,110
Missouri	10,002	5,134	1,762	144	-	-	184	549	89	220	350	2,537	-	1,427	22,398
Montana	3,033	-	388	287	-	440	-	-	61	-	240	-	2,310	-	6,760
N. Mariana Islands...	2,028	-	104	-	-	-	-	-	-	-	-	-	-	-	2,132
Nebraska	5,500	-	619	144	-	-	291	-	46	946	-	-	546	7,702	15,794
Nevada	1,398	-	315	80	-	329	-	-	49	649	-	-	-	500	3,320
New Hampshire	1,935	-	329	-	\$3,396	-	-	-	46	-	-	-	-	-	5,706
New Jersey	2,926	-	1,182	80	-	-	-	-	46	220	-	-	-	500	4,955
New Mexico.....	2,408	-	614	-	-	107	184	400	68	804	-	-	819	2,132	7,536
New York.....	9,120	-	3,512	-	-	-	-	391	87	2,695	350	-	-	10,641	26,796
North Carolina	12,593	5,318	2,794	767	-	110	-	504	105	1,061	-	2,450	-	2,170	27,872
North Dakota.....	3,718	-	424	287	-	219	-	-	46	-	349	-	1,565	-	6,609
Ohio.....	12,339	5,060	2,484	367	-	-	356	143	76	364	350	2,826	-	345	24,709
Oklahoma.....	6,256	3,267	1,267	367	-	221	-	-	80	-	350	2,145	273	-	14,226
Oregon.....	4,300	-	619	-	-	109	-	833	88	-	-	-	-	-	5,949
Pennsylvania	11,408	-	2,755	-	-	-	184	-	78	-	-	-	-	50	14,475
Puerto Rico.....	7,452	-	1,474	-	-	-	-	-	14	-	-	-	-	600	9,540
Rhode Island	1,226	-	390	144	-	-	-	-	46	-	-	-	-	738	2,545
South Carolina	6,208	2,740	1,739	-	-	-	178	1,097	86	678	-	1,934	-	-	14,661
South Dakota.....	3,870	-	469	287	-	111	184	-	46	-	-	-	819	-	5,785
Tennessee.....	9,430	4,460	2,191	144	-	-	184	700	87	2,897	-	2,380	-	-	22,473
Texas.....	14,600	7,362	4,814	144	-	-	184	847	112	802	-	4,887	-	2,269	36,020
Utah.....	2,001	-	422	-	-	-	320	-	51	-	-	-	-	-	2,793
Vermont	2,068	-	322	56	-	-	-	673	46	-	-	-	-	-	3,166
Virgin Islands.....	2,067	-	104	-	-	-	-	-	14	-	-	-	-	-	2,184
Virginia	7,939	3,706	1,900	-	-	-	183	393	99	1,373	-	2,194	-	1,949	19,736
Washington	4,773	-	823	144	-	215	-	150	83	2,169	-	-	471	9,912	18,739
West Virginia.....	4,495	2,100	1,146	-	-	-	-	150	70	-	-	1,798	-	-	9,759
Wisconsin.....	9,846	-	1,058	511	-	111	180	299	77	306	-	-	546	647	13,580
Wyoming.....	1,845	-	279	-	-	108	-	-	48	-	-	-	-	-	2,279
Micronesia.....	2,192	-	109	-	-	-	-	-	-	-	-	-	-	-	2,301
SBIR.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STTR.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BRAG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fed Admin Direct	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,100
Fed Admin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22,581
Obligations	315,244	691,120	69,401	8,054	3,396	4,133	4,793	9,573	3,898	23,976	4,788	43,077	10,552	86,257	686,943

Table NIFA-14. Geographic Breakdown of Estimated Obligations 2024 (thousands of dollars)

Distribution of Federal Payments for Extension at State Agricultural Experiment Stations and Other State Institutions

State/ Territory/ Country	Smith- Lever Form.	1890s and TUSK	EFNEP	Children, Youth, Families at Risk	New Tech at Ag Ext	Fed Recog Tribes Ext	Farm Safety & Youth Ed & Cert	Food Safety Outreach	Renewable Resources Ext Act	Other	Rural Health Safety Ed	1890 Facilities	Indian Tribal 1994 Colleges	Mandatory	Total Federal Funds
Fed Admin Direct	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$8,100
Fed Admin	\$9,263	\$2,880	\$599	\$353	\$142	\$172	\$200	\$429	\$162	\$1,085	\$214	\$860	\$453	\$5,865	22,677
Distribution															
Unknown.....	315,737	69,120	69,401	8,042	3,408	4,133	4,800	9,571	3,898	23,415	4,786	20,640	10,547	79,948	627,446
Obligations	325,000	72,000	70,000	8,395	3,550	4,305	5,000	10,000	4,060	24,500	5,000	21,500	11,000	85,813	658,223

Table NIFA-15. Geographic Breakdown of Estimated Obligations 2025 (thousands of dollars)

Distribution of Federal Payments for Extension at State Agricultural Experiment Stations and Other State Institutions

State/ Territory/ Country	Smith- Lever Form.	1890s and TUSK	EFNEP	Children, Youth, Families at Risk	New Tech at Ag Ext	Fed Recog Tribes Ext	Farm Safety & Youth Ed & Cert	Food Safety Outreach	Renewable Resources Ext Act	Other	Rural Health Safety Ed	1890 Facilities	Indian Tribal 1994 Colleges	Mandatory	Total Federal Funds
Fed Admin Direct	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$8,100
Fed Admin	\$9,263	\$3,040	\$1,399	\$353	\$142	\$308	\$200	\$429	\$162	\$950	\$214	\$992	\$853	\$5,865	24,170
Distribution															
Unknown.....	315,737	72,960	88,601	8,042	3,408	7,392	4,800	9,571	3,898	21,050	4,786	23,808	20,147	79,948	664,148
Obligations	325,000	76,000	90,000	8,395	3,550	7,700	5,000	10,000	4,060	22,000	5,000	24,800	21,000	85,813	696,418

Table NIFA-16. Geographic Breakdown of Estimated Obligations 2023 (thousands of dollars)

Distribution of Federal Payments for Integrated at State Agricultural Experiment Stations and Other State Institutions

State/Territory/ Country	Food and Agriculture Defense Initiative (Formerly Homeland Security)	Methyl Bromide	Organic Transition - Risk Assessment	Crop Protection / Pest Management	Regional Rural Development Centers	Specialty Crop Research Initiative	Emergency Citrus Disease Research and Extension Program	Organic Agricultural Research and Ext Initiative	Institute for Rural Partnership - University of Vermont	Urban, Indoor & Other Emerging Ag. Production (Urban Ag)	Total Federal Funds
Alabama	-	-	-	\$255	-	-	-	-	-	\$975	\$1,230
Alaska	-	-	-	127	-	-	-	-	-	-	127
Arizona.....	-	-	-	593	-	-	-	-	-	-	593
Arkansas.....	-	\$420	-	503	-	\$3,578	-	-	-	-	4,502
California	\$862	-	\$1,000	1,273	-	100	-	\$4,000	-	723	7,958
Colorado.....	-	-	-	209	-	-	-	-	-	-	209
Connecticut	-	-	-	224	-	-	-	4,338	-	-	4,562
Delaware	-	464	-	206	-	-	-	-	-	946	1,616
Florida	687	-	-	799	-	97	\$949	-	-	950	3,482
Georgia.....	282	-	-	255	-	4,790	-	3,215	-	-	8,542
Hawaii	-	-	-	58	-	-	-	-	-	-	58
Idaho	-	-	-	268	-	5,274	-	-	-	-	5,543
Illinois	-	-	-	205	-	3,532	-	-	-	975	4,711
Indiana.....	281	-	999	273	\$704	-	-	-	-	-	2,258

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State/Territory/ Country	Food and Agriculture Defense Initiative (Formerly Homeland Security)	Methyl Bromide	Organic Transition - Risk Assessment	Crop Protection / Pest Management	Regional Rural Development Centers	Specialty Crop Research Initiative	Emergency Citrus Disease Research and Extension Program	Organic Agricultural Research and Ext Initiative	Institute for Rural Partnership - University of Vermont	Urban, Indoor & Other Emerging Ag. Production (Urban Ag)	Total Federal Funds
Iowa.....	250	-	-	1,598	-	49	-	-	-	-	1,897
Kansas.....	726	486	-	535	-	-	-	-	-	-	1,747
Kentucky.....	250	-	-	192	-	-	-	3,525	-	-	3,967
Louisiana.....	250	-	-	106	-	-	-	-	-	-	356
Maine.....	578	-	-	123	-	-	-	-	-	-	701
Maryland.....	-	-	-	435	-	3,500	-	-	-	-	3,935
Massachusetts.....	-	-	-	273	-	-	-	-	-	-	273
Michigan.....	647	-	-	527	-	9,985	-	-	-	47	11,206
Minnesota.....	250	-	-	225	-	2,733	-	2,064	-	50	5,322
Mississippi.....	-	-	-	165	704	-	-	-	-	-	869
Missouri.....	628	-	-	179	-	-	-	-	-	-	807
Montana.....	-	-	656	445	-	-	-	-	-	-	1,100
Nebraska.....	250	-	-	174	-	-	-	-	-	-	424
Nevada.....	-	-	-	127	-	-	-	-	-	-	127
New Hampshire.....	-	-	-	178	-	-	-	-	-	-	178
New Jersey.....	-	-	-	173	-	-	-	-	-	-	173
New Mexico.....	-	-	-	165	-	5,954	-	-	-	-	6,119
New York.....	250	-	-	1,255	-	3,302	-	3,397	-	874	9,078
North Carolina.....	250	485	-	1,965	-	-	-	-	-	-	2,700
North Dakota.....	-	-	-	226	-	-	-	-	-	-	226
Ohio.....	250	-	-	388	-	3,942	-	50	-	1,946	6,576
Oklahoma.....	-	-	-	56	-	-	-	-	-	-	56
Oregon.....	-	-	-	690	-	4,209	-	5,544	-	950	11,393
Pennsylvania.....	-	-	1,490	550	704	3,470	-	1,920	-	-	8,135
Puerto Rico.....	-	-	-	184	-	-	-	-	-	-	184
Rhode Island.....	-	-	-	78	-	-	-	3,499	-	973	4,550
South Carolina.....	-	-	866	485	-	-	-	50	-	-	1,401
South Dakota.....	250	-	-	208	-	-	-	-	-	-	458
Tennessee.....	-	-	-	404	-	-	-	-	-	-	404
Texas.....	250	-	-	598	-	5,220	-	10,044	-	-	16,112
Utah.....	-	-	-	143	704	50	-	-	-	-	897
Vermont.....	-	-	-	473	-	-	-	2,398	\$9,500	-	12,371
Virginia.....	-	-	-	533	-	8,382	-	-	-	-	8,915
Washington.....	250	-	1,000	254	-	2,053	-	-	-	-	3,557
West Virginia.....	-	-	-	251	-	-	-	-	-	-	251
Wisconsin.....	250	-	1,000	225	-	50	-	100	-	-	1,624
Wyoming.....	-	-	-	107	-	-	-	-	-	-	107
SBIR.....	-	-	-	-	-	-	-	-	-	-	3,125
STTR.....	-	-	-	-	-	-	-	-	-	-	375
BRAG.....	-	-	-	-	-	-	-	-	-	-	568
Fed Admin.....	-	-	-	-	-	-	-	-	-	-	7,828

2025 USDA EXPLANATORY NOTES – NATIONAL INSTITUTE OF FOOD AGRICULTURE

State/Territory/ Country	Food and Agriculture Defense Initiative (Formerly Homeland Security)	Methyl Bromide	Organic Transition - Risk Assessment	Crop Protection / Pest Management	Regional Rural Development Centers	Specialty Crop Research Initiative	Emergency Citrus Disease Research and Extension Program	Organic Agricultural Research and Ext Initiative	Institute for Rural Partnership - University of Vermont	Urban, Indoor & Other Emerging Ag. Production (Urban Ag)	Total Federal Funds
Obligations	7,692	1,855	7,012	19,943	2,817	70,271	949	44,143	9,500	9,409	185,487

Table NIFA-17. Geographic Breakdown of Estimated Obligations 2024 (thousands of dollars)

Distribution of Federal Payments for Integrated at State Agricultural Experiment Stations and Other State Institutions

State/ Territory/ Country	Food and Agriculture Defense Initiative (Formerly Homeland Security)	Methyl Bromide	Organic Transition - Risk Assessment	Crop Protection / Pest Management	Regional Rural Development Centers	Specialty Crop Research Initiative	Emergency Citrus Disease Research and Extension Program	Organic Agricultural Research and Ext Initiative	Institute for Rural Partnership - University of Vermont	Urban, Indoor & Other Emerging Ag. Production (Urban Ag)	Total Federal Funds
STTR.....	-	\$6	\$21	\$23	\$4	\$202	-	\$110	-	\$5	\$371
SBIR.....	-	42	147	156	27	1,394	-	759	-	36	2,561
Biotech Risk.....	-	6	-	13	-	443	-	106	-	-	568
Fed Admin	320	89	329	901	121	3,156	-	1,951	-	81	6,948
Distribution											
Unknown.....	7,680	1,857	7,003	19,907	2,848	70,245	-	44,224	-	1,878	155,642
Obligations	8,000	2,000	7,500	21,000	3,000	75,440	-	47,150	-	2,000	166,090

Table NIFA-18. Geographic Breakdown of Estimated Obligations 2025 (thousands of dollars)

Distribution of Federal Payments for Integrated at State Agricultural Experiment Stations and Other State Institutions

State/ Territory/ Country	Food and Agriculture Defense Initiative (Formerly Homeland Security)		Organic Transition - Risk	Crop Protection / Pest Management	Regional Rural Development Centers	Specialty Crop Research Initiative	Emergency Citrus Disease Research and Extension Program	Organic Agricultural Research and Ext Initiative	Institute for Rural Partnership - University of Vermont	Urban, Indoor & Other Emerging Ag. Production (Urban Ag)	Total Federal Funds
	Methyl Bromide	Risk Assessment									
STTR.....	-	-	\$11	\$4	-	\$202	-	\$110	-	\$5	\$332
SBIR.....	-	-	81	28	-	1,394	-	759	-	36	2,298
Biotech Risk.....	-	-	-	-	-	443	-	106	-	-	549
Fed Admin	\$320	-	185	120	-	3,156	-	1,951	-	81	5,813
Distribution Unknown.....	7,680	-	3,723	2,848	-	70,245	-	44,224	-	1,878	130,598
Obligations	8,000	-	4,000	3,000	-	75,440	-	47,150	-	2,000	139,590

CLASSIFICATION BY OBJECTS**Table NIFA-19 Classification by Objects (thousands of dollars)**

Item No.	Item	2022 Actual	2023 Actual	2024 Estimated	2025 Estimated
	Personnel Compensation:				
	Washington D.C.	\$2,354	\$2,898	\$3,359	\$3,229
	Personnel Compensation, Field	29,456	33,499	42,039	40,404
11	Total personnel compensation	31,810	36,397	45,398	43,633
12	Personal benefits	12,625	14,511	18,099	17,395
13.0	Benefits for former personnel	56	11	14	13
	Total, personnel comp. and benefits	44,491	50,919	63,511	61,041
	Other Objects:				
21.0	Travel and transportation of persons	483	1,307	1,914	895
22.0	Transportation of things	470	9	14	240
23.1	Rental payments to GSA	116	1,042	1,151	1,151
23.3	Communications, utilities, and misc. charges	474	488	501	488
24.0	Printing and reproduction	22	47	45	46
25.1	Advisory and assistance services	330	5,086	6,449	5,535
25.2	Other services from non-Federal sources	38,149	30,639	38,848	33,343
25.3	Other goods and services from Federal sources	1,719	3,025	3,836	3,292
25.5	Research and development contracts	972	1,437	1,822	1,564
25.7	Operation and maintenance of equipment	238	268	340	292
26.0	Supplies and materials	43	125	180	153
31.0	Equipment	36	29	34	33
41.0	Grants, subsidies, and contributions	1,784,880	2,328,602 ¹	2,300,726 ¹	1,837,204
42.0	Insurance Claims and Indemnities	10	-	-	-
	Total, Other Objects	1,827,942	2,372,104	2,355,860	1,884,236
99.9	Total, new obligations	1,872,433	2,423,023	2,419,371	1,945,277
	DHS Building Security Payments (included in 25.3)	\$1,173	\$1,248	\$1,191	\$1,191
	Information Technology Investments:				
	Mission Area Non-Major Investment Totals	\$18,998	\$21,487	\$23,006	\$26,398
25.3	Mission Area WCF Transfers	2,782	3,342	3,570	3,966
	Total Non-Major Investment	21,780	24,829	26,576	30,364
	Total IT Investments	21,780	24,829	26,576	30,364
	Cybersecurity				
	Identify	n/a	\$741	\$775	\$798
	Protect	n/a	1,491	121,581	125,229
	Recover	n/a	114,714	-	-
	Total Cybersecurity	-	116,946	122,356	126,027
	Position Data:				
	Average Salary (dollars), ES Position	\$237,310	\$190,500	\$200,406	\$204,414
	Average Salary (dollars), GS Position	\$145,025	\$114,500	\$120,454	\$122,863
	Average Grade, GS Position	12.1	12.3	12.3	12.3

¹ Supplemental funding for Bioproduct Pilot Program is reflected in 2022 through 2023 Object Class 41.0

STATUS OF PROGRAMS**Current Activities****Research and Education Activities**

Selected Examples of Recent Progress

Hatch Act

The purpose of Hatch Act capacity funding is to conduct agricultural research programs at Agricultural Experiment Stations in the 50 states, the District of Columbia, and the U.S. insular areas. Hatch activities are broad and include research on all aspects of agriculture, including soil and water conservation and use; plant and animal production, protection, and health; processing, distribution, safety, marketing, and utilization of food and agricultural products; forestry, including range management and range products; multiple use of forest rangelands, and urban forestry; aquaculture; home economics and family life; human nutrition; rural and community development; sustainable agriculture; molecular biology; and biotechnology. Research may be conducted on problems of local, state, regional, or national concern.

