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 Director of the NIFA. NIFA continues 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 principal entree to the university system of the United States for the purpose of conducting agricultural research and education programs as authorized by Hatch Act of 1887, as amended (7 U.S.C. 361a-361i); McIntire-Stennis Cooperative Forestry Act of 1962, as amended (16 U.S.C. 582a et seq.); 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); National Agricultural Research, Extension, and Teaching Policy Act (NARETPA) of 1977, as amended (7 U.S.C. 3101 et seq.); Small Business Innovation Development Act of 1982 (Pub. L. 97-219), as amended (15 U.S.C. 638), 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, National Defense Authorization Act for Fiscal Year 2012 (Pub. L. 112-81); Equity in Educational Land-Grant Status Act of 1994 (7 U.S.C. 301 note) (the 1994 Act); Agricultural Research, Extension, and Education Reform Act of 1998 (Pub. L. 105-185), as amended (AREERA); Food, Agriculture, Conservation, and Trade Act of 1990 (Pub. L. 101-624) (FACT Act), Farm Security and Rural Investment Act of 2002 (Pub. L. 107–171) (FSRIA), Food Conservation, and Energy Act of 2008 (Pub. L. 110-246), as amended (FCEA), Agricultural Act of 2014 (2014 Farm Bill, Pub. L. 113-79), and the Agriculture Improvement Act of 2018 (2018 Farm Bill, Pub. L. 115-334). Through these authorities, the U.S. Department of Agriculture (USDA) participates with State and other cooperators to encourage and assist the State institutions in the conduct of agricultural research and education through the State Agricultural Experiment Stations (SAES) of the 50 States and the territories; by approved Schools of Forestry; 1890 Land-Grant Institutions and Tuskegee University, West Virginia State University, and Central State University (7 U.S.C. 321 et seq., as amended by Pub. L. 113-79); 1994 Land-Grant Institutions (7 U.S.C. 301 note, as amended by Pub. L. 115-334); by Colleges of Veterinary Medicine; and other eligible institutions. The 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 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 rural people in the individual States naturally look to their SAES, universities, and colleges for solutions to the State and local problems and request services to help meet changing conditions.

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.

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

Hatch Act

Payments to agricultural experiment stations under the Hatch Act of 1887 as amended (7 U.S.C. 361a-361i), the Agricultural Experiment Stations Act of August 11, 1955 (Pub. L. 84-352); the Education Amendments of 1972 (Pub. L. 92-318); District of Columbia Public Postsecondary Education Reorganization Act (Pub. L. 93-471); NARETPA (Pub. L. 95-113), as amended; Omnibus Territories Act of October 15, 1977 (Pub. L. 95-134); Act of March 12, 1980 (Pub. L. 96-205); Education Amendments of 1980 (Pub. L. 96-374); Act of December 24, 1980 (Pub. L. 96-597); Agriculture and Food Act of 1981 (Pub. L. 97-98); Act of December 8, 1983 (Pub. L. 98-213); Act of October 5, 1984 (Pub. L. 98-454); Food Security Act of 1985 (Pub. L. 99-198); Act of August 27, 1986 (Pub. L.

99-396); FACT Act; Federal Agriculture Improvement and Reform Act of 1996 (FAIR Act) (Pub. L. 104-127); AREERA; FSRIA; FCEA; 2014 Farm Bill (Pub. L. 113-79); and the 2018 Farm Bill (Pub. L. 115-334).

Funds under the Hatch Act are allocated to the 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 also actively participates in the planning and coordination of research programs between the States and the Department at the regional and national levels.

McIntire-Stennis Act

The McIntire-Stennis Cooperative Forestry Act of October 10, 1962, (16 U.S.C. 582a et seq.) as amended by Section 7412 of FCEA and Section 7604 of Pub. L. 115-334; and subject to provisions of Pub. L. 96-374; Pub. L. 97-98; Pub. L. 99-198; FACT Act; FAIR Act; Section 7101 of Pub. L. 113-79; and Section 7111 of Pub. L. 115-334.

The McIntire-Stennis Act 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, 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 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 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's degree or a baccalaureate degree in forestry.

Section 7101 of the 2014 Farm Bill (Pub. L. 113-79) which 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.

Payments to 1890 Colleges, including Tuskegee University, West Virginia State University, and Central State University

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 authorizing 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 University eligible to receive funds under this program. Section 7129 of the 2014 Farm Bill (Pub. L. 113-79) makes Central State University eligible to receive funds under this program beginning in fiscal year 2016 and 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 rural underprivileged people 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. Congress authorized appropriations in an amount not less than 15 percent of the amounts appropriated each year under Section 3 of the Hatch Act. 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; and
- 40 percent 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 the States in which eligible institutions are located.

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.

Animal Health and Disease Research

Section 1433 of NARETPA (7 U.S.C. 3195, as amended by Pub. L. 113-79 and 115-334), 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 and poultry in each State to the total value of and income to producers from domestic livestock and poultry 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 exceed $5 million in a fiscal year, Section 7111 of the 2014 Farm Bill (Pub. L. 113-79) 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.

Research Grants

Section 2(c) of the 1965 Act (7 U.S.C. 3157), 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:

Minor Crop Pest Management

Pursuant to Section 2(c) of the 1965 Act (7 U.S.C. 3157), as amended supports the work of the IR-4 program, which is the principal public program supporting the registration of pesticides and biological control agents for use on specialty crops. The IR-4 program provides coordination, funding, and scientific guidance for both field and laboratory research to develop data in support of registration packages to be submitted to the Environmental Protection Agency. Program investments are guided by a priority-setting process that engages commodity producers, State and Federal research scientists, and extension specialists. Funds are awarded on a competitive basis under the program.

Global Change UV-B Monitoring

Pursuant to Section 2(c) of the 1965 Act (7 U.S.C. 3157), as amended, supports a climatological network which includes 38 climatological sites: 35 in the U.S., two in Canada, and one in New Zealand. The program supports action items for informing decisions and modeling efforts as outlined in the U.S. Global Change Research Program strategic plan.

Potato Research

Pursuant to Section 2(c) of the 1965 Act (7 U.S.C. 3157), as amended, grants are awarded that develop and test improved potato varieties for commercial production. The program specifically seeks to improve aspects of potato varieties and production to include identifying traits for resistance to pests and diseases, stress, regional adaptation, increased yield, quality, and market appeal. Where appropriate, the program supports the use of technologies to rapidly identify traits for commercially suitable varieties. 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.

Aquaculture Centers

Pursuant to section 1475(d) of NARETPA (7 U.S.C. 3322) support 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.

Supplemental and Alternative Crops
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.

Sustainable Agriculture Research and Education
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 administrative councils for projects that address crop and livestock production and marketing, stewardship of natural resources, economics and quality of life.

Sections 1628 and 1629 of the FACT Act (7 U.S.C. 5831 and 7 U.S.C. 5832 respectively) funds are used to disseminate information about sustainable agricultural practices. The program supports the development of technical guides and handbooks plus education and training 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.

Alfalfa Seed and Alfalfa Forage Systems Program
Pursuant to Section 1672 of FACT Act (7 U.S.C. 5925) and as amended by the 2018 Farm Bill (Pub. L. 115-334), supports research for the purpose of studying improvements in alfalfa and forage yields, biomass and persistence, pest pressures, the bioenergy potential of alfalfa seed and other alfalfa forages, and systems to reduce losses during harvest and storage.

Aquaculture Research
Pursuant to Section 2(c) of the 1965 Act (7 U.S.C. 3157), as amended supports aquaculture research to address issues related to genetics, disease, systems, and economics.

Agriculture and Food Research Initiative
Subsection (b) of the 1965 Act (7 U.S.C. 3157) 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; or any group consisting of two or more of the aforementioned entities. Grants will be awarded to address critical issues in United States agriculture in areas of global food security and hunger, climate change, sustainable bioenergy, childhood obesity, food safety, and water in agriculture. 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 amount of 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 particular 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 entities identified in this sentence.

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.

Small Business Innovation Research (SBIR) Program

The Small Business Innovation Development Act of 1982 (Pub. L. 97-219, as amended) (15 U.S.C. 638), 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. 3341authorizes a competitive program for SBIR. The Small Business Innovation Development Act was designed to strengthen the role of small, innovative firms in Federally funded research and development. Section 5102 of the National Defense Authorization Act for Fiscal Year 2012 (Pub. L. 112-81) amends the Small Business Innovation Development Act to allow the set aside of not less than 3.2 percent of appropriations in fiscal year 2017 and each fiscal year thereafter for extramural research and development for awards to eligible small firms.

The SBIR Program is 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 program address critical issues in U.S. agriculture in the areas of global food security and hunger, climate change, sustainable bioenergy, childhood obesity, and food safety. 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 development; biofuels and biobased products; aquaculture; and small and mid-sized farms. NIFA administers the SBIR program for USDA, including the funds set aside for SBIR from other USDA agencies.

Biotechnology Risk Assessment Research Grants Program (BRAG)

Section 1668 of FACT Act and as amended in section 7210 of FSRIA 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. Under BRAG, at least 2 percent of appropriations for biotechnology related research is set aside for awards under this program. NIFA and the Agricultural Research Service 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/or fundamental risk assessment research, which is defined as the science-based evaluation and interpretation of factual information in which a given hazard, if any, is identified, and the consequences associated with the hazard are explored.

1994 Institutions Research

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.

Farm Business Management and Benchmarking Program

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.

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 program for grants to sun grant centers and subcenters for competitive awards to enhance national energy through the development, distribution, and implementation of biobased energy technologies. Through biobased energy and product technologies, activities are supported that promote diversification, and the environmental sustainability of, agricultural production in the U.S., and economic diversification in rural areas of the U.S. 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.

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

Section 7138 of FCEA (7 U.S.C. 3319i) established this competitively awarded grants program to assist the NLGCA Institutions in maintaining and expanding the capacity of the NLGCA Institutions 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 study of agricultural sciences, forestry, or both in any of 32 specified areas of study or any other area determined appropriate by the Secretary.

Federal Administration (direct appropriation)

Authority for direct appropriations is provided in the annual Agriculture, Rural Development, Food and Drug Administration and Related Agencies 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 security services, and General Services Administration rent.

Emergency Citrus Disease Research and Extension Program

Section 12605 of the 2018 Farm Bill (Pub. L. 115-334) establishes the Citrus Trust Fund and provides $25 million, available until expended, for each of the FYs 2019 through 2023, to carry out the Emergency Citrus Disease Research and Extension Program in section 412 of AREERA (7 U.S.C. 7632). Funding is for a competitive research and extension grant program to combat diseases of citrus by conducting scientific research and extension activities, technical assistance and development activities to combat citrus diseases and pests, both domestic and invasive, which pose imminent harm to the U.S. citrus production and threaten industry viability. Also the program combats citrus diseases by supporting the dissemination and commercialization of relevant information, techniques, and technologies.

In carrying out the Emergency Citrus Disease Research and Extension Program, priority will be given to projects that address the research and extension priorities established pursuant to subsection (g)(4) of section1408A of the NARETPA (7 U.S. C. 3123a).

Higher Education

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).

Institution Challenge, Multicultural Scholars, and Graduate Fellowship Grants Program

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

Institution Challenge Grants

Pursuant to section 1417(b)(1) of NARETPA supports competitive grants to stimulate and enable colleges and universities to provide the quality of education necessary to produce graduates capable of strengthening the Nation’s food and agricultural scientific and professional workforce.

Higher Education Multicultural Scholars Program
Pursuant to section 1417(b)(5) of NARETPA provides competitive grants to institutions for scholarships that attract and educate more students from groups currently underrepresented in the food and agricultural sciences for careers in agriscience and agribusiness.

Higher Education National Needs Graduate Fellowship Grants
Pursuant to section 1417(b)(6) of NARETPA 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.

Secondary Education, Two-year Postsecondary Education, and Agriculture in the K-12 Classroom
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. All Federal funds competitively awarded under this program must be matched by the institution on a dollar-for-dollar basis from non-Federal sources.

1890 Institution Teaching, Research, and Extension Capacity Building Grants Program
Pursuant to 1417(b)(4) of NARETPA stimulates the development of high quality teaching, research, and extension programs at the 1890 Land-Grant Institutions and Tuskegee University, West Virginia State University, and Central State University (per Section 7129 of the 2014 Farm Bill (Pub. L. 113-79)) to build their capabilities as full partners in the mission of the Department to provide more, and better trained, professionals for careers in the food and agricultural sciences. This competitive program is designed to strengthen institutional teaching, research, and extension capacities through cooperative programs with Federal and non-Federal entities, including curriculum, faculty, scientific instrumentation, instruction delivery systems, student experimental learning, student recruitment and retention, studies and experimentation, centralized research 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. Section 7107 of FCEA amended section 1417(b)(4) of NARETPA (7 U.S.C. 3152(b)(4)) to expand extension capacity.

USDA-Hispanic Serving Institutions Education Partnerships Grants Program
Pursuant to section 1455 of NARETPA (7 U.S.C. 3241) is the foundation for USDA efforts to better serve Hispanic Americans and to prepare them for careers in agriscience and agribusiness. This competitive program expands and strengthens academic programs in the food and agricultural sciences 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).

Native American Institutions Endowment Fund
The program, authorized by the 1994 Act, 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 making adjustments 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.

Tribal Colleges Education Equity Grants Program
The 1994 Act 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 in the event that 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.

Alaska Native Serving and Native Hawaiian-Serving Institutions Education Grants

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 redesignated 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, 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.

Grants for Insular Areas Program

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

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 located 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

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.

Veterinary Medicine Loan Repayment Program

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 and prohibits transfer of funds to the Food Safety and Inspection Service under the National Veterinary Medical Service Act. Funds are awarded on a competitive basis under the program.

Veterinary Services Grant Program

The program, authorized by section 1415B of NARETPA (7 U.S.C. 3151b) 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.

Scholarships for Students 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. The purpose of the program is to award grants to each to eligible 1890 Land-Grant Institution, including Tuskegee University. The general provisions, section 753, of Pub. L. 107-76 designated West Virginia State University 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.

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. 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 of the 3,143 counties or county equivalents in the United States.

Thousands of Extension employees and millions of 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 3 (b) & (c)

Smith-Lever 3 (b) & (c) formula funds of the Smith-Lever Act, 7 U.S.C. 343 (b)(3), as amended, comprise approximately two-thirds of the total Federal funding for extension activities. These funds are allocated to the States on the basis of 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:

- 20 percent is divided equally among the States;
- 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
- 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.