In 2023, NIFA funded more than 6,100 approved research projects in the Hatch multistate and regular research programs across more than 85 knowledge areas. Highlighted projects include:

- At the Ohio Agricultural Research and Development Center, researchers are using a novel urban soil blend made from local municipal wastes as reactive topsoil to reduce exposure to lead and other soil contaminants and protect public health.
- At Auburn University, researchers are seeking to turn agricultural wastes such as poultry litter into fish feed, a potential revenue source for poultry farmers. Eventual commercialization of an algae cultivation system producing fish feed will be a win-win for both poultry farmers and the environment.
- At Penn State, a study found that pulsed ultraviolet light is more effective than current methods in reducing microorganisms on the surface of eggshells and can be safely applied to both table and hatching eggs to improve food safety.

McIntire-Stennis Cooperative Forestry Act

The purpose of the McIntire-Stennis Capacity Grant is to increase forestry research in the production, utilization, and protection of forestland; to train future forestry scientists; and to involve other disciplines in forestry research. The grant is used to assist all states in carrying out a program of state forestry research at state forestry schools and colleges and developing a trained pool of forest scientists capable of conducting needed forestry research.

In 2023, more than 150 McIntire-Stennis projects were initiated across the United States and its insular areas across 41 subject areas, 28 fields of science and 34 knowledge areas. Highlights include:

- Six projects at Louisiana State University, Mississippi State University, North Carolina State University, Penn State, and the University of Maine are exploring new and improved non-food products and processes.
- Two projects in California at Cal Poly San Luis Obispo and Humboldt State University are furthering disaster preparedness, mitigation, response, and recovery efforts by investigating decision support tools for postfire assessment and the recovery of human communities after wildfire.
- Two projects at Mississippi State University and the University of Florida are creating knowledge in the field of remote sensing equipment and technologies by exploring the use of remotely sensed data in monitoring forest health and developing a multi-platform, multi-sensor framework to monitor forest productivity, chemistry, and water stress.

Research at 1890 Institutions (Evans-Allen Program)

Agricultural research is vital for a variety of reasons: to improve rural economies, increase food production, stimulate the bioeconomy, mitigate impacts of climate variability, address water availability issues, ensure food safety and security, enhance human nutrition, and train the next generation of the agricultural workforce. The nation's 1890 Land-grant Universities are responsible for some of the most cutting-edge research in the nation. NIFA's Evans-Allen capacity grants support agricultural research at the 1890 Land-Grant Institutions. Research conducted under the Evans-Allen Program has led to scientific breakthroughs benefiting numerous local communities served by the 1890 universities across the Southern region and the nation as a whole.

Examples of recently funded projects include the following:

- The 19 universities comprising the nation’s 1890 Land-grant Universities have formed a new integrated multistate project to address a broad range of climate change and mitigation issues in food and agriculture the first such multistate project by the 1890s in about two decades. The effort an Evans-Allen project also referred to as the Climate Resiliency Initiative is a multidisciplinary proposal that uniquely leverages the expertise and strength of the 1890 system. It consists of four primary goals, each of which is staffed by a team of researchers focused on specific objectives, and focuses on research spanning soil health, water resources, equity and environmental justice, and policy.
- In Georgia, Fort Valley State University researchers are studying using artificial insemination (AI) to establish a purebred Black Angus beef herd at the university. To meet future needs and sustain agricultural production, agricultural research needs access to emerging technologies such as assisted reproductive technologies like AI. Preliminary results showed that both inseminator and sire affected the pregnancy rates and birth outcomes after AI in beef cattle. They also found that both breed and method of semen collection affect the viability and fertility of goat semen. The research will help to provide genetically superior animals that cater to the need for efficient livestock production. The knowledge gained during the proposed studies may also assist with infertility treatment in humans. Applied projects such as this one will help realize the commercial "worth" of the underlying research and inform the marketing strategies of commercial companies accordingly.
- The production and safe storage of corn not only affect human food supply (corn flour/meal, corn oil and corn starch), but also affect animal food production because most of the corn grown in the U.S. is used as animal feed. However, insect invasion and mold growth cause significant loss of grains during storage. Researchers at North Carolina A&T State University studied the effectiveness of five essential oils (cinnamon, clove, oregano, orange terpenes, thyme) in controlling insect infestation. All the essential oils were effective to control the maize weevil and mold in the stored organic corn. This research supports essential oils as an eco-friendly alternative to commonly used pesticide to control insect and mold in stored organic corn. Transforming this result to a large scale could contribute to food safety, security, and environmental health.
- Meat goats are an emerging livestock class that offer U.S. farmers a new option for on-farm income. Tennessee State University has an established meat goat research program that examines different feeding and breeding practices used in meat goat production. In surveys of 140 producers who received research-based educational training on goat production, 18 percent saw a 20 percent or greater improvement in production efficiency, 29 percent reported a greater than 20 percent increase in herd health, and 21 percent saw a greater than 20 percent improvement in their overall profitability. Producers overwhelmingly rated their experience with the programs as beneficial; over 90 percent said the experience was excellent.

Scholarships at 1890 Institutions

NIFA’s 1890 Scholarships program provides scholarships to support recruiting, engaging, retaining, mentoring, and training of undergraduate students at the 1890 Land-grant Institutions. The scholarships are intended to encourage outstanding students at 1890 Institutions to pursue and complete baccalaureate degrees in the food and agricultural sciences and related fields. Last year, \$19.1 million was awarded to the 1890 Land-grant Universities.

The program is providing a means to degree completion for students most at need. Due to financial challenges, West Virginia State University student Destiny Weese was ready to give up on her college dreams. However, her circumstances changed when she was awarded the 1890 Scholarship, which enabled the 31-year-old agribusiness major to return to school to finish her degree. While balancing her education with raising four children, working a full-time job, and running the family farm Weese almost discontinued her education for the second time because she did not have the means to pay for tuition and was unwilling to go into more debt. Thanks to the support provided by the scholarship, Weese was able to complete her degree this year and hopes to move into a career that will allow her to help others in similar situations.

Education Grants for Hispanic-Serving Institutions

In 2023, NIFA granted \$19.5 million to Hispanic-serving higher education institutions to support Hispanic student learning experiences in the agricultural and human science sectors. This funding investment is part of NIFA’s Hispanic-serving Institutions (HSI) Education Grants Program, which aligns the efforts of Hispanic-serving Institutions to support academic development and career attainment of underrepresented groups.

- The University of Arizona’s project, “Preparing Hispanic and Other Underrepresented Students in Fisheries and Aquaculture,” will use their network of high schools that have aquaculture/fisheries programs to recruit

underrepresented youth to apply to Arizona and New Mexico community colleges with aquaculture programs and/or directly to the fisheries/aquaculture programs at the University of Arizona and New Mexico State University.

- Texas State University’s “AnimalCareBot” program will provide experiential learning in animal science and engineering, support underrepresented students pursuing degrees in areas with projected workforce deficits, and develop critical competencies in the emerging agricultural workforce. AnimalCareBot will also update existing curricula with course modules that focus on emerging technologies and robotics in livestock production.
- Los Angeles Community College District’s project, “Focus on Outreach, Opportunity, and Diversity in Food Science and Technology (Food FST),” will attract and support students from underrepresented groups particularly Hispanic/Latinx students -- into study and careers in food science and related fields.

Education Grants for Alaska Native and Native Hawaiian-Serving Institutions

In 2023, NIFA invested \$4.85 million in Alaska Native-Serving and Native Hawaiian-Serving Institutions higher education grants. The purpose of the Alaska Native-Serving and Native Hawaiian-Serving Institutions program is to promote and strengthen the ability of Alaska Native-Serving Institutions and Native Hawaiian-Serving Institutions to carry out education, applied research, and related community development programs.

- The University of Hawaii’s “GoFarm Hawaii: Enhancing Hawaii’s Agricultural Workforce” project will develop a skilled workforce through practical, experiential education in agriculture. This year, the project will expand beginning farmer training opportunities on Maui, provide opportunities for mentoring and apprenticeship, integrate more content on canoe crop and marketing, develop additional resources, provide enhanced business technical assistance, and develop and deploy an orchard course.
- The University of Alaska’s collaborative project, “Indigenous Meat Production in the 21st Century: Feeding Our People, Feeding the State,” will train students in managing small-scale reindeer and bison processing plants or mobile processing units serving specialized communities. It will focus on business management of meat processing, methods/safety standards, and experiential learning in a mobile slaughtering unit. This will contribute to improved viability and profitability of reindeer and bison meat processing businesses across the Northwest and Interior Alaska.

New Beginning for Tribal Students

In 2023, NIFA invested nearly \$2.9 million for Tribal College Research and New Beginning for Tribal Students at Tribal Colleges and Institutions that support Tribal students and their communities. The Tribal College Research Grant Program helps colleges in the 1994 Land-grant University System become centers of scientific inquiry and learning for remote and rural reservation communities. This funding supports crucial, innovative research projects at Tribal-serving Colleges and Universities to address the specific needs of their communities. The research projects focus on high-priority areas such as protecting reservation forests or monitoring water quality to promote sustainability, and climate-smart agriculture and forestry on Tribal lands. Other projects aim to ensure food and nutrition security and support healthy Tribal populations through improving bison herd productivity, uncovering the ways traditional plants can impact diabetes, or controlling invasive species.

- The University of Idaho’s “Path to Wisdom: Cultivating Indigenous Knowledge through Family and Community” will explore integrating Indigenous research into course curricula to increase enrollment and retention of New Beginning for Tribal Students scholars in agricultural, natural resources, and food, human and health science fields. Enrolled students will participate in courses focused on Indigenous Research and College Success with an emphasis on cultural identity.
- Montana State University’s project, “Fostering Culturally Relevant Pathways to Persistence in Agriculture for Tribal Students,” will increase Indigenous students completing their higher education by building a sense of belonging that connects their agricultural and culturally relevant experiences with their known strengths and experiences within their communities and families. This will help students overcome challenges and any worries that may have prevented them from successfully seeking an agricultural career path.

Grants for Insular Areas

Insular area Land-grant Institutions receive both capacity (formula) funds and competitive funds. In 2023, NIFA provided \$5.4 million in funds for Distance Learning Grants for Insular Areas, and \$2.7 million in funds for Resident Instruction Grants for Insular Areas.

NIFA is committed to providing technical assistance and resources to insular area Land-grant Institutions to assist them with preparing competitive grant applications, managing competitive and capacity awards, complying with grant requirements, and submitting accurate and timely reports through REEport and ezFedgrants.gov.

- As a tropical island, Puerto Rico — and other subtropical regions — faces heat stress as a great challenge for agriculture and animal production. To find potential solutions, it has established the Tropical Animal Reproduction and Investigation Center (TARIC) to study Slick Holstein cattle. The University of Puerto Rico at Mayaguez’s project, “Facilities Power Outages Solutions and Alternatives,” aims to develop a sustainable power source, such as a solar energy system, for TARIC to provide a solution that can be used to develop data to improve animal performance during heat stress, reduce electricity costs and prevent experimental data loss due to power outages. (Resident Instruction Grant)
- The University of Guam (UOG) Station’s “Strengthening Research Capability in Micro-Imagery and Next Generation DNA Sequencing for Plant Taxonomy in Guam” project proposal will focus on strengthening capabilities in high-resolution micro-imagery and next generation DNA sequencing to enhance research education documenting the taxonomic and genetic diversity of tropical and agricultural crops, invasive weeds, and native plant species in Guam and the Western Pacific. (Resident Instruction Grant)
- Northern Marianas College’s (NMC) distance learning program will enhance education through implementing virtual reality (VR). By immersing students in realistic and engaging agriculture and food experiences, VR technology has the potential to revolutionize learning at NMC. Its unique ability to spark curiosity and deepen understanding make it a promising tool for enhancing student engagement and achievement. The project, “Enhancing Agriculture and Food Science Education at the Northern Marianas College (NMC) Through the Implementation of Virtual Reality (VR) Technology,” is supported by NIFA’s Distance Learning Grants for Insular Areas.

Agriculture and Food Research Initiative

The Agriculture and Food Research Initiative (AFRI) is the nation’s leading competitive grants program for agricultural sciences. NIFA awards AFRI research, education, and Extension grants to improve rural economies, increase food production, stimulate the bioeconomy, mitigate impacts of climate variability, address water availability issues, ensure food safety and security, enhance human nutrition, and train the next generation of the agricultural workforce.

AFRI was established by Congress in the 2008 Farm Bill and re-authorized in the 2018 Farm Bill. The program was re-authorized to be funded at \$700 million a year. The Consolidated Appropriations Act of 2023 funds AFRI at \$455 million. NIFA provides AFRI grants to support research, education, and Extension activities in six Farm Bill priority areas:

- Plant Health and Production and Plant Products.
- Animal Health and Production and Animal Products.
- Food Safety, Nutrition and Health.
- Bioenergy, Natural Resources and Environment.
- Agriculture Systems and Technology.
- Agriculture Economics and Rural Communities.

AFRI-funded science is vital to meeting food, fiber, and fuel demands as the world’s population races toward a projected 10 billion by 2050 concomitant with diminishing land and water resources and increasingly variable climatic conditions. In addition, AFRI programs help develop new technologies and a workforce that will advance our national security, our energy self-sufficiency, and the health of Americans.