Smith-Lever 3(d)

These funds are allocated to the States to address special programs or concerns of regional and national importance. Section 7403 of FCEA amends 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 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

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) which is amended by section 7116 of FCEA. Funds are used to provide low-income youth and families with information to increase nutrition knowledge and improve nutritional practices. Funds are awarded to the eligible institutions as follows: (1) FY 1981 bases; (2) $100,000 to each institution; (3) a percentage of the increase in funding that exceeds the FY 2007 appropriated level (i.e., 14 percent for FY 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.

Farm Safety and Youth Farm Safety Education and Certification Program

The Rural Health and Safety Education Act of 1990, section 2390 of the FACT Act (7 U.S.C. 2661 and 7 U.S.C. 2662) – 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.

Children, Youth, & 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 include early childhood, school age youth, teens, and family outcomes with emphasis on science and reading literacy, and building youth and family program and community capacity. Section 7609 of the 2018 Farm Bill provided 1994 Institutions as eligible to receive funds from this program.

Federally-Recognized Tribes Extension Program (formerly Extension Indian Reservations)

Section 1677 of the FACT Act, 7 U.S.C. 5930 – 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 provided 1994 Institutions as eligible to receive funds from this program.

New Technologies for Agricultural Extension

Competitively awarded projects that support an Internet-based tool that provides fast and convenient access to objective, peer-reviewed, and researched-based information, education, and guidance on subjects that include food safety, homeland security, natural resources and environment, youth development, families, nutrition and health, and other agricultural related topics.

Payments to 1890 Colleges and Tuskegee University, West Virginia State University, and Central State University

Section 1444 of NARETPA, (7 U.S.C. 321-329), 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 University 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 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 particular 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.

1890 Facilities (Sec. 1447)

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 University, and Central State University (per Section 7129 of the 2014 Farm Bill (Pub. L. 113-79)).

Renewable Resources Extension Act

Renewable Resources Extension Act of 1978, 16 U.S.C. 1671-1676, provides funding for expanded natural resources education programs. Funds are distributed primarily by formula to 1862 and 1890 Land-Grant Institutions for educational programs, and a limited number of special emphasis national programs.

Rural Health and Safety Education

Rural Health and Safety Education Act of 1990, section 2390 of the FACT Act (7 U.S.C. 2662). 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 University, 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 (7 U.S.C. 2662(i)).

Federal Administration (direct appropriation)

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 Classroom (AITC)
This program is administered under the federal administration line. AITC advances agricultural literacy through a grassroots network of State coordinators, school teachers, 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.

Extension Services at the 1994 Institutions
The 1994 Act 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. 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.

Food Animal Residue Avoidance Database Program (FARAD)
Section 7642 of AREERA authorizes the FARAD program. The program is a computer-based decision support system designed to provide livestock producers, extension specialists, and veterinarians with practical information on how to avoid drug, pesticide, and environmental contaminant residue problems.

Women and Minorities in Science, Technology, Engineering, and Mathematics Fields
Section 7204 of FCEA amended section 1672 of the FACT Act 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 will be given to eligible institutions that carry out continuing programs funded by the Secretary.

Food Safety Outreach Program
Section 405 of AREERA is the authority for the program. The Food Safety Outreach Program awards competitive grants to eligible recipients for projects that develop and implement Food Safety Modernization Act-related food safety training, education, extension, outreach, and technical assistance to owners and operations of small and medium-sized farms, beginning farmers, socially disadvantaged farmers, small processors or small fresh fruit and vegetable merchant wholesalers. 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.

Food and Agricultural Service Learning Program (FASLP)
Section 413 of AREERA 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 higher levels of community engagement between farms and school systems. 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.

Enhancing Agricultural Opportunities for Military Veterans Competitive Grants Program
Section 777 of the Consolidated Appropriations Act, 2018 provides funds for competitive grants to non-profit organizations to increase the number of military veterans gaining knowledge and skills through comprehensive, hands-on and immersive model farm and ranch programs offered regionally that lead to successful careers in the food and agricultural sector. The program encourages the development of training opportunities specifically designed for military veterans. The projects will offer onsite, hands-on training and classroom education leading to a comprehensive understanding of successful farm and ranch operations and management practices. Projects also may offer workforce readiness and employment prospects for service-disabled veterans.

Beginning Farmer and Rancher Development Program
Section 12301 of the 2018 Farm Bill makes available the enacted amount of $15 million for FYs 2019 and 2020, $17.5 million for FY 2021, $20 million for FY 2022, and $25 million for FY 2023 and each year thereafter to carry out the program. The purpose of this mandatory, 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.

Gus Schumacher Nutrition Incentive (formerly Food Insecurity Nutrition Incentive)
Section 4205 of the 2018 Farm Bill, which amends section 4405 of the Food, Conservation, and Energy Act 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. Mandatory funding was made available in the enacted amount of $45 million for FY 2019, $48 million for FYs 2020 and 2021, $53 million for FY 2022, and $56 million for FY 2023 and each year thereafter to carry out the program.

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.

Integrated Activities
The following programs are included under the integrated activities account:

Section 406
Section 7129 of FCEA amended section 406(b) of AREERA (7 U.S.C. 7626(b)) by adding Hispanic-serving agricultural colleges and universities (HSACUs) to the eligibility for section 406 funds. HSACUs are defined in section 1404(10) of NARETPA as colleges and universities that (1) qualify as Hispanic-serving institutions; and (2) offer associate, bachelors, or other accredited degree programs in agriculture-related fields. The following programs are provided pursuant to the authority found in section 406. Funding for all programs is provided on a competitive basis.

Methyl Bromide Transition Program
This program is designed to support the discovery and implementation of practical pest management alternatives for commodities affected by the methyl bromide phase-out. The program focuses on short- to medium-term solutions for all commodities at risk using either combinations of presently available technologies or some newly developed practices.

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

Crop Protection/Pest Management
This program will support Integrated Pest Management (IPM) projects that respond to pest management challenges with coordinated state-based, regional and national research, education, and extension programs. Activities also will promote further development and use of IPM approaches.

Regional Rural Development Centers

Section 2(c)(1)(B) of the Act of 1965 (7 U.S.C. 3157 (c)(1)(B)) provides funds at four regional centers in Pennsylvania, Mississippi, Utah, and Michigan. Programs are designed to improve the social and economic well-being of rural communities in their respective regions. These funds are distributed competitively according to the extent of the problem that requires attention in each State.

Food and Agriculture Defense Initiative Program

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 support activities to identify and respond to high risk biological pathogens in the food and agricultural system. 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 Nation 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 supported under this program also. EDEN is a collaborative national effort that is led by State Cooperative Extension Services (CES) to provide disaster education resources for CES educators to use to help farmers and other public sectors in the event of disasters, including agricultural disasters.

Organic Agriculture Research and Extension Initiative

Section 7210 of the 2018 Farm Bill (Pub. L. 115-334) amended section 1672B of the FACT Act to provide mandatory funding in the enacted amount of $20 million for FYs 2019 and 2020, $25 million for fiscal year 2021, $30 million for FY 2022, and $50 million for FY 2023 and each year thereafter for the Organic Agriculture Research and Extension Initiative. The purpose of this mandatory program is to make competitive grants to support research, education, and extension activities regarding organically grown and processed agricultural commodities and their economic impact on producers, processors, and rural communities.