- In 2023, Auburn University received a \$9.95 million AFRI grant to transform controlled environment agriculture (CEA) – a rapidly expanding segment of U.S. agriculture that includes producing food crops in greenhouses and indoor spaces, with great promise for producing the food we need while reducing carbon emissions. This project will reduce the demand for heating and cooling in CEA food-production environments, improve the overall efficiency of CEA climate-controlled environments, lower the carbon intensity of resource inputs, and shift consumer and producer behavior surrounding CEA products and practices. Currently, controlled environment agriculture is valued at \$74 billion and is expected to grow at about 10 percent annually.
- The University of Missouri received a \$10 million AFRI grant to address USDA-NIFA Sustainable Agriculture Systems goals on climate-smart agriculture along with strengthening regional bioeconomies in

rural areas. This project involves a diverse team of 34 collaborators from 17 states. The project will train farmers to produce cover crop seed and be a catalyst to further adopt cover crops as a climate-smart practice, helping farmers adapt to climate change. Through transdisciplinary research, Extension, and education activities, the project will develop a comprehensive national program on cover crop varietal improvement, leading to increased use of regionally adapted varieties.

Veterinary Medicine Loan Repayment

In 2022, 89 food animal veterinary practitioners from 29 American Veterinary Medical Association accredited Colleges of Veterinary Medicine received nearly \$9 million in loan repayment benefits from NIFA via the USDA Veterinary Medicine Loan Repayment Program (VMLRP).

VMLRP provides up to \$75,000 in loan repayment over a three-year period to help eligible veterinarians offset a significant portion of the debt incurred in pursuit of their veterinary medical degrees in return for their service in certain high-priority veterinary shortage situations. Funding is authorized by the National Veterinary Medical Services Act.

There is a critical shortage of food animal veterinarians in both private and public practice, particularly in rural communities, in the United States and insular areas. Food animal producers rely on veterinarians with expertise in food animal medicine and surgery as well as advanced training in herd health, diagnostic medicine, epidemiology, public health, and food safety.

One cause for this shortage is the high cost of professional veterinary medical education. Graduates of veterinary colleges have, on average, student loan debt greater than \$180,000. The high cost of veterinary education leads many veterinarians to choose other, more lucrative, career paths, such as in small animal practice.

In 2022, the average veterinary student debt for new VMLRP awardees was \$163,576, and for renewal awardees, \$108,813. A large majority of new awardees (78 percent) and half of renewal awardees had more than \$100,000 in student loan debt.

Dr. Racheal McKinney is a veterinarian at Urban Livestock and Equine Veterinary Services in San Tan Valley, Arizona. She is a previous VMLRP grant recipient who was able to start her own mobile veterinary clinic that focused on helping farm animal species after graduation. She was one of only two practices in the Phoenix area treating species such as swine and ruminants.

Continuing Animal Health and Disease Research Program

Animal disease is one of the greatest threats to animal agriculture. Recent events in the United States and abroad have made us aware of how animal diseases can affect the food supply, human health, and national economies. NIFA supports the health of livestock, poultry, horses, fish, and other agriculturally important commodities through research, education, and extension activities. NIFA's unique role in the fight against animal disease includes its ability to:

- Support college/university/diagnostic laboratory infrastructure and provide Land-grant Institutions and veterinary colleges and departments of veterinary science with funds to conduct small-scale research to determine how best to respond to animal disease.
- Solicit basic and applied research, education and Extension proposals from all U.S. institution types and support the best science through competitive peer review and larger awards.
- Stimulate interstate cooperation for targeted animal disease issues through multistate committees and multimillion dollar Coordinated Agricultural Project (CAP) competitive awards.
- Focus funds on targeted diseases and national programs of state and regional importance.
- Serve as the federal link to the veterinary Extension and education infrastructure to disseminate timely and pertinent animal health information.

Multicultural Scholars, Graduate Fellowship and Institution Challenge Grants

Recently, NIFA invested \$1.2 million in the Higher Education Multicultural Scholars Program to increase the multicultural diversity of the food and agricultural scientific and professional workforce and advance the educational achievement of all Americans by providing competitive grants to colleges and universities. Scholarships support recruiting, mentoring, and training committed multicultural scholars, resulting in either baccalaureate degrees within the food and agricultural science disciplines or Doctor of Veterinary Medicine degrees.

- NIFA invested \$2.7 million in the Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship Grants Program. This supports projects that train students for master’s and/or doctoral degrees. Fellowships and Special International Study or Thesis/Dissertation Research Travel Allowances are specifically intended to support traineeship programs that encourage outstanding students to pursue and complete their degrees in areas where there is an identified national need for the development of scientific and professional personnel.
- NIFA invested \$6.5 million in 2023 for the Higher Education Challenge (HEC) Grants Program, to fund college agri-science projects taught by university faculty to inspire students to take learning to a new level. Examples include:
 - Food animal veterinarians play a critical role in maintaining a safe food supply by protecting animal health and well-being while promoting public health. Food animal veterinary education is a national interest. There is a shortage of educators in this field, and the food animal veterinary profession will be facing a major setback if faculty positions remain vacant. In response, Kansas State University received HEC funding to develop a veterinary food animal educator academy to recruit, maintain and support early career food animal educators in academia.
 - Antimicrobials are used in production animals together with good husbandry, biosecurity, and disease prevention to protect animal and human health and maintain financial security in animal agriculture. The sustainability of animal agriculture is threatened, however, by the dissemination of antimicrobial resistant (AMR) organisms, compounded by restricted use of antimicrobial drugs in food animals. The Ohio State University is addressing this issue through its project, “Protecting U.S. Animal Agriculture through Enhanced Workforce Training in Biosecurity, Disease Prevention, and Antimicrobial Stewardship.”

Aquaculture Centers

By 2050, global fish consumption will increase nearly 80 percent, while the total weight of the world’s fish harvest may only double, according to a 2021 Stanford-led study. This future projection underlies the great and growing importance of efficient, sustainable production of aquatic animals at farms around the U.S. and internationally.

Preparing for that future requires innovative basic and applied aquaculture research and Extension program efforts that can jumpstart the sustainable expansion of aquaculture and improve understanding of the local context for the food on our plates. In cooperation with Land-grant University partners and diverse stakeholders, NIFA provides leadership and funding for aquaculture research, technology development and Extension programs.

- Shellfish aquaculture — an important economic driver for rural coastal areas — is perhaps the most sustainable form of aquaculture. Oysters filter water and provide habitat for many marine species. They contribute to national food security and provide numerous health benefits. However, domestic shellfish aquaculture is bottlenecked by outdated technology and tools, preventing high-volume production. To address the sustainability issues of the current shellfish farming, University of Maryland scientists are developing smart precision farming practices with support from NIFA that will lead to sustainable shellfish production and improve farmers’ lives. Currently, scientists are developing underwater robotics-based monitoring and smart-harvesting technologies, and in the long term, researchers will go from precision shellfish farming to digital, programmable aquaculture that would help address food insecurity and mitigate climate change. Preliminary economic studies show that a modest increase of 10 percent oyster production will result in an annual increase in revenues of more than \$11 million for Maryland farmers and more than \$228 million nationwide.
- Rainbow trout is the most cultivated cold-water fish in the United States, and muscle fillet is its most valuable product. Increasing fillet yield and improving fillet quality in rainbow trout can improve aquaculture production efficiency and economic benefits. Classical breeding approaches can improve fillet yield and quality but are time-consuming because of the long time from when adult fish produce offspring – called generation interval. A more efficient approach is to use genomic selection, where thousands of genetic markers are used to increase the accuracy of the breeding process, thereby reducing the generation interval. With support from NIFA, researchers at the University of Maryland are using genomic analyses to identify genetic markers that can predict muscle yield and quality and, more importantly, use genomic selection to selectively breed fish with these traits. The impact of this research would be substantial. Animal selection for breeding would be reduced from two to three years to three weeks, and there would be an increase in production efficiency by 30 to 50 percent. The research will benefit both the commercial fishing industry and fish lines bred by USDA’s Agricultural Research Service. The total value of fish sales

received by trout growers in the United States totaled \$97.3 million for 2021. The estimated value of trout distributed for restoration, conservation, enhancement, or recreational purposes, primarily by state and federal hatcheries in 2021, totaled \$139 million.

Sustainable Agriculture Research and Education

The purpose of the Sustainable Agriculture Research and Education program is to encourage research and outreach designed to increase knowledge concerning agricultural production systems that:

- Maintain and enhance the quality and productivity of the soil.
- Conserve soil, water, energy, natural resources, and fish and wildlife habitat.
- Maintain and enhance the quality of surface and ground water.
- Protect the health and safety of persons involved in the food and farm system.
- Promote the well-being of animals.
- Increase employment opportunities in agriculture (7 U.S.C. 5801 and 5811).

With the popularity of local foods spreading to the largest retailers in the country, many producers now see an opportunity to grow their farms by scaling up and expanding to wholesale markets, which can help smaller-scale farmers to connect with more customers to increase brand recognition and profitability. A new educational resource from Sustainable Agriculture Research Education (SARE), a NIFA funded organization, provides a variety of strategies and tools to help owners of small- to mid-scale operations branch out into wholesale markets. *Scaling Up Your Vegetable Farm for Wholesale Markets* features a range of effective strategies for business planning, working with wholesale buyers and increasing production capacity. Producers in Texas share how they scaled up from 1.5 acres of diversified vegetables to growing 15 acres of organic radishes for local wholesale markets. The producers report that transitioning to wholesale markets was a “game changer” for their farm and for the surrounding community.

Beneficial insects those that feed on the common insect pests, help break down organic material, and/or pollinate flowering plants play an important environmental and economic role as biological pest controls, which could help lower the use of pesticides, reduce labor efforts, and strengthen resiliency of organic production. And this can make a big impact for New Hampshire, where avid gardeners and small-scale agricultural production abound. A team of New Hampshire Agricultural Experiment Station scientists examined the role of annual insectary plants which are flowering plants grown to attract, feed and shelter beneficial insects—in serving as habitats for syrphid flies. Adult syrphids prefer nectar and pollen for a meal, but many species of syrphid larva will consume large numbers of common pests like aphids. The three-year study was conducted at UNH’s Woodman Horticulture Research Farm; the University of Massachusetts Crop and Animal Research and Education Farm in South Deerfield, MA.; and the University of Connecticut Plant Science Research Farm in Storrs, CT.

Small Business Innovation Research (SBIR)

The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs offer competitively awarded grants to qualified small businesses to support high quality research related to important scientific problems and opportunities in agriculture that could lead to significant public benefits.

The USDA SBIR/STTR programs seek to:

- Stimulate technological innovation in the private sector.
- Strengthen the role of small businesses in meeting federal research and development needs.
- Increase private sector commercialization of innovations derived from USDA-supported research and development efforts.
- Foster and encourage participation by women-owned and socially and economically disadvantaged small business firms in technological innovations.

The USDA SBIR/STTR programs recognize that small business is often the driver of innovation as well as industry and sector disruption. In this spirit, NIFA welcomes high risk-high reward proposals.

In 2023, USDA invested over \$12.5 million in SBIR/STTR awards. The Phase I awards support 76 small businesses conducting high-quality research that addresses critical scientific challenges and opportunities in agriculture.

Some of the funded businesses include Evergreen Aquatics in Washington to improve the viability of burbot, a cod-like freshwater fish, as a new U.S. aquaculture species; Home Grown Fuels in Vermont, in partnership with the

University at Albany, to use plants to clean up contamination from “forever chemicals;” Padma Agrobotics in Arizona to develop an automated robotic harvester for cilantro and other specialty crops harvested in bunches; and Shende LLC in South Dakota to develop a novel heat transfer fluid system that converts solar energy into thermal energy to support an energy-efficient, wind and hail-resistant solar greenhouse usable in extreme winter temperatures.

Previous SBIR funding allowed Biotronics Inc. of Ames, IA, to develop and commercialize technology which uses ultrasound scans for measuring backfat, muscle depth and intramuscular fat in its products. The Miami, Florida-based small business nanoSUR, LLC, developed a gene-targeted insecticide for the red imported fire ant — a specific and menacing crop pest — that is safe for both the people handling it and the environment. Radical Plastics, a small business based in Marblehead, Massachusetts, developed a new technology to produce soil biodegradable plastic mulch films that solve current technologies' limitations, while enabling farmers to increase crop yields, preserve water, energy, and fertilizers, reduce labor and costs of farming. Springtide Seaweed, a small business in Gouldsboro, Maine, refined nursery, and farm seaweed cultivation systems to extend the U.S. seaweed industry beyond the low-value brown kelp crops into more valuable crops like nori and dulse. Simonpietri Enterprises, LLC, a small business in Kailua, Hawaii, developed a fuel refining technology that can make urban wood waste and construction and demolition debris usable for conversion into lower-cost jet fuel.

Smith-Lever, Section 3(b) and (c) Programs and Cooperative Extension

In 2023, USDA invested \$3.04 million for 23 projects in the Smith-Lever Special Needs Competitive Grants Program, whose purpose is to support Extension educational outreach initiatives for disaster preparedness, response, mitigation, and recovery (pre-disasters, during, and post-disasters). The goal of this funding is to increase the level of agricultural Extension activities and reach out to new audiences.

Applications may be submitted with the approval of Extension Directors of 1862 Land-grant Institutions in the 50 states, American Samoa, Guam, Micronesia, Northern Marianas, Puerto Rico, and the U.S. Virgin Islands.

Examples of recently funded projects:

Students at Little Big Horn College in Montana largely come from the culturally rich but poverty-stricken Crow Reservation. Mainstream education and family service programs there fall short of sound interventions without community-based intervention. With Smith-Lever Special Needs Competitive Grants program funding, the Little Big Horn College Extension-Apsalooke Healing Families Project can step up intervention strategies to provide holistic healing services and culturally based practices that encompass individual treatment and include a balance of health and wellness for the entire family unit.

University of Missouri Extension’s EDEN at Work in the Heartland provides training for Extension workers in Iowa, Kansas, Missouri, and Nebraska to enhance the delivery of disaster management education at the local level, with a special emphasis on reaching under-served and under-represented audiences. This approach will be integrated with the ongoing efforts of the Heartland Extension Disaster Education Network (H-EDEN). H-EDEN will help individuals and communities understand their hazard risks, how to plan for them, determine ways to mitigate them, and create more resilient communities.

Virginia Polytechnic Institute’s AgrAbility Virginia (AgVa) program holds a strong record in addressing the safety, health, and wellness of Virginia farmers through educational programs; rehabilitative and assistive technology services; culturally relevant outreach; and networking with agricultural, healthcare, and disability service organizations and agencies. With Smith-Lever Special Needs Competitive Grants program funding and the foundational support of the AgrAbility Virginia Network, AgVa will continue to further assist and build the capacity of farmers who have illnesses, injuries, or disabilities by promoting safety, health, wellness, and accessibility on the farm.

Extension Services at 1890 Institutions

The nation’s 1890 LGUs are advancing the well-being of families, businesses, and communities. Whether modernizing food systems, supporting local economies or mentoring youths, this system of 19 historically Black LGUs is successfully bridging access to knowledge and shaping a brighter future for their communities through innovative Extension efforts in multiple ways.

- To combat obesity and other health issues, South Carolina State University’s Upstate Region Family Life, Nutrition and Health Program operates the Comparing Food Options Across the Community project. The program provides seniors with nutrition education to help families adopt healthier food choices and budget-

friendly techniques to use when shopping. Results from last year show that 100 percent of the participants learned the importance of reading food labels, being healthy, reducing salt intake, buying fresh fruits and vegetables, having a balanced diet, and selecting healthier fat options.

- Preparing the Scientists of Tomorrow - Last year, more than 3,000 youths from 31 school districts attended Virtual STEM Day sponsored by Alabama A&M University. Youths were introduced to the engineering design process and created catapults that accurately and consistently launched a projectile into a target or as far away as possible. In addition, a Mobile STEM Lab introduced youths to real-world and hands-on learning experiences.
- Alcorn State University in Mississippi conducted three two-day National 4-H STEM Challenge camps, titled “Explorers of the Deep,” last year. Held in elementary, middle, and high schools in southwest Mississippi, the camps focused on the mysteries and adventures of ocean exploration. More than 950 young people developed inquiry, observational and problem-solving skills while they made discoveries and discovered their own STEM identities.

Extension Services at 1994 Institutions

NIFA administers several grant-making programs aimed at uplifting and advancing 1994 Land-grant Institutions. Not only do these programs fund research and Extension to support Tribal communities, they provide critical resources for students who seek advanced degrees and technical training.

- The New Beginning for Tribal Students Program makes competitive grants to Land-grant Institutions to provide support specifically targeted for Tribal students on their path to higher education. A Land-grant College or University that receives this grant will use the funds for, but not limited to, the support of Tribal students for articulation agreements with 1994s; dual credit programs; recruiting; tuition and related fees; experiential learning; student services, including tutoring; counseling; academic advising; and other student services that would increase the retention and graduation rate of Tribal students enrolled at the Land-grant College or University, as determined by the Secretary of Agriculture. The maximum one state can receive is \$500,000 per year.
- The Tribal Equity Grants Program funds formal learning at 1994 Land-grant Institutions. Faculty use the funding to improve courses, enhance teaching ability, provide student stipends, or invest in new technology to reach more students on remote reservation communities. The program also supports student recruitment and retention and the development of classes and degree programs focused on agriculture, natural resources, and human sciences for Native Americans. Additionally, faculty have used program funding to help build laboratories, conduct remedial courses, create new degree programs in forestry, and provide students with stipends. The goal is to graduate empowered students who can embrace their future with new skills and knowledge.
- The Tribal Extension Grant Program allows 1994 Land-grant Institutions to create Extension offices for their reservation communities. Through this funding, 1994 Land-grant Institutions touch the lives of reservation youth, farmers and families with activities that enhance health, promote prosperity and support learning.
- Each Extension office works with reservation communities to build programs that target local needs. The result is diversified outreach focused on local needs. For example, reservation youths participate in fun activities in a safe environment. Farmers and ranchers gain science-based insights to improve their productivity. Financial literacy training enhances rural reservation economies. The institutions also provide culture-centered family activities to restore Native languages, traditions, and agriculture.
- The Tribal College Research Grant Program helps 1994 Land-grant Institutions become centers of scientific inquiry and learning for remote and rural reservation communities. The 1994 Land-grant Institutions often serve as the primary institution of scientific inquiry, knowledge and learning for reservation communities. This funding allows them to address the questions important to these communities such as protecting reservation forests or monitoring water quality. Projects may help a tribe improve bison herd productivity, discover whether traditional plants can play a role in managing diabetes or control invasive species.
- The Federally Recognized Tribes Extension Program aims to establish an Extension presence and support Extension outreach on Federally Recognized Indian Reservations and Tribal jurisdictions of Federally Recognized Tribes. This program seeks to continue the Land-grant mission of providing education and research-based knowledge to those who might not otherwise receive it. The program is a competitive, four-year continuing grant opportunity. Applications may be submitted by 1862, 1890, and 1994 Land-grant

Institutions. Awards will be made through a competitive, peer-reviewed process administered by NIFA. Award amounts will vary and are contingent upon annual congressional appropriations.

Facility Improvements at 1890 Institutions

NIFA's 1890 Land-grant Institutions programs are intended to strengthen research, Extension and teaching in the food and agricultural sciences by building the institutional capacities of the 1890 Institutions. The 1890 Facilities Grant Program is intended for the acquisition and improvement of agricultural and food sciences facilities and equipment, including libraries.

Examples of recently funded projects include:

- Alabama A&M University is expanding its research, teaching, and Extension capabilities by constructing and renovating facilities that support its work and enhance its degree programs in Biological and Environmental Sciences, Food and Animal Sciences, Community and Regional Planning, and Family and Consumer Science. The university is constructing a primary care veterinary clinic, renovating its greenhouse complex and agribusiness center, and constructing a community enrichment complex.
- Kentucky State University is upgrading and replacing existing aquaculture buildings and facilities, which will address the critical need for modern infrastructure to support research, teaching, and Extension activities in aquaculture production.
- Tuskegee University is building out a complex of science labs and classrooms to enhance the instructional infrastructure necessary to effectively support the related teaching and Extension activities; constructing a red meat slaughtering unit; and constructing a poultry research, teaching, and Extension facility.

Renewable Resources Extension Act

The goal of the Renewable Resource Extension Act (RREA) program is to enhance the sustainability of U.S. forest and rangeland resources, and enable landowners and managers to achieve their desired goals and objectives by making the results of relevant public research available to them. Forests and rangelands provide multiple benefits to people, but these precious ecosystems are vulnerable to threats from climate change, invasive species and diseases, wildfire, and land conversion such as agriculture expansion and urbanization. The RREA program supports Extension projects that ensure the adoption of climate-smart technologies in forest and rangeland systems.

In 2023, the RREA program supported two regional projects, with national applicability, for such purposes:

- Building forest carbon and market decision support tool and capacity building in the Lakes State this project fills in the gaps in understanding carbon market among forest owners and foresters, and how forest carbon payment programs work. Led by Michigan State University's forestry Extension program, this project aims to develop a webtool to conduct cost-benefit analyses of delaying harvests for carbon trading or other ecological objectives. The long-term goal of this project is to support landowners in understanding forest carbon markets based on their needs as they (forest owners) play a critical role in managing their forests to improve carbon sequestration to address climate change impacts.
- Adoption of climate-smart tree risk assessment in coastal communities, tree damage in coastal communities is related to increasing frequency and intensity of storms. Insurance companies are implementing policies that could influence community forest management decisions including increasing premiums, denying coverage, or suggesting the removal of trees, all of which represent a negative adaptation to climate change. This project at the University of Georgia aims to promote the adoption of climate-smart practices through mitigating the risks in urban and peri-urban forests. To achieve this goal, the project is building a network to enable understanding and communication among property owners, tree care workers, and the insurance industry of the risks associated with forest management and protection as influenced by the frequency and severity of storms. This project aims to mitigate the risks and develop opportunities for the insurance industries to increase their knowledge about tree risk management.

Rural Health and Safety Education Programs

Many individuals and families living in rural areas and communities experience disparities related to physical and behavioral health, safety, and well-being. Such disparities are often triggered by the hardships of poverty and inadequate access to gainful employment and resources. Through the Rural Health and Safety Education Program, NIFA helps enhance rural health and safety through national program leadership, funding for integrated research, education, and Extension activities, and strategic partnerships and collaborations. Such efforts help promote and enhance rural health, strengthen economic vitality and, over time, break the rural poverty cycle.

Examples of recently funded projects include:

- Colorado State University is building bridges between families, schools, and communities for American Indian and Hispanic populations. Evidence-based prevention programs are rarely adapted to meet the unique strengths and needs of these families, decreasing the likelihood that they will be implemented with fidelity or sustained over time. The university's DARE to be You Bridge Program, developed in partnership with Ute tribes, involves family-school collaboration to enhance family resilience and parent-youth-teacher relationships, builds youth life skills, and reduces risks of substance use. Its primary goal is to promote the ability of American Indian and Hispanic youths and families to make healthy choices and build supportive family and school environments with respect to opioid and other substance use.
- Through training and advocacy, the University of Maryland is reinforcing overdose prevention in its state, which ranked in the top eight in the U.S. based on opioid overdose deaths in 2021. The program is working to reduce substance misuse and overdose-related deaths by strengthening individual knowledge and efficacy related to preventing/reducing opioid misuse and overdose risk, accessing health and mental care services, using effective stress reduction techniques, and understanding how recent changes in recreational drug use policy intersect with overdose risk.
- Oklahoma State University is building water quality and rural health education capacity through private well screenings and training. The project is providing essential knowledge about household wells and drinking water quality risks in coordination with rural-serving institutions in southeastern Oklahoma.

Women and Minorities in Science, Technology, Engineering, and Mathematics (STEM) Fields

The Women and Minorities in Science, Technology, Engineering and Mathematics (STEM) Fields program supports research, education/teaching and Extension projects that increase participation by women and underrepresented minorities from rural areas in STEM. This program addresses educational needs within broadly defined areas of food and agricultural sciences.

This program develops and implements robust collaborations to increase the representation, participation, and entrepreneurial skills and abilities of rural women and underrepresented minorities from rural areas in STEM careers, thereby contributing to economic prosperity in rural areas across the nation. Funded projects will meet this goal and lead to the development of a robust and diverse food and agricultural STEM workforce that is highly competent in the application of STEM knowledge and skills, with increased participation of women and minorities from rural areas across a broad spectrum of rural, local, state, or national communities.

For example, in 2023, NIFA invested nearly \$2 million for 10 projects that support rural women and minorities in STEM. One of the grants was awarded to Purdue University to recruit women and minority students from senior high schools, vocational, junior and community colleges to provide immersive, informative, and experiential learning experience about the interdisciplinary aspects of scientific and engineering disciplines related to agricultural fields.

Food Safety Outreach Program

The Food Safety Outreach Competitive Grant Program (FSOP) supports customized food safety education, training, and technical assistance for operators of small to mid-size farms and food processing facilities; veteran, beginning, and underserved farmers and ranchers; and small-scale vegetable and fruit merchant wholesalers.

In 2023, the FSOP funded \$9.6 million for 14 Community Outreach and 14 Collaborative Education and Training awards. The program also provided 1 technical assistance award that will support grant writing training and resource development for groups not historically awarded through the FSOP.

For example, with FSOP funding, the Rio Grande Community Development Corporation and the New Mexico Farmers Marketing Association have partnered to create New Mexico Food Safety Strong, which aims to enhance the food safety and quality assurance knowledge and capacities of New Mexico's small-scale farmers and small processors, allowing them to take advantage of existing and expanding market opportunities while furthering the growing culture of food safety among food processors in the state.

Farmer and Ranch Stress Assistance Network

NIFA's Farm and Ranch Stress Assistance Network (FRSAN) connects farmers, ranchers, and others in agriculture-related occupations to stress assistance programs. Creating and expanding a network to assist farmers and ranchers in times of stress can increase behavioral health awareness, literacy, and positive outcomes for agricultural producers, workers, and their families.

Projects funded through the FRSSAN must initiate, expand, or sustain programs that provide professional agricultural behavioral health counseling and referral for other forms of assistance as necessary through farm telephone helplines and websites; training programs and workshops; support groups; and outreach services and activities.

- In 2023, NIFA is funding a \$2.5 million project being led by the National Young Farmers Coalition, Inc., of Hudson, New York, to support the sustainability of farm stress assistance in the Northeast region by enhancing and expanding an existing network known since 2022 as "Cultivemos." Cultivemos works together to build and equip an inclusive network of service providers dedicated to advancing the mental, emotional, social, and financial health of agricultural producers, workers, and their families across the Northeastern United States, and the network aims to increase access to services for producers with historically limited access to them, including farmworkers, young farmers, and Black, Indigenous, and People of Color (BIPOC) farmers.
- The FRSSAN project also invested over \$7 million to support assistance networks in the southern (University of Tennessee), north central (University of Illinois) and western (Washington State University) regions.
- NIFA and the USDA Rural Health Liaison Office are currently finalizing the 2023 report that includes more detailed impact statements from the FRSSAN centers, that includes their strategy for coordination with partners and outreach efforts, the impact additional funding could have on supporting increased outreach, and the numbers of those impacted by the program. This report is provided annually to the Senate and House Committee on Appropriations. NIFA anticipates that the report will be completed no earlier than February 2024.

Expanded Food and Nutrition Program

The Expanded Food and Nutrition Education Program (EFNEP) is the nation's first federal nutrition education program for low-income populations, established in 1969. Through nutrition and physical activity education, EFNEP works to change health behaviors with efforts reaching all 50 states, six U.S. territories, and the District of Columbia. Roughly 75 percent of adult participants are at or below the federal poverty line, and more than 70 percent of adult participants are people of color and/or of Hispanic ethnicity. Annually, more than 94 percent of participants report improved behaviors. Last year, 95 percent of adults improved their diet, including consuming additional fruits and vegetables, with program graduates reporting a collective food cost savings of \$558,446.34. Additionally, EFNEP provided employment to 1,285 peer educators who are members of the communities they serve. Last year, EFNEP educators worked directly with 45,421 adults and 187,663 youths. These educators tailored lessons on diet quality and physical activity, food resource management, food safety and food security to meet the specific needs of their respective program participants.

Impact examples include:

- San Juan, Puerto Rico, has a 40 percent poverty rate. One mother who was on food assistance enrolled in EFNEP virtually to learn basic food skills. She had no knowledge of food safety practices, reading nutrition labels or planning meals for her family. She participated in EFNEP through videoconferencing. She also received motivational text messages. Upon completing the program, she reported learning to read the nutritional labels and to make a shopping list before going to the supermarket to save on purchases. She introduced new healthy recipes to her family, increased physical activity and lost weight – all factors for improved health.
- Pemiscot County, Missouri, has one of the highest rates of food insecurity in the state. The poverty rate for residents of Pemiscot County exceeds 28 percent. Individuals living in poverty have difficulty accessing, affording and therefore consuming healthier food options such as fruits, vegetables, and whole grains.
- Lincoln University Cooperative Extension EFNEP partners with local community organizations to give low-income families the knowledge and skills needed to make behavior changes toward a healthy diet and an active lifestyle, while stretching their food dollars. Upon completion of EFNEP classes, graduates in Pemiscot County reported increased consumption of fruits, vegetables and whole grains and an average savings of \$52 per month on food costs.

Although EFNEP is not a weight-loss program, some participants do lose weight when practicing fun and healthy behaviors taught in EFNEP. Before attending University of Maryland's EFNEP classes, one Baltimore family of five struggled with being physically active. After participating in EFNEP, the family exercises regularly. They like going for walks following family mealtimes. The mother and father have shed nearly 10 pounds together from exercising regularly and eating healthier, more balanced meals.

New Technologies for Agricultural Extension

The New Technologies for Ag Extension program aims to increase the capacity of the Cooperative Extension System to adopt new and innovative technology applications for delivering science-based educational resources from Land-grant and other partner institutions about matters of high importance to the public like Diversity, Equity, Inclusion, and Accessibility; Climate; Economic & Workforce Development; Health Equity; Positive Youth Development; Urban Programs; and Broadband Access.

In 2023, the program funded a \$3.4 million project at the University of New Hampshire that will launch the Technology-Enhanced Cooperative Extension Hub (TECHExt), a ground-breaking initiative that aims to revolutionize the Cooperative Extension System (CES) by infusing it with state-of-the-art technologies and practices.

Conducted in partnership with the Extension Foundation, the project is designed to enhance digital accessibility, professional capacity, and stakeholder engagement. UNH Extension will focus on two cornerstone projects: implementing New Hampshire's comprehensive Digital Equity Plan and transforming its existing email marketing into an integrated omnichannel strategy. Through this strategic collaboration, UNH Extension and the Extension Foundation aim to create a more inclusive, effective, and technologically advanced Cooperative Extension System, setting a precedent for similar systems nationwide.

Children, Youth, and Families at Risk

The Children, Youth, and Families at Risk (CYFAR) Grant Program allocates funding provided by congressional appropriation to Land-grant Universities for comprehensive community-based programs for at-risk children, youths, and families. The CYFAR mission is to provide resources to the Land-grant University System and Cooperative Extension Systems so that, in collaboration with other organizations, they can develop and deliver educational programs that equip at-risk youths with the skills they need to lead positive, productive, contributing lives.