Specialty Crop Research Initiative

Reauthorized by Section 7305 of the 2018 Farm Bill (Pub L. 115-334) which amends 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 FY 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) amends section 1672 of the FACT Act (Pub. L. 101-624) to establish a competitive grants program to support research, education, and extension activities to facilitate the development of urban, indoor, and other emerging agricultural production, harvesting, transportation, aggregation, packaging, distribution, and markets. Activities are to 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 the successful urban, indoor, and other emerging agricultural production; analyzing the means by which 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, lighting systems, water, 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; or examining the impacts of crop exposure to urban elements on environmental quality and food safety. Mandatory funding in the enacted amount of $10 million, until expended, is available to carry out the program.

Community Food Projects

Section 25 of the Food Stamp Act of 1977 (7 U.S.C. 2034), as amended by the 2014 Farm Bill and the Food and Nutrition Act of 2008, authorized funding in support of competitively awarded Community Food Projects (CFP). The objectives of the CFP program are to increase the food self-reliance of communities; promote comprehensive responses to local food, farm, and nutrition issues; develop innovative linkages between the public, for-profit, and nonprofit food sectors; and encourage long-term planning activities and comprehensive multi-agency approaches. Projects are intended to bring together stakeholders from the distinct parts of the food system and to foster understanding of national food security trends and how they might improve local food systems. Mandatory funding is made available annually in the amount of $5 million.

For NIFA program coordination and planning are carried out by staff located entirely in the Washington, D.C. area. As of September 30, 2018, there were 316 permanent full-time employees and 55 other employees.

OIG and GAO Reports

Table NIFA-1. Completed OIG Reports

ID	Date	Title
None	10/20/2014	Assessing Low-cost Alternatives to Leasing Research Facilities

Table NIFA-2. In-Progress OIG Reports

ID	Title
13601-0001-22	NIFA Formula Grant Program Controls Over Fund Allocation to States
50401-0016-11	USDA Consolidated Financial Statement
50501-0017-12	Security Over Select USDA Agencies' Networks and Systems FY 2018
50101-0018-12	FISMA FY 2018
50701-0002-21	USDA's Controls to Prevent the Unauthorized Access to the Transfer of Research Technologies

Table NIFA-3. Completed GAO Reports

ID	Date	Title	Result
18-290	03/29/2018	STEM Education Program	NIFA participated in GAO STEM Survey and follow-up interviews. The GAO final report did not contain recommendations for NIFA.
18-207	01/31/2018	SBIR & STTR Programs Commercializing Technologies Benchmarks	NIFA participated in the review representing USDA. The NIFA SBIR team participated in interviews and discussions with the GAO team. The GAO final report contained recommendations for the SBA.

ID	Date	Title	Result
18-199	04/18/2018	Arsenic in Rice	GAO report included 5 recommendations to the FDA. The NIFA team participated in discussion and interviews with GAO on NIFA programs that address Arsenic in Rice issues.
18-307	03/12/2018	Sustainable Chemistry Technology Assessment	The NIFA team members participated in GAO discussion and interviews and provided information on NIFA programs in the field. There were no recommendations for NIFA in the final report.
18-415	09/26/2018	Compacts of Free Association Grants and Trust Funds	NIFA was included in the engagement notification, with FAS taking the lead. The GAO final report recommends that Interior work with the compact trust fund committees to develop distribution policies and fiscal procedures for the funds and to address disbursement timing.
18-656	10/02/2018	Science and Technology: Considerations for Maintaining U.S. Competitiveness in Quantum Computing, Synthetic Biology, and Other Potentially Transformational Research Areas	NIFA participated in discussions with GAO and USDA's OSEC/OCS, the lead on the review. NIFA provided comment/edits for the draft report to OSEC/OCS. No particular recommendations for NIFA. GAO recommends strengthened collaboration for all participating agencies.
18-491	09/20/2018	Grants Workforce: Actions Needed to Ensure Staff Have Skills to Administer and Oversee Federal Grants	NIFA Program and Operations Officials participated in interviews, provided training documentation and contributed to discussion with GAO concerning the review topic. GAO recommendation for USDA-The Secretary of USDA should establish a process to monitor and evaluate USDA's grants training at the central office level. This process should include (1) a method for identifying all employees working on grants across the agency, and (2) oversight procedures to evaluate the sufficiency of sub-agencies' grant-training efforts including the incorporation of leading practices related to assessing competencies, training approaches, accountability, and training results.

Table NIFA-4. In-Progress GAO Reports

ID	Title
101406	Renewable Fuel Standard (RFS) and its Influence on Transportation Fuel Prices and Greenhouse Gas Emissions
102502	Food Loss and Waste
102767	Small Business R & D Venture Capital
102599	Network for Manufacturing Innovation Program
102509	Federal Preparedness for Responding or Antimicrobial-Resistant Pathogens
101943	Child Labor in Agricultural and Non-Agricultural Occupations
102958	Federal Efforts to Address Sexual Harassment
101068	Reducing Nutrient Pollution

AVAILABLE FUNDS AND STAFF YEARS

Table NIFA-5. Available Funds and Staff Years (thousands of dollars, staff years (SY))

Item	2017 Actual	SY	2018 Actual	SY	2019 Estimate	SY	2020 Budget	SY
National Institute of Food and Agriculture:								
Discretionary Appropriations	-	-	-	-	-	-	$1,391,686	345
Native American Endowment Interest Earned	-	-	-	-	-	-	5,102	-
Mandatory Appropriations	-	-	-	-	-	-	198,000	-
Research and Education Activities:								
Discretionary Appropriations	$849,518	216	$887,171	211	$887,171	209	-	-
Native American Endowment Interest Earned	4,823	-	4,559	-	4,595	-	-	-
Mandatory Appropriations	-	-	-	-	40,000	-	-	-
General Provision Appropriation	-	-	6,000	-	6,000	-	-	-
Extension Activities:								
Discretionary Appropriations	477,391	137	483,626	134	483,626	133	-	-
Mandatory Appropriations	45,000	-	50,000	-	69,380	-	-	-
General Provision Appropriations	5,000	-	5,000	-	5,000	-	-	-
Integrated Activities:								
Discretionary Appropriations	36,000	5	37,000	5	37,000	3	-	-
Mandatory Appropriations	100,000	-	100,000	-	130,040	-	-	-
Biomass Research and Development Initiative:								
Mandatory Appropriations	3,000	-	-	-	-	-	-	-
Sequestration	-3,105	-	-3,300	-	-5,580	-	-	-
Transfers In	90	-	60	-	-	-	-	-
Adjusted Appropriation	1,505,520	358	1,552,456	350	1,651,812	345	1,594,788	345
Balance Available, SOY	490,377	-	563,847	-	575,684	-	-	-
Other Adjustments (Net)	18,213	-	21,785	-	-	-	-	-
Total Available	2,014,110	358	2,138,088	350	2,227,496	345	1,594,788	345
Lapsing Balances	-335	-	-513	-	-	-	-	-
Balance Available, EOY	-563,847	-	-575,684	-	-	-	-	-
Obligations	1,449,928	358	1,561,891	350	2,227,496	345	1,594,788	345
Other Funding:								
Biodiesel Fuel Education Program	931	-	934	-	-	-	-	-
Community Food Projects Program	9,000	-	9,000	-	9,000	-	9,000	-
Total, Other Funding	9,931	-	9,934	-	9,000	-	9,000	-