Examples of recently funded projects include:

- Alabama A&M University is responding to the growing evidence suggesting the need for parents to teach their children personal finance, financial knowledge, and skills. The project is developing a Parent-Child Financial Literacy in Progress Program for impacting limited-resource families and high-risk youths. The program is an intervention/prevention program aimed at increasing the financial knowledge and skills of parents and their children in basic financial literacy, targeting limited-resource families in one of the highest poverty-stricken areas of the Black Belt.
- The College of Menominee Nation is addressing the drug abuse epidemic on the Menominee Indian Reservation as it pertains to teenagers and their mental health. The Menominee Tribal Legislature declared a public health emergency during April 2022, as a result of the opioid addiction crisis. Young people on the Reservation are being taken away because of this, and there is a direct need for collaboration and resources. This project is providing resources directly to teens in the communities of Keshena and Neopit. The most noticeable impact will be the increase in teenagers having a voice and the strengthening of social and emotional skill sets to overcome personal challenges. The project is assisting in providing a safe, non-judgmental place for teens to share with their peers and work on their mental health and decision-making skills. The project is also providing tools and vital resources to teens that can be shared in the community with family and friends.
- The University of Minnesota and North Dakota State University are partnering to improve Somali youths' educational outcomes, career opportunities and overall well-being. Somali youths and their families invest many resources into education. Still, Somali youths in Minnesota and North Dakota experience lower educational and career outcomes than their peers. Structural barriers, like anti-Muslim racism, rural social isolation and deficit-based interventions negatively impact Somali youths' educational outcomes. The project is not only focusing on building skills and changing behavior of youths but will also cultivating positive environmental contexts within youths' families, schools, and potential places of work. The project is using a program model which addresses multiple social environments that support thriving. The program immersive experiences will showcase knowledge and aspirations to adults in these settings to forge a relationship and to transform deficit perspectives these systems hold.

Farm Safety and Youth Farm Safety Education

Farming is a hazardous profession. According to the U.S. Bureau of Labor Statistics, data gathered from 2019 statistics indicate that the agricultural sector is still the most dangerous in America with 573 fatalities, or an

equivalent of 23.1 deaths per 100,000 workers. NIFA addresses the issue of farm safety by supporting Cooperative Extension Service programs that train workers in appropriate field practices and equipment use and maintenance. Overall, NIFA farm safety efforts strive to help workers avoid workplace hazards, assist those with disabilities remain employed, and ensure equal access to the agriculture profession for all workers, regardless of background or ability.

For more than 30 years, the AgrAbility Program has helped to empower individuals with disabilities to stay in agriculture. AgrAbility's efforts have helped enhance quality of life, not only for individuals, but also for families and communities. When one Indiana farmer lost her left arm and leg in a combine accident, resources from AgrAbility helped her bounce back quickly into farming. After conducting a farm assessment, which included touring their farm operation and identifying barriers to productivity, the Indiana AgrAbility and the Indiana Vocational Rehabilitation Services determined that two of the most helpful pieces of assistive technology would be a platform lift to get her into the tractor's cab and a utility vehicle with an enclosed cab. Five years later, she continues to share with others how the AgrAbility program helped her continue farming after the accident. Over the years, AgrAbility has provided direct, on-site services to more than 13,600 farmers and their families.

In addition to NIFA's Farm Safety efforts, the Youth Farm Safety Education and Certification Program supports a National Clearing House of youth farm safety educational curriculum, enhancement and development of new curriculum and enhanced instructor expertise in delivering safety training to youth among African American, Native American, and Hispanic/Latinx farming communities.

Examples of recently funded Youth Farm Safety programs include the following:

- University of Nebraska Medical Center built on activities and accomplishments of the Safety in Agriculture for Youth (SAY) project through marketing, outreach, and expansion of 30 curriculums and 12 resources related to agricultural safety and health and provided support to students taking the OSHA 10-Hour General Industry (Agriculture) course.
- Ohio State University's Ohio Safety in Youth for Agricultural project supports safety training for young farm workers and safety curriculum for educators who teach youth workers through non-formal and formal approaches and incorporates technology-based learning and performance tools into youth workforce training materials, such as on-line learning platforms with digital badges and Virtual Reality technologies.
- Utah State University promotes and encourages a sustainable and highly qualified population of Tractor and Machinery Certification instructors who may serve an underrepresented population of youths representing African American, Native American, and Hispanic/Latinx farming communities as well as promote digital learning tools with Youth Farm Safety Education and Certification curriculum.

Federally Recognized Tribes Extension Program

The Federally Recognized Tribes Extension Program (FRTEP) works to establish and support Extension outreach on Federally Recognized Indian Reservations and Tribal jurisdictions of Federally Recognized Tribes. Examples of funded projects include:

Promoting food sovereign and secure tribes in Interior Alaska and beyond

University of Alaska Fairbanks

The FRTEP Project at the Tanana Chiefs Conference (TCC) has promoted food sovereignty and security in the region for 30 years. TCC is a regional native nonprofit consortium of 37 Interior Alaska Tribes. This project provided education and outreach in the TCC region and statewide to help Alaska Natives improve food security, resiliency, and economic diversity through gardening, farming, and subsistence activities.

Funding provided the delivery of 12 webinars called the GROW series to Tribes as well as workshops on a variety of topics including Youth Gardening Basics and Seed Starting, Traditional Ways of Using Wild Plants and Fermenting, Youth Cross Country Skiing, and Raised Bed Gardening. Participants said of the workshops, "I will teach my kids to grow," "I liked the hands-on experience," and "I will know how to use my carrots from my garden and how to preserve them."

Tribal Local Foods FRTEP Project, Oglala Sioux Tribe, Pine Ridge Reservation

South Dakota State University

Food insecurity is high on the Pine Ridge Reservation, with one in four households consistently classified as food insecure. This project expands Extension presence and outreach on the Pine Ridge Reservation to address the needs of its marginalized communities and help provide increased access to badly needed and hard-to-find resources.

One focus of this project is the Farm to School (F2S) program. Six schools are participating in F2S programs. They will be provided with a small hoop house built from locally sourced materials, disability sensitive raised beds, drip irrigation, and either a grow station or seedlings from the FRTEP Extension office. One F2S training took place in the F2S High Tunnel at Little Wound School. It was attended by 17 Lakota youths from Little Wound School's Extension School. In addition, 42 tribal farmers received one-on-one small-acreage regenerative-agriculture production training customized to their abilities and site conditions.

Continuing Extension Activities at Ilisagvik College for Tribal Health and Equity

Ilisagvik College is one of two 1994 Tribal Colleges to participate in FRTEP. The focus of their Extension programming is hands-on, experiential learning to promote an understanding of food and health in the context of Iñupiaq traditions, culture, and a worldview which includes supporting Indigenous food systems and encouraging healthy living on the North Slope through workshops and camps. The programming uses Iñupiaq traditions and includes a focus on citizen engagement regarding food supply, environmental concerns in the arctic, and public health. The majority of the workshops and camps were offered in Utqiagvik, Alaska, with a Zoom option for those who live outside the village. On-site programming was also offered within the other seven outlying villages in the region.

Funding provided 1,334 participants with 59 hands-on workshops on topics such as the migration of the caribou herd, caribou mask making, skin sewing, tundra plant walks, gathering and preserving traditional tundra plants, and salve making.

Pawnee Agriculture and Nutrition Outreach – Phase II

Oklahoma State University

The objective of the Pawnee Agriculture and Nutrition Outreach project is to support the goals of the Pawnee Nation and Pawnee Nation College by building resilience and confidence in the Pawnee community, creating a balance of scientific knowledge in agriculture production and food security-related topics with Pawnee heritage, ancestral knowledge, and culture. Activities are based on developing Extension curricula to deliver science-based knowledge while supporting cultural traditions and sharing elder knowledge and spiritual foundations of the community.

Funding for this project supported a Pawnee Gardener Program and Pawnee Community Garden. Tribal members gardened in traditional gardens, two hoop houses, and a greenhouse, applying knowledge gained from curricula based on the Master Gardener Program with selected topics of interest to the Tribal members including traditional Tribal knowledge. In addition, workshops focusing on food and agriculture manufacturing practices, food defense practices, basics of plant physiology and greenhouse management, pollinator gardening, medicinal plants, basic financial training, and leadership and entrepreneurship were delivered to over 100 participants.

Methyl Bromide Transition Program

The Methyl Bromide Transition Program supports the discovery and implementation of practical pest management alternatives for commodities and uses affected by the phase-out of methyl bromide (MB), an ozone layer-depleting gas that was previously used for pest control. Methyl bromide is an odorless, colorless gas used to control a wide variety of pests in agriculture and shipping, including fungi, weeds, insects, and nematodes. However, in the atmosphere, methyl bromide depletes the ozone layer and allows increased ultraviolet radiation to reach the earth's surface. Hence, this soil fumigant was banned from several agricultural usages, exposing the need for new sources and methods for its replacement. The pressure to completely phase-out MB has created an urgent need for new economical and effective pest control tactics to control soil-borne and post-harvest pests, and pests in the processing and shipping industries. Funded projects include those that seek to solve pest problems in key agricultural production and post-harvest management systems, processing facilities and transport systems for which MB has been withdrawn or withdrawal is imminent.

In 2023, NIFA invested \$1.8 million in four projects as part of the Methyl Bromide Transition Program.

Following the phase out of methyl bromide, *Phytophthora* fruit rot caused by the oomycete *Phytophthora capsici*, and root-knot nematodes pose mounting challenges to cucurbit production within the United States. In recent years, losses from *Phytophthora* fruit rot in the Mid-Atlantic region have ranged from 7-20 percent prompting the need for

new management approaches. Interest in using biofumigant crops is expanding, but lack of best management practices along with traditional spring plantings have limited the deployment of this approach in watermelon and pumpkin production. University of Delaware researchers are addressing relevant stakeholder concerns regarding implementation of biofumigant crops and assessing if fall planting is feasible for disease management in watermelon and pumpkin production. Economic assessment and evaluation of planting date for optimal establishment of biofumigant biomass will be combined with the ability to quantify changes in pathogen populations to inform Extension recommendations on improved disease management alternatives for watermelon and pumpkin production in the Mid-Atlantic. Findings from this research will be applicable beyond watermelon and pumpkin to all vegetable crops susceptible to *P. capsici* and root-knot nematodes.

Organic Transition Program

The Organic Transitions Program (ORG) supports the development and implementation of research, Extension, and higher education programs to improve the competitiveness of organic livestock and crop producers, as well as those who are adopting organic practices.

In 2023, NIFA invested \$7 million across eight projects in the Organic Transitions program. Highlights include:

- At Penn State, researchers are investigating how the combination of multiple species of perennials in a field might improve weed suppression and soil health. Organic farmers who currently use tillage as a weed control measure do so at the expense of soil health, as disturbing the soil can impact long-term fertility. But planting perennial crops can disturb the soil less, providing an opportunity for microorganisms to build organic matter and soil fertility.
- Researchers at the University of Wisconsin are testing how well a bacterial strain of *Pseudomonas soli* T307 (T307) can aid in the fight against apple fire blight, which is a major problem affecting agriculture. The T307 strain produces a unique natural compound that has been proven effective in countering the effects of the bacterium that causes fire blight. The project's goal is to develop an integrated management system to protect crops, especially apples and pears, from fire blight for organic farmers, helping to improve crop yields and farm productivity.
- At Clemson University, scientists are developing new fertilizer formulations using innovative manure-based organic products and rendered materials to help solve the common mismatches between nutrient release rates of organic fertilizers and peak plant nutrient demands, a problem that often bedevils organic vegetable growers. For these farmers, this mismatch means nutrient release from organic fertilizers that often cannot supply enough nutrients to support periods of rapid crop growth, resulting in the loss of yield or decreased crop quality.

Regional Rural Development Centers

In 2023, the Regional Rural Development Centers (RRDCs) shared their preliminary report from a Listening Sessions Initiative to gather feedback from stakeholders engaged in developing America's rural communities. The report summarizes results from a survey of stakeholders, identifying their views on top priorities for rural community development, as well as their organization's capacity and interest to engage on key issues.

Some recently completed projects include:

- Developing GIS Data in the West to Inform Land Use and Management Planning, through a \$475,000 grant in 2020, the Regional Rural Development Centers program funded a number of activities at the Western Rural Development Center (WRDC) in Utah to facilitate rural prosperity and economic development. Notable among these is the WRDC's Land Use and Management Planning Initiative. Nearly one million square miles (55 percent) of the land in the western United States is managed by the federal government, and in recent years federal land management decisions in the region have been prominent and divisive. The WRDC's land use and management planning initiative seeks to develop a comprehensive GIS data set on all land west of the 98th meridian in the continental U.S. to explore the consequences of various land management approaches.
- Promoting Rural Workforce Development in the North Central Region, at Purdue University in Indiana, the Regional Rural Development Center program helped support the operation of the North Central Regional Rural Development Center (NCRDC), which is focused on creating resilient communities and economies, developing leadership and civic engagement, and promoting community health and wellness. In 2021, the NCRDC partnered with the Association of Public and Land-grant Universities on a successful Ascendium

Foundation grant to build a workforce engagement model that supports Extension professionals in forming and supporting a local community team to understand and address a community’s workforce needs.

- Supporting Underserved Farmers, Ranchers and Communities in the South, the Southern Rural Development Center (SRDC) at Mississippi State University has made considerable progress in developing programs and providing resources to help underserved communities. Activities include the development of a basic grant writing workshop for use in underserved communities; exploration of opportunities to advance assistance to socially disadvantaged farmers/ranchers; and helping rural communities and disadvantaged groups increase access to USDA and other resources. Also, with additional AFRI funding, the SRDC began working in partnership with 1890 LGU colleagues on designing and disseminating tools for helping close the digital divide among underserved communities. Building upon the work begun in 2017, the SRDC along with its partners continues to build capacity to address heirs’ property concerns. Five teams, formed in spring 2020, continue to meet with SRDC to address concerns. A group including Mississippi State University, Tuskegee University, the Center for Heirs’ Prosperity Preservation, and the USDA Forest Service has already been able to leverage \$499,998 to support research efforts. In the last year, the SRDC’s efforts resulted in 40 training workshops conducted, eight multistate teams formed or supported, five curricula developed or expanded, \$500,000 in new funds leveraged, multiple virtual engagement practices adopted, and several new partnerships established, each of which has served to advance rural development.
- Advancing Agritourism, Women-Owned Businesses in the Northeast, the Northeast Regional Center for Rural Development (NERCRD) at Pennsylvania State University has richly explored the roles of agritourism and female-operated farms in maintaining agricultural vitality at the county-level. As part of a NIFA-funded multistate project on agritourism, NERCRD faculty have assisted small and medium-sized farms engage in agritourism ventures, and staff supported the dissemination of those findings by hosting a webinar, editing, and publishing the report, and publicizing it across the RRDC networks. The report has been downloaded more than 300 times and provides practical tips and strategies for others interested in establishing a beverage-related tourism attraction in their locale. Other priorities undertaken by the NERCRD include new grant opportunities (both in agritourism and intergenerational programming); rural-urban interdependencies as reflected in models of spatial supply chains; documenting how the rural Northeast (NE) differs from the nation and also what the NE states have in common agriculturally; behavioral and mental health in rural communities and how they interact with quality of life factors; changing agricultural production conditions in the Northeast and the nation; and the barriers and opportunities for innovation to occur in different types of communities.

Food and Agriculture Defense Initiative (FADI)

Initially established in 2002, the Food and Agriculture Defense Initiative (FADI) was aligned with a presidential directive that established infrastructure to address homeland security issues, protect the security of our agricultural enterprises and the safety, security, and rapid recovery of the American public in the face of disaster. NIFA continues to support this effort with three national networks: the National Plant Diagnostic (NPDN), the National Animal Health Laboratory Networks (NAHLN), and the Extension Disaster Education Network (EDEN).

National Animal Health Laboratory Network

The National Animal Health Laboratory Network (NAHLN) is part of a nationwide strategy that enhances the nation’s early detection of response to, and recovery from animal health emergencies. It is a partnership of over 60 federal, state and university-associated animal health laboratories distributed throughout the U.S., capable of testing large numbers of samples for specific disease agents originating from food animals.