Balance Available, SOY	-	-	-	-	-	-	-	-
Other Adjustments (Net)	-	-	-	-	-	-	-	-
Total Available.....	9,931	-	9,934	-	9,000	-	9,000	-
Lapsing Balances.....	-	-	-	-	-	-	-	-
Bal. Available, EOY.....	-	-	-	-	-	-	-	-
Obligations.....	9,931	-	9,934	-	9,000	-	9,000	-
Subtotal Obligations, NIFA.....	1,459,859	358	1,571,826	350	2,236,496	345	1,603,788	345
Ob. Under Other USDA Appr.:								
Research and Education Activities:								
Agricultural Research Service:								
Biotechnology Risk Assessment.....	1,600	-	1,498	-	1,498	-	1,498	-
National Atmospheric Deposition Program.....	5	-	5	-	5	-	5	-
Forest Service:								
National Atmospheric Deposition Program.....	198	-	198	-	198	-	198	-
Biotechnology Risk Assessment.....	108	-	108	-	108	-	108	-
Office of the Chief Scientist:								
Salary, Benefits and Operating Expenses for Detailees.....	208	-	-	-	-	-	-	-
Various agencies sharing cost of the USDA Small Business Innovation Research Program (SBIR)	2,454	-	2,827	-	3,255	-	3,255	-
Various research agencies sharing cost of the Current Research Information System (CRIS)	70	-	-	-	636	-	636	-
Subtotal Ob. Under Other USDA Appr.:	4,643	-	4,636	-	5,700	-	5,700	-
Extension Activities:								
Farm Service Agency:								
Farm Stress Training and Assistance.....	-	-	500	-	500	-	500	-
Rural Development								
Vision & Roadmap for Maine's Forest Sector...	150	-	-	-	-	-	-	-
Subtotal Extension Activities:	150		500		500		500	
Total Ob. Under Other USDA Appr.:	4,793	-	5,136	-	6,200	-	6,200	-
Other Federal Funds:								
Research and Education Activities:								
US Air Force								

Family Advocacy Program.....	2,522	-	2,343	-	2,343	-	2,343	-
US Air Force Traumatic Brain Injury…..	1,500	-	1,588	-	1,588	-	1,588	-
Department of Commerce								
NOAA National Atmospheric Deposition Program.....	190	-	165	-	165	-	165	-
Department of Defense:								
Professional Development Delivery Model.....	1,000	-	661	-	661	-	661	-
Environmental Protection Agency:								
National Atmospheric Deposition Program.....	538	-	-	-	-	-	-	-
Water for Agriculture Challenge Area.....	330	-	-	-	-	-	-	-
Department of Interior:								
Geological Survey, National Atmospheric Deposition Program.....	579	-	581	-	581	-	581	-
National Park Service, National Trends Network.....	405	-	415	-	415	-	415	-
Bureau of Land Management, National Atmospheric Deposition Program.....	38	-	35	-	35	-	35	-
Subtotal, Research	7,102	-	5,788	-	5,788	-	5,788	-
Extension Activities:								
Department of Defense:								
Army Substance Abuse Program, Ft-Sam	-	-	327	-	327	-	327	-
Army/4-H Military Partnership.....	1,300	-	-	-	-	-	-	-
Army - New Parent Support Program (NPSP)	-	-	312	-	312	-	312	-
Air Force 4-H Programs.....	-	-	2,600	-	2,600	-	2,600	-
Air Force - Airmen Family Readiness.....	-	-	500	-	500	-	500	-
Air Force Partnership & Outreach and Support.....	600	-	-	-	-	-	-	-
Clearinghouse for Military Family Readiness	2,520	-	2,635	-	2,635	-	2,635	-
Family Advocacy Program Incident Determination Committee	2,150	-	2,693	-	2,693	-	2,693	-
Family Advocacy Program.....	-	-	249	-	249	-	249	-

Military Family Learning Network.....	-	-	2,435	-	2,435	-	2,435	-
Military Family Learning Networks Leadership & Core Support.....	2,255	-	-	-	-	-	-	-
Project Youth Extension Services.....	1,000	-	1,000	-	1,000	-	1,000	-
Project Military REACH.....	660	-	660	-	660	-	660	-
Teen Adventure Camps.....	1,032	-	770	-	770	-	770	-
Substance Abuse Program Joint Base San Antonio, TX.....	422	-	-	-	-	-	-	-
Suicide Prevention Professional Development	39	-	351	-	351	-	351	-
Virtual Lab School	2,000	-	3,300	-	3,300	-	3,300	-
Yellow Ribbon Reintegration Program Metric.....	-	-	600	-	600	-	600	-
Department of Housing and Urban Development								
IPM Training to Public Housing Authorities.....	400	-	400	-	400	-	400	-
Healthy Homes.....	250	-	350	-	350	-	350	-
Department of Navy								
Navy/4-H Military Partnership and Outreach and Support.....	1,178	-	2,871	-	2,871	-	2,871	-
Navy Youth Sports and Fitness Project	303	-	-	-	-	-	-	-
Subtotal, Extension	16,109	-	22,053	-	22,053	-	22,053	-
Total NIFA Other Federal Funds	23,211	-	27,841	-	27,841	-	27,841	-
Total, NIFA	1,487,863	358	1,605,943	350	2,264,337	345	1,631,629	345

PERMANENT POSITIONS BY GRADE AND STAFF YEARS

Table NIFA-6. Permanent Positions by Grade and Staff Years

Item	2017 Actual		2018 Actual		2019 Estimate		2020 Budget	
	D.C.	Total	D.C.	Total	D.C.	Total	D.C.	Total
SES	8	8	8	8	8	8	8	8
GS-15	75	75	75	75	75	75	75	75
GS-14	57	57	57	57	57	57	57	57
GS-13	68	68	68	68	68	68	68	68
GS-12	83	83	83	83	83	83	83	83
GS-11	33	33	33	33	33	33	33	33
GS-10	7	7	7	7	7	7	7	7
GS-9	23	23	23	23	23	23	23	23
GS-8	14	14	14	14	14	14	14	14
GS-7	28	28	28	28	28	28	28	28
GS-6	8	8	8	8	8	8	8	8
GS-5	4	4	4	4	4	4	4	4
GS-4	3	3	3	3	3	3	3	3
Other Graded	1	1	1	1	1	1	1	1
Total Permanent	412	412	412	412	412	412	412	412
Unfilled, EOY	-73	-73	-96	-96	-72	-72	-72	-72
Total Perm. FT EOY	339	339	316	316	340	340	340	340
Staff Year Est	358	358	350	350	345	345	345	345

SHARED FUNDING PROJECTS

Table NIFA-7. Shared Funding Projects (dollars in thousands)

Item	2017 Actual	2018 Actual	2019 Estimate	2020 Budget
Department-Wide Shared Cost Programs:				
1890's USDA Initiatives	101	-	-	-
Advisory Committee Liaison Services	37	41	49	49
Agency Partnership Outreach	-	260	267	267
Classified National Security Information	16	-	-	-
Continuity of Operations Planning	56	-	-	-
Emergency Operations Center	64	-	-	-
Facility and Infrastructure Review and Assessment	12	-	-	-
Faith-Based Initiatives & Neighborhood Partnerships	11	-	-	-
Hispanic-Serving Institutions National Program	53	-	-	-
Honor Awards	-	1	2	2
Human Resources Self-Service Dashboard	16	20	20	22
Human Resources Transformation	46	31	-	-
Identity Access Management	183	-	-	-
Intertribal Technical Assistance Network	-	-	-	-
Medical Services	47	47	48	48
Office of Customer Experience	0	67	107	129
People's Garden	18	17	-	-
Personnel and Document Security	-	50	46	46
Personnel Security Branch	22	-	-	-
Security Detail	112	154	158	158
Security Operations	-	362	361	361
TARGET Center	40	46	40	40
USDA 1994 Program	22	-	-	-
Virtual University	55	35	-	-
Total, Department-Wide Reimbursable Programs	911	1,130	1,099	40
E-Gov:				
Budget Formulation and Execution Line of Business	2	2	2	2
Enterprise Human Resources Integration	53	53	53	53
E-Payroll	-	-	-	-
E-Travel	-	-	-	-
Financial Management LOB	7	8	8	8
HR Management LOB	5	5	5	5
Integrated Acquisition Environment	38	39	42	-
Recruitment One-Stop	-	-	-	-
Disaster Assistance Improvement	-	-	-	-
E-Rulemaking	124	154	127	-
Geospatial LoB	-	-	-	-
Gov Benefits	-	-	-	-
Grants.gov	58	56	53	53
Total, E-Gov	287	316	290	121

Working Capital Fund:				
Administration:				
HR Enterprise System Management	6	6	9	9
Integrated Procurement Systems	36	34	34	36
Mail and Reproduction Services	313	300	300	296
Material Management Service Center	67	58	57	64
Communications				
Creative Media and Broadcast Center	66	38	31	29
Correspondence Management Services:				
Office of the Executive Secretariat	37	33	11	11
Finance and Management:				
Financial Shared Services	625	610	1,927	1,742
Internal Control Support Services	132	128	136	136
National Finance Center	104	109	107	112
Information Technology:				
Client Experience Center	585	410	538	535
Digital Infrastructure Services Center	523	583	1,608	1,608
Enterprise Network Services	197	201	512	515
Total, Working Capital Fund	2,691	2,511	5,270	5,903

ACCOUNT 1: NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

APPROPRIATIONS LANGUAGE

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

National Institute of Food and Agriculture

For payments to agricultural experiment stations, for cooperative forestry and other research, for facilities, for payments to States, the District of Columbia, Puerto Rico, Guam, the Virgin Islands, Micronesia, the Northern Marianas, and American Samoa for cooperative extension activities, for integrated activities, for research, education, and extension grant programs, including necessary administrative expenses, and for other expenses, $1,391,686,000 which shall be for the purposes, and in the amounts, specified in the table titled "National Institute of Food and Agriculture" in the report accompanying this Act: *Provided further*, That funds totaling $582,914,000 available for research grants for 1994 institutions, education grants for 1890 institutions, the agriculture and food research initiative, competitive facility modernization and fixed equipment at LGUs, veterinary medicine loan repayment, and grants management systems shall remain available until expended: *Provided further*, That $9,500,000 is available for relocation expenses and for the alteration and repair of leased buildings and improvements pursuant to 7 U.S.C. 2250, to be available until expended: *Provided further*, That each institution eligible to receive funds under the Evans-Allen program receives no less than $1,000,000: *Provided further*, That $5,000,000 is available to provide competitive grants for food and agricultural sciences at Alaska, Hawaii, and Insular area institutions, to remain available until September 30, 2021: *Provided further*, That funds for education grants for 1890 institutions shall be made available to institutions eligible to receive funds under 7 U.S.C. 3221 and 3222: *Provided further*, That not more than 5 percent of the amounts made available by this or any other Act to carry out the Agriculture and Food Research Initiative under 7 U.S.C. 3157 may be retained by the Secretary of Agriculture to pay administrative costs incurred by the Secretary in carrying out that authority: *Provided further*, That institutions eligible to receive funds under 7 U.S.C. 3221 for cooperative extension receive no less than $1,000,000: *Provided further*, That funds for cooperative extension under sections 3(b) and (c) of the Smith-Lever Act (7 U.S.C. 343(b) and (c)) and section 208(c) of Public Law 93–471 shall be available for retirement and employees' compensation costs for extension agents.

For the Native American Institutions Endowment Funds authorized by Public Law 103-382 (7 U.S.C. 30 note), $11,857,000, to remain available until expended.

LEAD-OFF TABULAR STATEMENT

Table NIFA-8. Lead-Off Tabular Statement

Item	Amount
2019 Annualized Continuing Resolution	$1,407,797,000
Change in Appropriation	-16,111,000
Budget Estimate, 2020	1,391,686,000

PROJECT STATEMENT

Table NIFA-9. Project Statement (thousands of dollars, staff years (SY))

Item	2017 Actual	SY	2018 Actual	SY	2019 Estimate	SY	Inc. or Dec.	Chg Key	SY	2020 Budget	SY
Discretionary Appropriations:											
Hatch Act.....	$243,701		$243,701		$243,701		-463	(1)	-	$243,238	-
McIntire-Stennis Cooperative	33,961		33,961		33,961		-5,094	(2)	-	28,867	-
Evans-Allen Payments to 189(	54,185		54,185		54,185		-368	(3)	-	53,817	-
Animal Health and Disease Res	4,000		4,000		4,000		-4,000	(A)	-	-	-
Special Research Grants.....	-										
Global Change/UV-B Monitc	1,405		1,405		1,405		-1,405	(A)	-	-	-
Other Special Research Grar	15,513	-	15,763		15,763		-15,763	(A)	-	-	-
Total Special Research Grants	16,918	-	17,168	-	17,168	-	-17,168			-	-
Alfalfa Forage and Research Pr	2,250	-	2,250	-	2,250	-	-2,250	(A)	-	-	-
Aquaculture Centers, Section 1	4,000	-	5,000	-	5,000	-	-5,000	(A)	-	-	-
Supplemental and Alternative (	825	-	825	-	825	-	-825	(A)	-	-	-
Farm Business Management ar	1,450	-	2,000	-	2,000	-	-2,000	(A)	-	-	-
Sun Grant Program.....	3,000	-	3,000	-	3,000	-	-3,000	(A)	-	-	-
Sustainable Agriculture.....	27,000	-	35,000	-	35,000	-	-15,991	(4)	-	19,009	-
1994 Institutions Research Pro	1,801	-	3,801	-	3,801	-	-2,012	(5)	-	1,789	-
Capacity Building for Non-Lar	5,000	-	5,000	-	5,000	-	-5,000	(A)	-	-	-
Agriculture and Food Research	375,000	-	400,000	-	400,000	-	+100,000	(6)	-	500,000	-
Competitive Facility Moderniz	-	-	-	-	-	-	+50,000	(7)		50,000	
Federal Admin (Direct Appropriation)											
Grants Management Systems	7,830	-	7,830	-	7,830	-	-406	(8a)	-	7,424	-
GSA Rent and DHS Security Expenses	5,960	-	-	-	-	-	-		-	-	-
Other General Administration - Research	6,549	-	11,862	-	11,862	-	-11,862	(8b)	-	-	-
Relocation and Building Alteration/Repair Expenses	-	-	(6,000)	-	(6,000)	-	+3,500	(8c)	-	9,500	-
Single Account - General Administration -	-	-	-	-	-	-	+19,798	(8d)	-	19,798	-
Total Federal Administration..	20,339	-	19,692	-	19,692	-	+17,030		-	36,722	-
Total Research.....	793,430	-	829,583	-	829,583	-	+103,859		-	933,442	-
Higher Education Activities:											
Institution Challenge, Multicul	9,000	-	9,000	-	9,000	-	-9,000	(B)	-	-	-
1890 Institution Capacity Buil	19,336	-	19,336	-	19,336	-	-626	(9)	-	18,710	-
Hispanic Serving Institutions E	9,219	-	9,219	-	9,219	-	-63	(10)	-	9,156	-
Tribal Colleges Education Equi	3,439	-	3,439	-	3,439	-	-23	(11)	-	3,416	-
Secondary/Post Secondary.....	900	-	900	-	900	-	-900	(B)	-	-	-
Veterinary Medical Services A(	6,500	-	8,000	-	8,000	-	-3,009	(12)	-	4,991	-
Veterinary Services Grant Prog	2,500	-	2,500	-	2,500	-	-2,500	(B)	-	-	-
Competitive Program for Nativ	-	-	-	-	-	-	+5,000	(13a)	-	5,000	-
Alaska Native-Serving and Nat	3,194	-	3,194	-	3,194	-	-3,194	(13b)	-	-	-
Grants for Insular Areas.....	2,000	-	2,000	-	2,000	-	-2,000	(13c)	-	-	-
Total Education.....	56,088	-	57,588	-	57,588	-	-16,315		-	41,273	-
Total Research and Education.	849,518	-	887,171	-	887,171	-	+87,544		-	974,715	-