NIFA was the first USDA agency to participate in the cooperative agreement that established NAHLN, and NIFA representatives contribute to the Network’s coordinating council and its executive committee. NIFA also has contributed approximately \$4.2 million every year.

Highlights from 2023 include:

- The latest lab to join NAHLN’s network of 60+ labs is the University of Arkansas System Division of Agriculture’s Tollett Veterinary Diagnostic Lab. The Tollett Lab has been operated by the Arkansas Agricultural Experiment Station for 14 years, offering diagnostics for poultry and mammals. Its NAHLN certification comes as the poultry industry in Arkansas is dealing with highly pathogenic avian influenza. In 2020, the poultry industry was the state’s top commodity in terms of cash receipts at more than \$2.6 billion.

- In early 2023, NAHLN's antimicrobial resistance (AMR) pilot project was expected to be converted into a permanent program that monitors data from four livestock species (cattle, swine, poultry, and horses) and two companion animal species (dogs and cats). Establishing a surveillance program within NAHLN to monitor AMR profiles in animal pathogens will enhance the nation's early detection of, response to, and recovery from animal health emergencies. It will also help identify new or emerging AMR profiles and help monitor continued usefulness of antimicrobials over time.

Crop Protection and Pest Management Program

The Crop Protection and Pest Management (CPPM) program at NIFA addresses high-priority issues related to pests and their management using integrated pest management (IPM) approaches at the state, regional and national levels. The CPPM program supports projects that will ensure food security and respond effectively to other major societal pest management challenges with comprehensive IPM approaches that are economically viable, ecologically prudent, and safe for human health.

The CPPM program invests in projects that use new and emerging technologies to address pest management challenges, with the intended effect of funding effective, affordable, and environmentally sound solutions needed to maintain agricultural productivity and healthy communities.

In 2023, NIFA invested \$5.8 million in 21 projects across the United States. Some examples include:

- At North Carolina State University, researchers are advancing the IPM toolbox for the sustainable production of brassica crops (broccoli, cauliflower, cabbage, etc.) through the use of mating disruption to manage the diamondback moth, a global pest of elevated severity that has shown resistance to the active ingredients in virtually all classes of insecticides.
- At Oregon State University, investigators are considering the performance, safety, and economic sustainability of electric weed control (EWC) as an herbicide resistance-management strategy in hazelnut orchards. EWC — the only effective non-chemical weed control tool because tillage is limited in hazelnut, and mowing is ineffective — can fundamentally change weed management in hazelnut and mitigate herbicide resistances.
- At Iowa State University, researchers are working to enhance diversity, equity, inclusion, and accessibility (DEIA) within IPM by driving cultural change within the discipline, fostering a more inclusive community reflective of the U.S. population. The project will perform needs-assessment and relationship-building activities to increase resources through fellowships, project funding, and mini-grants.

Urban, Indoor & Other Emerging Ag. Production (Urban Ag)

The Urban, Indoor, and other Emerging Agricultural Production Research, Education, and Extension Initiative (UIE) is a NIFA competitive grant program implemented in 2022 to support research, education and Extension activities that facilitate development of urban, indoor, and other emerging agricultural production systems. The UIE emphasizes activities on several segments of the value chain, including production, harvesting, transportation aggregation, packaging, distribution, and marketing needs.

In 2023, NIFA invested more than \$9.4 million for 12 projects through the Urban, Indoor, and Other Emerging Agricultural Production Research, Education and Extension Initiative.

Evaluating Controlled Environment Production Techniques in Urban Settings for Small-Scale Growers. Many challenges face farmers who live and operate in and around urban centers. This is especially true of the large urban areas in Southern California where water, land, and knowledge of how best to produce high-value crops are in short supply despite the large number of small farmers in the region. To address these needs and to help increase food production in urban areas, University of California Davis researchers are investigating best practices and management techniques for controlled environment agricultural systems for small scale producers, including greenhouses with hydroponics, high tunnels with hydroponics or potted crops, and container plantings that could easily fit on an average urban lot or in a suburban backyard. Data generated will be compiled into a map and guide so growers can find land to use, and so they know the relevant rules around accessing it. Extension will then create a comprehensive guide on how to set up and grow in a variety of controlled environment ag systems that are small enough to be used in urban areas. Scale-appropriate management will be identified and laid out, as will the necessary costs for creating and maintaining these systems. Finally, they will have a tool where growers can locate available land and ensure they have followed all local regulations governing its use. All outputs will be made available through the UC Cooperative Extension system and will be further distributed by collaborators like local resources conservation districts.

Community Food Projects Program (CFP)

Through a network of stakeholders from various parts of the food system, Community Food Projects increase communities' food and nutrition security by supporting people through small to medium farmers, producers, and processors in urban, rural, tribal, and insular areas. The program provides communities a voice in food system decisions and supports local food markets to fully benefit the community, increase food and nutrition security, and stimulate local economies. These projects meet specific state, tribal, insular, local or neighborhood food and agricultural needs for infrastructure improvement and development, while reducing barriers to food access and increasing food and nutrition security for communities across the nation.

Examples of funded projects include the following:

- 'Aina Ho'okupu O Kilauea in Kilauea, Hawaii, expanded the Kauai Local Food Systems Supporting Vulnerable Populations project to transform its produce box aggregation and delivery system into a sustainable, self-funded program providing 200 produce boxes per week to those in need.
- Through its "Nourishing Acadiana: Creating a More Robust Local Food System by Empowering Local Farmers and Families," Second Harvest in New Orleans, Louisiana, partnered with farmers, nonprofit organizations, agencies, and community members to achieve the common goals of linking growers and consumers; providing support for Black, Indigenous, and People of Color farmers; positively influencing health outcomes; and creating a more sustainable local food system.
- Preble Street, a social service agency in Portland, Maine, collaborated with community stakeholders to improve food and nutrition security and access to local food in low-income communities and among people experiencing homelessness.

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SMALL BUSINESS INNOVATION RESEARCH AND SMALL BUSINESS TECHNOLOGY TRANSFER PROGRAMS

The Small Business Innovation Research Act (SBIR) and the Small Business Technology Transfer (STTR) Act are codified at §9 of the Small Business Act, 15 U.S.C. §638. The SBIR program was designed to strengthen the role of small, innovative firms in federally funded research and development (R/R&D). The STTR program requires participating agencies to allocate a certain percentage of its extramural R/R&D budget to be reserved for awards to small business concerns for cooperative research and development.

The SBIR and STTR Extension Act of 2022 (Pub. L. 117-183) reauthorizes SBIR and STTR programs and pilot programs thru 2025 with a set aside of not less than 3.2 percent of appropriations in fiscal year 2017 and each fiscal year thereafter for the SBIR program and a set aside of not less than 0.45 percent for fiscal year 2016 and each fiscal year thereafter for the STTR program.

Table NIFA-20 Funding for SBIR by Agency (thousands of dollars)

Agency	2022 Actual	2023 Actual	2024 Estimate	2025 Estimate
Agricultural Research Service.....	\$5,452	\$7,558	\$6,912	\$6,912
Animal and Plant Health Inspection Service	31	65	65	65
National Institute of Food and Agriculture	27,285	42,467	27,936	26,956
Economic Research Service.....	152	138	80	80
Forest Service.....	990	1,044	1,240	1,240
National Agriculture Statistics Service	22	34	34	34
Total	33,932	51,306	36,267	35,287

NOTE: Estimate has been provided for 2025. A report to the Small Business Administration for planned investments in 2024 and 2025 will be updated based on final appropriations.

Table NIFA-21 Funding for STTR by Agency (thousands of dollars)

Agency	2022 Actual	2023 Actual	2024 Estimate	2025 Estimate
Agricultural Research Service.....	-	\$1,063	\$972	\$972
Animal and Plant Health Service	-	9	9	9
National Institute of Food and Agriculture	-	1,987	4,028	3,857
Economic Research Service.....	-	19	11	11
Forest Service.....	-	147	174	174
National Agriculture Statistics Service	-	4	4	4
Total	-	3,229	5,198	5,027

NOTE: Estimate has been provided for 2024 and 2025. A report to the Small Business Administration for planned investments in 2024 and 2025 will be updated based on final appropriations.

The staff functions of USDA’s SBIR program have been centralized in NIFA in order to serve the SBIR community most effectively and efficiently. Ten research topic areas have been established.

1. Forests and Related Resources – Topic Area 8.1: The Forests and Related Resources topic area aims to address the health, diversity, and productivity of the Nation’s forests to meet the needs of present and future generations through the development of environmentally sound approaches to increase productivity of forest lands, improve sustainability and develop value-added materials derived from forest resources.
2. Plant Production and Protection - Biology – Topic Area 8.2: The objective of this topic area is to develop novel ways of enhancing crop production and protection against abiotic and/or biotic stresses through the use of novel diagnostic technologies, plant improvement approaches, and tools or management practices that ensure healthy pollinators.
3. Animal Production and Protection – Topic Area 8.3: The Animal Production and Protection topic area aims to develop innovative, marketable technologies that will provide significant benefit to the production and protection of agricultural animals.
4. Conservation of Natural Resources – Topic Area 8.4: The Conservation of Natural Resources topic area aims to develop innovative technologies that are developed with the purpose to conserve, monitor, improve and/or protect the quality and/or quantity of natural resources while sustaining optimal farm and forest productivity and profitability. Encourage new technologies and innovations that will help improve soil health, reduce soil

- erosion, improve water and air quality, improve nutrient management and conserve and use water more effectively.
5. Food Science and Nutrition – Topic Area 8.5: The Food Science and Nutrition topic area aims to fund projects that support research focusing on developing new and improved processes, technologies, or services that address emerging food safety, food processing, and nutrition issues.
 6. Rural and Community Development – Topic Area 8.6: The Rural and Community Development topic area aims to fund the development of new technologies, or for the utilization of existing technologies, that address important economic and social development issues or challenges in rural America. The applications need not be centered on agriculture but may be focused on any area that has the potential to provide significant benefit to rural Americans.
 7. Aquaculture – Topic Area 8.7: The Aquaculture topic area aims to develop new technologies that will enhance the knowledge and technology base necessary for the expansion of the domestic aquaculture industry as a form of production agriculture.
 8. Biofuels and Biobased Products – Topic Area 8.8: The objective of this topic area is to promote the use of biofuels and non-food biobased products by developing new or improved technologies that will lead to increased production of biofuels, industrial chemicals, and other value-added products from agricultural materials.
 9. Small and Mid-Size Farms – Topic Area 8.12: The Small and Mid-Size Farms topic area aims to promote and improve the sustainability and profitability of small and mid-size farms and ranches (where annual sales of agricultural products are less than \$350,000 for small farms and between \$350,000 and \$999,999 for mid-size farms).
 10. Plant Production and Protection – Engineering – Topic Area 8.13: The objective of this topic area is to enhance crop production by creating and commercializing engineering technologies that enhance system efficiency and profitability and protect crops from pests and pathogens in economically and environmentally sound ways.

REPORT ON ANTICIPATED RFA PUBLICATION DATE

Information on the publication schedule for NIFA Requests for Applications (RFAs) is included below, as required by a directive from the 2018 Farm Bill. The scope of the final RFAs will depend upon the final levels of appropriations enacted by Congress. The actual publication dates may change due to factors such as amount and timing of appropriations, unexpected delays in the review process, and new developments in science. For the most up-to-date AFRI RFA publication schedule, please refer to the NIFA website at: <https://www.nifa.usda.gov/grants/programs/agriculture-food-research-initiative-afri/afri-request-applications>.

The Expected 2025 Publication Dates for the AFRI Foundational and Applied Science, Education and Workforce Development, and Sustainable Agricultural Systems RFAs will be December 2024, January 2025 and February 2025, respectively. NIFA will continue to release the Foundational and Applied Science RFA and the Education and Workforce Development RFA as single funding opportunity announcements for each respective program spanning two years of appropriations (i.e., 2025 and 2026). In contrast, the yearly Sustainable Agricultural Systems RFA will span a single year of appropriations to reflect the changing goals of the program. Funding amounts for AFRI reflect those amounts of appropriated funds anticipated for programs including interagency programs and legislative set-asides for programs such as the Small Business Innovation Research program, except where noted otherwise.

2025 President’s Budget for the Agriculture and Food Research Initiative

The U.S. Department of Agriculture (USDA) established the Agriculture and Food Research Initiative (AFRI) competitive grants program, under which the Secretary of Agriculture may make competitive grants for fundamental and applied research, education, and extension to address food and agricultural sciences (as defined under section 1404 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA) (7 U.S.C. 3103)), in AFRI’s six Farm Bill priority areas include: 1) plant health and production and plant products; 2) animal health and production and animal products; 3) food safety, nutrition, and health; 4) bioenergy, natural resources, and environment; 5) agriculture systems and technology; and 6) agriculture economics and rural communities.

AFRI supports the creation, delivery, and application of new knowledge in a broad range of agriculturally relevant areas, including sustainable livestock and crop production systems, farm profitability, resiliency of agriculture to

impacts of climate change, water management, natural resources and the environment, rural development, human nutrition, food safety, and the food and agriculture workforce pipeline. Additional high-priority science will be supported in collaboration with other Federal science agencies and international science agencies, where appropriate. Domestic interagency programs are aligned with NIFA’s relevant programs aimed at developing the foundational knowledge needed to address challenges to the food and agriculture production system. In addition, AFRI allows NIFA to provide global leadership in agriculture through programs such as the Agriculture Innovation Mission for Climate (<https://www.aimforclimate.org/>). These efforts and the Farm Bill priorities are addressed through the three major components of AFRI: the Foundational and Applied Science Program, the Sustainable Agricultural Systems Program, and the Education and Workforce Development Program. The alignment of the AFRI program Requests for Applications (RFAs) with the Farm Bill priorities is described in this document.

Through AFRI grants, NIFA will support the 2025 Administration priorities of addressing climate science (including developing and promoting climate-smart agriculture and forestry practices), measurement and monitoring of agricultural greenhouse gas emissions, improving nutrition security, driving innovation in clean energy production and adoption, expanding markets for agricultural producers, and promoting prosperity in America’s rural and underserved communities. NIFA will also incorporate the Administration’s priorities for research and development (<https://www.whitehouse.gov/wp-content/uploads/2023/08/FY2025-OMB-OSTP-RD-Budget-Priorities-Memo.pdf>).

The NIFA 2025 budget proposes to support the AFRI program at \$475,000,000, which includes:

- An investment of \$35 million for climate science that promotes development of climate-smart agriculture and forestry and carbon-neutral agricultural practices to support adaptation to climate change and to achieve net-zero greenhouse gas emissions by 2050
- Monitoring and measuring greenhouse gases emissions from agricultural and food production systems
- Sustained support for Plant and Animal Breeding, including adaption and resiliency to climate change through climate-smart agriculture and forestry
- Innovations in clean energy production and use in food and agricultural systems that contribute to development of rural circular economies through clean energy technologies to create high-value biobased products from agricultural feedstocks
- Continued support for high priority areas including sustainable production agriculture, soil health, agricultural biosecurity, food and agricultural microbiomes, nanotechnology, food safety, water quality, food loss and waste, and pollinator health
- \$30 million, to support the Administration’s efforts on Cancer Moonshot and Precision nutrition through work on food and nutrition security, production of healthy foods, and creation of biobased supplements and therapeutic agents
- Support for understanding and using Indigenous Traditional Ecological Knowledge in a broad range of food and agricultural topics (<https://www.whitehouse.gov/wp-content/uploads/2021/11/111521-OSTP-CEQ-ITEK-Memo.pdf>)
- Investments to enhance support for innovation, translation and entrepreneurship training, and support for underserved rural communities
- Continued fostering of interagency collaborations to leverage greater investment in food and agriculture-relevant areas of science, and to attract new communities of scientists to address challenging agricultural issues

Agriculture and Food Research Initiative Requests for Applications

In 2025, the AFRI program will issue three Requests for Applications (RFA) to solicit new applications; the Foundational and Applied Science RFA, the Sustainable Agricultural Systems RFA, and the Education and Workforce Development RFA. All three of these RFAs collectively address the six AFRI priority areas established in the 2014 Farm Bill.