Extension Activities:.....											
Smith Lever 3b&c.....	300,000	-	300,000	-	300,000	-	-570	(14)	-	299,430	-
1890 Extension.....	45,620	-	45,620	-	45,620	-	+1,690	(15)	-	47,310	-
Smith Lever 3(d).....											
EFNEP.....	67,934	-	67,934	-	67,934	-	-12,834	(16)	-	55,100	-
Children, Youth, and Families	8,395	-	8,395	-	8,395	-	-8,395	(C)	-	-	-
New Technologies at Ag Exte	1,550	-	1,550	-	1,550	-	-1,550	(G)	-	-	-
Federally Recognized Tribes	3,039	-	3,039	-	3,039	-	-21	(17)	-	3,018	-
Farm Safety and Youth Farm	4,610	-	4,610	-	4,610	-	-4,610	(G)	-	-	-
Food Safety Outreach Program	5,000	-	7,000	-	7,000	-	-3,000	(18)	-	4,000	-
Renewable Resources Extensio	4,060	-	4,060	-	4,060	-	-4,060	(G)	-	-	-
Extension Services at the 1994	4,446	-	6,446	-	6,446	-	-2,030	(19)	-	4,416	-
Rural Health and Safety Educat	3,000	-	3,000	-	3,000	-	-1,000	(20)	-	2,000	-
Food Animal Residue Avoidan	1,250	-	2,500	-	2,500	-	-2,500	(D)	-	-	-
1890 Facilities.....	19,730	-	19,730	-	19,730	-	-19,730	(E)	-	-	-
Women and Minorities in STE	400	-	400	-	400	-	-400	(G)	-	-	-
Food and Ag Service Learning.	-	-	1,000	-	1,000	-	-1,000	(G)	-	-	-
Enhancing Ag Opp Military Ve	(5,000)	-	(5,000)	-	(5,000)	-	-5,000		-		
Federal Admin (Direct Appropriation)			-		-					-	-
Ag in the Classroom.....	552	-	552	-	552	-	-552	(F)	-	-	-
Other General Administratio	7,805	-	7,790	-	7,790	-	-7,790	(8e)	-	-	-
Total Federal Administration..	8,357	-	8,342	-	8,342	-	-8,342		-	-	-
Total Extension.....	477,391	-	483,626	-	483,626	-	-73,352		-	415,274	-
Integrated Activities:.....											
Methyl Bromide Transition Pr	2,000	-	2,000	-	2,000	-	-2,000	(I)	-	-	-
Organic Transition Program....	4,000	-	5,000	-	5,000	-	-5,000	(I)	-	-	-
Regional Rural Development C	2,000	-	2,000	-	2,000	-	-303	(21)	-	1,697	-
Food and Agriculture Defense I	8,000	-	8,000	-	8,000	-	-8,000	(I)	-	-	-
Crop Protection/Pest Managen	20,000	-	20,000	-	20,000	-	-20,000	(H)	-	-	-
Total Integrated.....	36,000	-	37,000	-	37,000	-	-35,303		-	1,697	-
Subtotal Discretionary Appr	1,362,909	358	1,407,797	350	1,407,797	345	-16,111		-	1,391,686	345
Endowment Funds.....											
Native American Institutions E	(11,880)	-	(11,880)	-	(11,880)	-	-23		-	(11,857)	-
Native American Institutions E	(4,823)	-	(4,559)	-	(4,595)	-	+507	(22)	-	(5,102)	-
Total Endowment.....	4,823	-	4,559	-	4,595	-	507		-	5,102	-
Mandatory Appropriations:											
Food Insecurity Nutrition Ince	18,620	-	23,350	-	-	-	-		-	-	-
Risk Management Education P	4,655	-	4,670	-	9,380	-	+620		-	10,000	-
Beginning Farmers and Rancher	18,620	-	18,680	-	15,000	-	-		-	15,000	-
Specialty Crop Grant Program	51,205	-	51,370	-	75,040	-	+4,960		-	80,000	-
Emergency Citrus.....	23,275	-	23,350	-	-	-	-		-	-	-
Organic Research Inititiave.....	18,620	-	18,680	-	20,000	-	-		-	20,000	-
Biomass Research and Develop	2,793	-	-	-	-	-	-		-	-	-
Gus Schumacher Nutrition Ince	-	-	-	-	45,000	-	+3,000		-	48,000	-
Urban Agriculture.....	-	-	-	-	10,000	-	-10,000		-	-	-
Scholarships for 1890 Students	-	-	-	-	40,000	-	-40,000		-	-	-
Citrus Trust Fund.....	-	-	-	-	25,000	-	-		-	25,000	-
Total Mandatory Appropriations	137,788	-	140,100	-	239,420	-	-41,420		-	198,000	-
Total Adjusted Approp.....	1,505,520	358	1,552,456	350	1,651,812	345	-57,531	-	-	1,594,788	345
Rsc, Trns, Other (Net).....	-	-	-	-	-	-	-		-	-	-
Sequestration.....	3,105	-	3,300	-	5,580	-	-5,580		-	-	-
Total Appropriation.....	1,508,625	358	1,555,756	350	1,657,392	345	-62,604		-	1,594,788	345

Transfers In:										
Cong. Relations	90	-	60	-	-	-	-	-	-	-
Total	90	-	60	-	-	-	-	-	-	-
Sequestration	-3,105	-	-3,300	-	-5,580	-	+5,580	-	-	-
Recoveries, Other (Net)	18,123	-	21,725	-	-	-	-	-	-	-
Bal. Available, SOY	490,377	-	563,847	-	575,684	-	-575,684	-	-	-
Total Available	2,014,110	358	2,138,088	350	2,227,496	345	-632,708	-	1,594,788	345
Lapsing Balances	-335	-	-513	-	-	-	-	-	-	-
Bal. Available, EOY	-563,847	-	-575,684	-	-	-	-	-	-	-
Total Obligations	1,449,928	358	1,561,891	350	2,227,496	345	-632,708	-	1,594,788	345

* Relocatoin Expses were general provisions in FY 2018 and FY 2019
* Enhancing Ag Opp for Military Veterans in Ag was a general provision in FY 2017 - FY 2019
* Fiscal Year 2019 and Fiscal Year 2020 contain two new programs
(Scholarships for 1890 Students and Gus Schumacher Nutrition Inventive Program)

The numbered justifications items are keyed to the Change Key (Chg Key) column on the Project Statement. Items that are labeled with letters are programs that are not funded in 2020, and are consolidated, as appropriate.