The NIFA 2025 budget proposes to support the AFRI program RFAs as follows:

- Increased investment in the Foundational and Applied Science Program, including continuation of the increased support for new investigators, continued promotion of equity and inclusion in the food and

agricultural sciences, and increased investments in addressing challenges faced by underserved communities

- Continued investments in the Sustainable Agricultural Systems Program, to support innovative, transformative, integrated, and transdisciplinary systems-level approaches for development of sustainable production systems, climate-smart agriculture and forestry, carbon-neutral agricultural practices, local and regional food systems for improved production, food and nutrition security, clean energy technologies and high-value biobased products, and equitable economic development
- Continued investments in the Education and Workforce Development program for training and retraining of agricultural workers and the next generation of food and agricultural scientists, with special emphasis on underserved rural communities and use of technology

AFRI REQUESTS FOR APPLICATIONS

Foundational and Applied Science RFA | The AFRI Foundational and Applied Science RFA is organized by, and directly aligns with, the six priority areas established in the 2014 Farm Bill. NIFA will invest \$339,300,000 of appropriated AFRI funds to support *new* grants in the Foundational and Applied Science Program, as well as interagency programs. These investments will allow increased foundational efforts on mitigation of greenhouse gases, adaptation, and resiliency of agricultural systems to climate change, as well as enhanced focus in promising new areas of agricultural science such as robotics, sensors, cyber physical systems, and application of big data.

NIFA proposes to continue increased investments in the plant and animal breeding program area priorities that support classical breeding efforts to improve crop and animal productivity, local adaptation of cultivars and breeds, and development of publicly-available cultivars. Additional investments will be made in emerging technologies such as gene editing for agricultural applications, autonomous systems and machine learning for agricultural applications, and production of new agriculture-based products, including clean energy. Enhanced investments will foster research on agricultural biosecurity; precision livestock farming; the microbiome of foods, human gut, food animals, plants, and soils; food waste and loss; and on strategies to mitigate antimicrobial resistance. Investments will also be made through interagency programs related to technology and data-driven solutions in agriculture such as the application of artificial intelligence to climate-smart agriculture, forestry and food system supply chains.

Research supported by the Foundational and Applied Science Program provides the knowledge base required for subsequent transformative future research, extension, and education programs at NIFA. Additionally, discoveries derived from the Foundational and Applied Science Program often lead to innovations that are commercialized and drive local economic development.

Table NIFA-22 Foundational and Applied Science 2025 RFA (In dollars).

Request for Applications (RFA)	New Grant Awards
Foundational and Applied Science Program	\$339,300,000

In 2025, the AFRI Foundation and Applied Science program will include the following additional goals:

- \$10 for precision nutrition and \$20 million for the Moonshot for Cancer through work on food and nutrition security, production of healthy foods, and creation of biobased supplements and therapeutic agents
- Continued support for climate science, including mitigation, adaptation, and resiliency of agricultural systems to climate change in all program areas and cross-cutting programs to provide foundational knowledge needed to support related work in the Sustainable Agricultural Systems program
- Continued investment in innovative foundational and applied research on clean energy to provide knowledge required to support related work in the Sustainable Agricultural Systems program necessary to develop cost-competitive bioproducts with environmental benefit for development of circular bioeconomies
- Continued support for the novel “Rapid Response to Extreme Weather Events” cross-cutting program to rapidly deploy strategies and fill knowledge gaps that protect the nation’s food and agricultural supply chains during and after extreme weather events and natural disasters
- Enhance capacity of diverse educational institutions, promote equity and inclusion, and serve underserved communities through increased proportion of Food and Agricultural Science Enhancement (FASE) awards
- Continued support for early-career scientists and educators through awarding of New Investigator Seed Grants and New Investigator Standard Grants
- Incorporation of Indigenous Traditional Ecological Knowledge in appropriate priority areas
- Development of precision agricultural technologies concomitant with educational programs to enhance adoption of these technologies by small- and medium-sized farmers and ranchers.
- Continued fostering of interagency collaborations to leverage greater investment in agriculturally-relevant areas of science, and to attract new communities of scientists to address challenging agricultural issues.

Sustainable Agricultural Systems RFA | In 2025, NIFA will invest \$88,200,000 of appropriated funds in the AFRI Sustainable Agricultural Systems Program. The integrated transdisciplinary approach taken in the Sustainable Agricultural Systems Program will enable NIFA’s goal of advancing the convergence of agricultural and food sciences with engineering, social sciences, technology, computational sciences, and advanced

manufacturing to generate new scientific discoveries, new products, new markets and, consequently, new high-skill jobs. These systems-level projects address interrelated challenges of agricultural productivity, climate change, water quality and availability, food safety, environmental resilience, and nutrition security.

Table NIFA-23 Sustainable Agricultural Systems 2025 RFA (In dollars).

Request for Applications (RFA)	New Grant Awards
Sustainable Agricultural Systems Program	\$88,200,000

Through investments in systems-level Coordinated Agricultural Projects (CAPs) of up to \$10 million per project focused on technology, data, and innovation, NIFA will catalyze transformative changes throughout U.S. agricultural systems and contribute to the following goals:

- Provide \$35 million for climate science including monitoring and measuring emissions of greenhouse gases from agricultural and food production systems, as well as development and application of climate-smart agriculture and forestry practices to improve mitigation, adaptation, and resiliency of agricultural and food systems to climate change
- Improved nutrition security by enhancing the contribution of food and agriculture to health of the nation through development, adoption, and application of new or existing technologies, decision-support tools, education, and other resources to ensure access to sufficient quantities of safe, nutritious, and affordable food
- Continue support for innovations in clean energy production and use in food and agricultural systems that contribute to development of rural circular economies through clean energy technologies and creation of high-value biobased products from agricultural feedstocks
- Creating more and better market opportunities in the food and agricultural sector, especially for socially disadvantaged and historically underserved producers and communities: these opportunities include high-value biobased products, circular agricultural economies, local and regional food systems, and use of scale-appropriate technologies and management practices
- Research, education, and extension to support urban and indoor agricultural systems to solve key problems of local, regional, and national importance

Education and Workforce Development RFA | NIFA will invest \$47,500,000 of appropriated AFRI funding in *new* grants for Education and Workforce Development that focus on further enhancing three distinct components of the pipeline for developing the food and agricultural sciences workforce. The first component is institutional grants to help K-14 teachers and administrators develop improved curricula to train the food and agricultural workforce of the future. This will also include training and retraining of agricultural workers to create a technology and data-savvy workforce. The second component is to provide pathways for undergraduates to develop applied technical and leadership skills required for careers in agricultural sectors, farming enterprises, or graduate programs. Finally, the third component will support graduate and post-graduate education in food, agriculture, and related disciplines by awarding pre- and postdoctoral fellowships. These investments will address the projected shortfalls in the availability of a qualified scientific workforce in food and agriculture in the United States.

Table NIFA-24 Education and Workforce Development 2025 RFA (In dollars)

Request for Applications (RFA)	New Grant Awards
Education and Workforce Development Program	\$47,500,000

In 2025, the AFRI Workforce Development RFA will maintain emphasis on:

- Investments to enhance support for innovation, translation and entrepreneurship training, especially in underserved rural communities in order to solidify U.S. global leadership in circular bioeconomic development
- Workforce development at diverse educational institutions, promote equity and inclusion, and support historically underserved communities
- Continued support for predoctoral fellowships, postdoctoral fellowships, and experiential learning for undergraduate students at the baccalaureate and community college level.
- Support for STEM education.

Table NIFA-25 Funding Allocations by Request for Applications for the 2025 President’s Budget for AFRI (In dollars).

Request for Applications (RFA) Title	Funding Allocation
Foundational and Applied Science Program ¹	\$339,300,000
Sustainable Agricultural Systems Program	\$88,200,000
Education and Workforce Development Program	\$47,500,000

¹ Funding for interagency programs is included within the Foundational and Applied Science Program, as appropriate.

Table NIFA-26 Estimated Funding Allocations by Farm Bill Priority Area for the 2025 President’s Budget for AFRI (In dollars).

Farm Bill Priority Area	Total Percentage of AFRI	Foundational and Applied Science	Sustainable Agricultural Systems	Education and Workforce Development
A. Plant Health and Production and Plant Products	19%	20%	15%	23%
B. Animal Health and Production and Animal Products	17%	17%	15%	19%
C. Food Safety, Nutrition, and Health	16%	17%	13%	16%
D. Bioenergy, Natural Resources, and Environment	21%	19%	30%	16%
E. Agriculture Systems and Technology	17%	17%	16%	17%
F. Agriculture Economics and Rural Communities	10%	10%	11%	9%

Table NIFA-27 Funding Allocations by RFA for 2021 to 2023 Enacted, 2025 Budget for AFRI (In dollars).

AFRI Program Areas	2021 Enacted	2022 Enacted	2023 Enacted	2024 Estimated	2025 President’s Budget
Foundational and Applied Science Program	\$304,330,000	\$326,584,000	\$317,901,000	\$332,300,000	\$339,300,000
Sustainable Agricultural Systems Program	74,215,000	77,159,000	82,873,000	77,200,000	88,200,000
Education and Workforce Development Program	56,455,000	41,257,000	54,226,000	45,500,000	47,500,000
Total	435,000,000	445,000,000	455,000,000	455,000,000	475,000,000

OTHER COMPETITIVE Program RFAs

Non-AFRI competitive programs Requests for Application are listed below. 2024 estimates for discretionary funding are based on a 2024 Annualized Continuing Resolutions. Programs funded by mandatory funding are included based on the Agriculture Improvement Act of 2018 (2018 Farm Bill). 2024 and 2025 mandatory funding reflects the impact of a 5.7 percent sequestration reduction.

Table NIFA-28. Other Competitive Program RFAs (In thousands)

Program	Authority	Scope of RFA and Budget Justification	2024 Estimated Budget	2025 Estimated Budget	RFA Dates (Actual / Estimated)
Sustainable Agriculture Research and Education (SARE) Program	7 U.S.C. 5811, 5812, 5831, and 5832	The 2024 RFAs will fund four regional centers and one national coordination center which were selected in 2018 through a rigorous competitive review process. The centers will emphasize innovative projects to help farmers and ranchers to adopt practices that are productive, profitable, environmentally sound, and enhance the quality of life for farmers, and society as a whole. Proposals for projects are submitted by scientists at academic institutions, public and private sector agricultural professionals and directly by farmers and ranchers. To promote development of the next generation of agricultural scientists the SARE program has also pioneered accepting grant applications directly from graduate students in agricultural discipline. Grants awarded by the four regional administrative councils will support applied projects that address crop and livestock production and marketing, stewardship of private lands, the rural economy, and quality of life. The program will support development of technical guides and handbooks and education and training for Cooperative Extension System agents, and other agricultural professionals involved in the education and transfer of technical information concerning sustainable agriculture. The 2025 RFA will continue funding the centers for competitively reviewed projects to help farmers and ranchers.	\$50,000	\$50,000	2024: January 4, 2024 2025: January 9, 2025
Methyl Bromide	7 U.S.C. 7626	The 2024 RFA focuses on supporting the discovery and implementation of practical pest management alternatives for commodities and uses affected by the methyl bromide phase-out. This program will request integrated and extension-only projects. The program focuses on integrated commercial and field-scale research on methyl bromide alternatives and associated extension activities that foster the adoption of these alternatives. The program will support new methodologies, technologies, strategies, and systems for controlling economically important pests for which methyl bromide has been the only effective pest control option. The 2025 RFA will consist of similar priorities to the 2024 RFA.	\$2,000	\$0	2024: November 27, 2023

2025 USDA EXPLANATORY NOTES – NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Program	Authority	Scope of RFA and Budget Justification	2024 Estimated Budget	2025 Estimated Budget	RFA Dates (Actual / Estimated)
Minor Crop Pest Management Program – Interregional Research Project #4 (IR-4)	7 U.S.C. 3157(e)	The 2024 and 2025 RFA will focus on continued funding for projects that provide safe, effective, and economical pest management solutions for minor agricultural uses and specialty crops. NIFA anticipates funding one national project that will consist of an administrative headquarters and four geographically based regional IR-4 centers (North Central, Northeastern, Southern, and Western). The funding period will be four years and the project will be funded as a continuation project.	\$15,000	\$15,000	2024: February 15, 2024 2025: December 12, 2024
Organic Transition Program (ORG)	7 U.S.C. 7626	The 2024 and 2025 RFAs will focus on the development and implementation of research, extension, and higher education programs to solve critical organic agriculture issues, priorities, or problems to improve the competitiveness of organic livestock and crop producers, as well as those who are adopting organic practices. Practices and systems to be addressed include those associated with organic crops, organic animal production, and organic systems that integrate crop and animal production. The program will focus on (1) Documenting and understanding the effects of organic practices on soil health and fertility, greenhouse gas mitigation, enhanced biodiversity, and understanding of weed, pest and disease dynamics for better management; (2) Developing improved technologies, methods, models, and metrics to document and optimize the ecosystem services and the climate variability adaptation and mitigation ability of organic crop, livestock, and integrated crop-livestock production systems; (3) Developing cultural practices and other allowable alternatives to substances recommended for removal from NOP’s National List of Allowed and Prohibited Substances; and (4) Overcoming barriers to organic transition.	\$7,500	\$4,000	2024: December 24, 2023 2025: December 15, 2024
Crop Protection and Pest Management Program (CPPM)	7 U.S.C. 7626	The purpose of the CPPM program is to address high priority issues related to pests including insects, nematodes, pathogens, weeds, and other pests and their management using integrated pest management (IPM) approaches at the state, regional and national levels. The CPPM program provides support for this activity through three linked program areas: the Applied Research and Development Program (ARDP) area, the Extension Implementation Program (EIP) area, and the Regional Coordination Program (RCP) area that emphasizes research and development for discovery of IPM knowledge; extension activities for IPM adoption and implementation; and enhanced coordination, collaboration and communications among related	\$21,000	\$3,000	2024: November 22, 2023 2025: November 18, 2024

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Program	Authority	Scope of RFA and Budget Justification	2024 Estimated Budget	2025 Estimated Budget	RFA Dates (Actual / Estimated)
		CPPM programs and awardees. The 2024 RFA will support competitive ARDP and EIP, and continuation RCP projects. The 2025 RFAs will focus on competitive ARDP and RCP, and continuation EIP projects.			
Specialty Crop Research Initiative (SCRI)	7 U.S.C. 7632	The 2024 and 2025 RFAs will continue to give priority to projects that are multistate, multi-institutional, or trans-disciplinary; and include explicit mechanisms to communicate results to producers and the public. It is also required that applications address one of the five legislatively mandated focus areas.	\$75,440	\$75,440	2024: February 15, 2024 2025: February 15, 2025
Emergency Citrus Disease Research and Extension (ECDRE) Trust Fund	7 U.S.C. 7632(j)	7 U.S.C. 7632(j) authorizes the ECDRE Trust Fund to provide \$25,000,000 per year in mandatory funding for the program. The ECDRE program solicits proposals to develop effective tactics and strategies to control Huanglongbing (HLB) and its disease complex for financially sustainable citrus growth in the United States. All projects funded by the ECDRE program will incorporate collaborative approaches that utilize available knowledge to develop new solutions that can be deployed by growers to manage and prevent HLB infection in the near term. The 2024 and 2025 RFAs will support two types of projects designed to provide citrus growers with effective management strategies for citrus greening; applicants will decide which project type is best suited to the research and extension efforts they propose to undertake. Standard projects will support research and extension efforts focused on specific aspects of the disease organism or its insect vector. Cooperative agricultural projects will provide support to consortia or groups of qualified applicants with the expectation that they project will make significant contributions to the sustainability of the system or system component.	\$25,000	\$25,000	2024: May 9, 2024 2025: May 8, 2025
Beginning Farmer and Rancher Development Program (BFRDP) (Mandatory Funds)	7 U.S.C. 2279	The 2024 and 2025 BFRDP RFAs will continue to focus on education and training through standard grants and educational enhancement grants with the reauthorized and new topics. At least five percent of funds will focus on training for Veteran Beginning Farmers and Ranchers (BFRs), and at least five percent of funds will focus on training for limited resource BFRs, socially disadvantaged BFRs, and farmworkers desiring to become BFRs. Criteria for consideration of waiving matching fund requirements will be included in the RFAs.	\$23,575	\$23,575	2024: February 2, 2024 2025: February 15, 2025
Beginning Farmer and Rancher Development	7 U.S.C. 2279	The FY 2024 RFA will address the same goals as described above for the BFRDP.	\$2,000	\$0	2024: February 2, 2024

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Program	Authority	Scope of RFA and Budget Justification	2024 Estimated Budget	2025 Estimated Budget	RFA Dates (Actual / Estimated)
Program (BFRDP (Discretionary Funds))		The 2025 President’s budget does not include discretionary funds for this program.			2025: N/A
Organic Agriculture Research and Extension Initiative (OREI)	7 U.S.C. 5925(b)	The 2024 and 2025 RFAs will focus on solving critical organic agricultural issues, priorities, or problems through the integration of research, education and extension activities in order to enhance the ability of producers and processors who have already adopted organic standards to grow and market high quality organic agricultural products. Priority concerns include biological, physical, and social sciences, including economics. The focus will be on the eight legislatively-defined goals: (1) Facilitating the development and improvement of organic agriculture production, breeding, and processing methods; (2) Evaluating the potential economic benefits of organic agricultural production and methods to producers, processors, and rural communities; (3) Exploring international trade opportunities for organically grown and processed agricultural commodities; (4) Determining desirable traits for organic commodities; (5) Identifying marketing and policy constraints on the expansion of organic agriculture; (6) Conducting advanced on-farm research and development that emphasizes observation of experimentation with, and innovation for working organic farms, including research relating to production, marketing, food safety, socioeconomic conditions, and farm business management; (7) Examining optimal conservation, soil health, and environmental outcomes relating to organically produced agricultural product; and (8) Developing new and improved seed varieties that are particularly suited for organic agriculture.	\$47,150	\$47,150	2024: November 24, 2023 2025: November 15, 2024
Scholarships for Students at 1890 Institutions (Mandatory Funds)	7 U.S.C. 3222(a)	The 2018 Farm Bill provided \$40 million to support the program, with up to \$10 million per year to be used for scholarships. Per the Further Continuing Appropriation and Other Extensions Act, 2024, the additional 1890 Scholarships mandatory funds are expected to be made available in December 2023. These awards will be processed as continuations due to the extension.	\$10,000	\$0	2024: January 8, 2024 2025: January 25, 2025
Scholarships for Students at 1890 Institutions (Discretionary Funds)	7 U.S.C. 3222(a)	Through the 2024 RFA, the program provides scholarships to outstanding students at 1890 institutions to pursue and complete baccalaureate degrees in the food and agricultural sciences and related fields that would lead to a highly skilled food and agricultural systems workforce.	\$10,000	\$10,000	2024: March 1, 2024 2025: March 6, 2025

2025 USDA EXPLANATORY NOTES – NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Program	Authority	Scope of RFA and Budget Justification	2024 Estimated Budget	2025 Estimated Budget	RFA Dates (Actual / Estimated)
Gus Schumacher Nutrition Incentive Program (GusNIP)	7 U.S.C. 7517	<p>The GusNIP portfolio includes three funding opportunities to conduct and evaluate projects providing incentives to income-eligible consumers to increase the purchase of fruits and vegetables and prescriptions for fresh fruits and vegetables. By bringing together stakeholders from various parts of the food and healthcare systems GusNIP projects help foster understanding to improve the health and nutrition status of participating households facilitate growth in underrepresented communities and geographies, as well as collect and aggregate data to identify and improve best practices on a broad scale.</p> <p>GusNIP - Nutrition Incentive Program– develops and evaluates projects to increase the purchase of fruits and vegetables by providing incentives at the point of purchase among income eligible consumers participating in the USDA Supplemental Nutrition Assistance Program (in all 50 States, the District of Columbia, Guam, and the United States Virgin Islands, in addition to income-eligible consumers participating in the USDA Nutrition Assistance Program (NAP) in Puerto Rico, American Samoa, and the Commonwealth of the Northern Marianas Islands.</p> <p>GusNIP - Produce Prescription Program– conducts projects that demonstrate and evaluate the impact of fresh fruit and vegetable prescriptions to increase procurement and consumption of fruits and vegetables, reduce individual and household food insecurity, and reduce healthcare usage and associated costs.</p> <p>GusNIP - National Training, Technical Assistance, Evaluation, and Information Centers (NTAE) Cooperative Agreements– offer training, technical assistance, evaluation, and informational support services to potential to applicants nutrition incentive projects, produce prescription projects, and to GusNIP as a whole. Cooperative agreement applicants will be invited again in 2027, when the current cooperative agreement ends.</p> <p>The 2024 and 2025 GusNIP - Nutrition Incentive Program and GusNIP - Produce Prescription Program RFAs will include language that selection for funding will be weighed in favor of proposals aligning with and advancing the GusNIP priorities, such as providing services to underrepresented communities and geographies. NIFA will focus promotion and outreach for GusNIP to states, territories, tribal nations, SNAP recipients, NAP</p>	\$52,808	52,808	<p>2024: GusNIP - Produce Prescription Program: November 30, 2023</p> <p>GusNIP - Nutrition Incentive Program: January 15, 2024</p> <p>2025: GusNIP - Produce Prescription Program: December 2024</p> <p>GusNIP - Nutrition Incentive Program: January 2025</p>

2025 USDA EXPLANATORY NOTES – NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Program	Authority	Scope of RFA and Budget Justification	2024 Estimated Budget	2025 Estimated Budget	RFA Dates (Actual / Estimated)
		recipients, healthcare partners, community-based organizations, and/or retailers that have not previously participated in GusNIP.			
Agriculture Risk Management Education Partnerships Competitive Grants Program (ARME)	7 U.S.C. 1524(a)	The 2023 RFA is a continuation award from 2021 and 2022. It will fund four regional centers and one digital center. The centers will emphasize risk management education programs that support pre-and post-farmgate activities including production, processing, storage and logistics. Proposals for projects are submitted by public and private sector agricultural professionals and directly by farmers and ranchers. Grants awarded by the four regional administrative councils will support applied projects that promotes risk management education that targets risk associated with production, price/marketing human, legal and finance. The 2024 RFA is intended to identify four host institutions and a digital center. The proposal submissions will cover risk management education from 2024 to 2028	\$9,052	\$9,052	2024: November 2023 2025: N/A

AGENCY-WIDE PERFORMANCE**Introduction**

The National Institute of Food and Agriculture (NIFA) provides leadership and funding for programs that advance agriculture-related sciences. NIFA invests in and supports initiatives that ensure the long-term viability of agriculture. NIFA applies an integrated approach to ensure that groundbreaking discoveries in agriculture-related sciences and technologies reach the people who can put them into practice.

The purpose of the Summary of Performance section is to provide an update on Performance and Evidence and Evaluation efforts, facilitating compliance with the Government Performance Results Modernization Act (GPRMA) and the Evidence Act of 2018, as well as departmental Key Performance Indicators (KPI). The Office of Budget and Program Analysis (OBPA) leads the Department in performance, evaluation, evidence, and risk management and chairs the Performance, Evaluation, Evidence Committee (PEEC) and the Enterprise Risk Management (ERM) committee. Each USDA Mission Area is represented on these committees.

The Research, Education, and Economics (REE) mission area and the Office of the Chief Scientist are jointly represented through the OCS' Strategic Planning, Program Evaluation, and Enterprise Risk Officer, whose team functions as the coordinating members on USDA's PEEC and ERM committees.

The Research, Education, and Economics (REE) mission area of the U. S. Department of Agriculture has Federal leadership responsibility for advancing scientific knowledge related to agriculture through research, extension, and education. The mission area office is led by the Under Secretary for the Research, Education, and Economics (REE) and Chief Scientist for USDA, whose responsibilities include oversight of the four agencies that comprise OCS/REE, the Agricultural Research Service (ARS), National Institute for Food and Agriculture (NIFA), Economic Research Service (ERS), and National Agricultural Statistics Service (NASS.) The National Agriculture Library, National Arboretum, and the Office of the Chief Scientist also fall under this mission area.

The mission of the Office of the Chief Scientist (OCS) is to provide strategic coordination of the science that informs the Department's and the Federal government's decisions, policies, and regulations that impact all aspects of U.S. food and agriculture, related landscapes, and communities.

Therefore, REE performance, evaluation, evidence, and risk management efforts are coordinated and led by the Office of the Chief Scientist on behalf of the Mission Area. The OCS Strategic Planning, Program Evaluation, and Enterprise Risk Officer leads the Mission Area by chairing two committees: the OCS/REE Performance, Evaluation and Evidence Committee (OCS/REE-PEEC) and the OCS/REE Enterprise Risk Management (ERM) Committee. The two Mission Area committees are comprised of REE agency leaders in performance, evaluation, evidence, and risk management, as well as the Mission Area's functional and operational leads as necessary.

Alignment to USDA 2022 – 2026 Strategic Plan

NIFA contributes to Goals 2, 4, and 6 of the Department's Strategic Goals in the current 2022 – 2026 USDA Strategic Plan. Departmental KPIs are performance indicators that are aligned to the Strategic Objectives laid out in the USDA's Strategic Plan.

- Strategic Goal 2: Ensure America's Agricultural System is Equitable, Resilient, and Prosperous
 - Objective 2.3: Foster Agricultural Innovation
- Strategic Goal 4: Make Safe, Nutritious Food Available to All Americans
 - Objective 4.1: Increase Food Security Through Assistance and Access to Nutritious and Affordable Food
- Strategic Goal 6: Attract, Inspire, and Retain an Engaged and Motivated Workforce that's Proud to Represent USDA
 - Objective 6.2: Establish a Customer-Centric, Inclusive, High-Performing Workforce that is Representative of America and the Communities We Serve

SUMMARY OF PERFORMANCE

A more detailed report of the performance plan can be found at <https://www.usda.gov/our-agency/about-usda/performance> . The following table summarizes the results for the Departmental Key Performance Indicators (KPIs) for which NIFA is responsible.

Table NIFA-29 Intellectual Property (IP) Funded by NIFA (thousands)

Strategic Objective 2.3	Item	2023	2024	2025
Inventions Reported	Results	-	-	-
Count of Reports of IP Supported by NIFA Funding	Target	N/A	N/A	231

Expected Performance Progress Towards the Achievement of Strategic Objectives:

USDA Strategic Objective 2.3: Foster Agricultural Innovation

- This is a new KPI for 2025 and includes two components, both of which indicate the progress towards the protection of Intellectual Property (IP). Supported by funding from the National Institute of Food and Agriculture (NIFA), this KPI demonstrates USDA successes in supporting IP lifecycle, including compliance monitoring driven by the Bayh-Dole Act. Selection of this KPI is in line with anticipated modernization and prioritization of this publicly funded asset. The metrics include reporting to the NIST system, iEdison which supports funding recipient Bayh-Dole responsibilities to report subject inventions and patents filed to protect subject inventions and utilization. In 2025, NIFA plans to increase emphasis and importance of report IP for NIFA grantees. REE will review NIFA terms and conditions and the financial policy guide language to ensure alignment with updates to Bayh-Dole. REE may also consider an information webinar or resource guide for NIFA grantees to increase awareness of this reporting requirement.

Table NIFA-30 Count of Journal Article Publications Reported, Published from NIFA- Funded Research, Education, and Extension (thousands)

Strategic Objective 2.3	Item	2023	2024	2025
Publications Reported	Results	-	-	-
Count of Journal Article Publications Reported to NIFA, Published from NIFA-funded Research, Education and Extension	Target	N/A	N/A	13,025

Expected Performance Progress Towards the Achievement of Strategic Objectives:

USDA Strategic Objective 2.3: Foster Agricultural Innovation

- This is a new KPI for 2025 which measures the number of published journal articles that are reported from NIFA-funded research, education, and extension. By tracking the reach of NIFA-funded research and its related publications, REE is able to monitor and drive the accessibility, usability and reach of its science, expanding the opportunity for new innovations and impact. Additionally, NIFA expects to see this number increase with the issuance of Departmental Regulation 1020-006, “Public Access to Scholarly Publications and Digital Scientific Research Data” ensuring that USDA Science is increasingly accessible to its stakeholders and scientific community. This new KPI has been co-developed with the National Agriculture Library (NAL) where NIFA grantees can submit publication info to PubAg to collect and track data. In 2025, NIFA will host an informational webinar along with NAL in October 2023 on how to submit publications to PubAg. This webinar will be heavily advertised to NIFA stakeholders and grantees and also recorded and posted to an external webpage. NIFA terms and conditions and financial policy guide will be updated based on DR 1020-006. NIFA continues to collaborate with NAL via an interagency agreement to conduct a gap analysis on NIFA-funded publications (reported) in other databases vs PubAg. NIFA will pursue an application programming interface to PubAg in the future for both of primary post award reporting systems.

Table NIFA-31 Number of firms associated with delivery of Gus Schumacher Nutrition Incentive Program Nutrition Incentive or Produce Prescription Program (thousands)

Strategic Objective 4.1	Item	2023	2024	2025
Number of Firms	Results	-	-	-
Number of Firms Associated with Delivery of Gus Schumacher Nutrition Incentive Program Nutrition Incentive or Produce Prescription Program	Target	N/A	N/A	2,300

Expected Performance Progress Towards the Achievement of Strategic Objectives:

USDA Strategic Objective 4.1 Increase Food Security Through Assistance and Access to Nutritious and Affordable Food

- This KPI is being introduced in 2025. This measure represents the scope of service for the Gus Schumacher Nutrition Incentive Program by proxy of the number of firms engaged in incentive or program delivery. Nutrition Incentive (NI) Projects provide incentives to individuals using Supplemental Nutrition Assistance Program (SNAP) or Nutrition Assistance Program (NAP) benefits to purchase fruits and vegetables. Produce Prescription Program (PPR) projects provide prescriptions in the form of incentives for the purchase of fresh fruits and vegetables. Data collected in year two of GusNIP NI and PPR indicates fruit and vegetable intake increased for participants, the longer they participated in the program. In 2022 the PPR program RFA was separated from the NI RFA which allowed greater program management and thus greater impact. Firm partnerships are a lagging indicator relative to RFA and award and impact is anticipated to begin being seen in firm partnership metrics by 2025. Assuming funding is sustained or increased for the GusNIP program, the number of firms is expected to increase, given the many benefits which include reduction of food insecurity and the burden of chronic disease, and positive impacts to local economies.

Table NIFA-32 Number of Agriculture and Food Research Initiative – Supported Undergraduate, Graduate, and Post-Doctoral Students (NIFA) (thousands)

Strategic Objective 6.2	Item	2023	2024	2025
Initiative-Supported Students	Results	7,811	-	-
Number of Agriculture and Food Research Initiative-Supported Undergraduate, Graduate Students, and Post-Doctoral Fellows	Target	4,222	4,392	-

This KPI is being retired in 2025.