National Institute of Food and Agriculture

(1) A decrease of $463,000 for Hatch Act ($243,701,000 available in 2019).

Hatch base capacity funds are used to support continuing agricultural research at 1862 Land-Grant Universities (LGUs) and State Agricultural Experiment Stations (SAES). Hatch funds are used to conduct original research, investigations, and experiments bearing directly on and contributing to the establishment and maintenance of a vibrant agricultural industry in the U.S. Hatch funded scientists undertake research on the problems of agriculture in its broadest aspects, which serve to develop and improve rural communities. Much of the research supported with Hatch funds at the State level is not amenable to support by competitive grants or funding from private/corporate interests. For example, plant and animal breeding and genetics research needs long-term support provided by Hatch funds and cannot be sustained by individual 3-5 year competitive grants. The innovations supported by Hatch funds have demonstrably helped increase farm incomes, improved health, and enhanced the quality of life in America. Funding is requested to address local, regional, and national challenges in agriculture.

(2) A decrease of $5,094,000 McIntire-Stennis Research Program ($33,961,000 available in 2019).

The McIntire-Stennis Research Program supports development of new knowledge and innovations to sustain healthy, productive forests, agroforests, rangelands, and grasslands and address the challenges facing forest owners and the forest products industry. The McIntire-Stennis Research Program develops critical information that enables researchers and land managers (along with their advisors such as Cooperative Extension) to develop the plant materials and management practices that can maintain the flow of services and products that the U.S. relies upon from these lands. As these adverse impacts on the health and productivity of these lands continue to rise, the wellbeing of rural America is impacted through lost jobs and resources.

McIntire-Stennis is the only formula fund that is directed exclusively to support forestry, range, and the forest products industry, and supports programs in the 1890s and 1862s LGUs and non-land-grant colleges of forestry, as well as provides for 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.

McIntire Stennis Cooperative Program funds will be used to support research in the following topic areas: understanding the impacts of new stressors and developing management solutions; utilization of wood and new applications for forest products; development of sound policies for the harvesting and marketing of forest products; strengthening forestry program and support new initiative in multi cropping (agroforestry); management of forest and related rangeland and grassland for livestock, game and wildlife; utilization of wood and other forest products; management of rotational grazing; and increasing the use of agroforestry by landowners and communities, with a priority on underserved and minority audiences.

The program addresses the USDA Strategic Plan, specifically Goal #6: Ensure Productive and Sustainable Use of our National Forest System Lands.

(3) A decrease of $368,000 for Evans-Allen Capacity Grants ($54,185,000 available in 2019).

Currently, the Program is supporting over 200 active research projects that will enhance innovation, support training of the next generation of African-American workers and researchers, and address various issues in limited-resourced communities such as obesity and diabetes. The Evans-Allen program underpins and supports NIFA's competitive programs. The funding for the program is needed to help build capacity and reduce the disparities that exist between the land-grant universities. This program directly contributes to advancing USDA's Strategic Goals, specifically Goal #4: Facilitate Rural Prosperity and Economic Development. In addition, the program supports all the recommendations of the Task Force on Agriculture and Rural Prosperity.

(4) A decrease of $15,991,000 support for Sustainable Agriculture Research and Education (SARE) ($35,000,000 available in 2019).

Base funding will be used to increase knowledge of sustainable agricultural practices that are profitable, environmentally sound, and beneficial for quality of life and to help farmers adopt these practices. Grants awarded by the four regional administrative councils support projects that address crop and livestock production and marketing, stewardship of soil and other natural resources, economics, and quality of life in rural communities. The program will continue to focus on the high priority solutions for farmers and ranchers across all U.S. regions through grants provided to farmers and ranchers to develop innovative sustainable practices. The program supports the USDA Strategic Goal 2: Maximize the ability of American agricultural producers to prosper by feeding and clothing the world; and Strategic Goal 5: Strengthen the stewardship of private lands through technology and research.

(5) A decrease of $2,012,000 for Tribal Research Program ($3,801,000 available in 2019).

The Tribal College Research program assists 1994 LGUs in building institutional research capacity through competitive funding of applied projects and in turn, address the questions that matter to tribal communities such as protecting reservation forests or monitoring water quality. NIFA funds are used to support the training of Native-American students for employment in the food and agricultural industry in the nation; serve as a catalyst to promote collaboration among the land-grant universities; and support research on various topics of importance to the U.S. The grants awarded in 2017 supported more than 500 students with assistantships and experiential learning opportunities. This program advances several USDA Strategic Goals, including Goal #4: Facilitate Rural Prosperity and Economic Development; and Goal #6: Foster productive and sustainable use of our National Forest System Lands.

The 1994 LGUs are essential for healthy and sustainable individuals, Indian communities and Tribal Reservations. With NIFA's support, these institutions have become centers and repositories for the preservation of cultural and linguistic knowledge, vibrant centers of applied discovery and problem solving, and as incubators for American Indian students to get a start on higher education, contributing to their economic opportunities.

(6) An increase of $100,000,000 for Agriculture and Food Research Initiative (AFRI) ($400,000,000 available in 2019).

To support the transformative innovations needed for enhancing profitability in U.S. agriculture and for boosting rural prosperity, NIFA proposes to increase its investment to $500 million in AFRI, America's flagship competitive grants program for food and agricultural sciences. This investment is critical for supporting systems-level as well as foundational research on agricultural production and products, for integrated extension activities to transfer research findings to producers and consumers, and for continued development of the skilled workforce needed to spur the agricultural enterprise. Past AFRI investments have directly benefited agricultural producers by providing improved cultivars, creating climate-smart decision tools, and developing high-value uses of agricultural products. For example, an AFRI-funded project successfully genotyped and phenotyped more than 8,000 cattle from 8 major U.S. beef breeds and identified variation in the primary genes responsible for improved feed efficiency. Use of this knowledge in marker-assisted selection of cattle, depending upon breed, is projected to save U.S. beef producers more than a billion dollars annually in feed costs for every 1 percent improvement in feed efficiency, thereby improving economic sustainability of beef operations, global competitiveness of U.S. beef and rural prosperity.

To achieve the transformation of U.S. agricultural systems, NIFA proposes the AFRI program to include a broad emphasis on 'Harnessing Technological Innovation for Rural Prosperity' through focused investments in three major complementary components of AFRI: 1) Sustainable Agricultural Systems, 2) Foundational and Applied Science, and 3) Education and Workforce Development. These foci on data-driven solutions and technology-savvy workforce development will catalyze foundational and large systems-level research needed to spur innovation in U.S. food and agricultural science, promote economic prosperity in America's rural communities, and enhance the Nation's global competitiveness in food and agricultural production. Collectively, these investments in AFRI address the President's priorities as described in the OMB-Office of Science and Technology Policy memo on 'FY2020 Administration Research and Development Budget Priorities', support USDA's strategic goals and contribute to actions listed in the report of the Interagency Task Force of Agriculture and Rural Prosperity.

NIFA proposes to invest $134 million of appropriated funds in the Sustainable Agricultural Systems programs to support large integrative projects that develop technological solutions to major agricultural system challenges. 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. New in 2020 will be the Predictive Science program area, which will build on the investments in the Food and Agriculture Cyberinformatics and Tools (FACT) program area by developing data-driven methods to predict outcomes in agricultural systems across all scales of production.

The agency proposes to invest $317 million in the Foundational and Applied Science programs, and for support of interagency partnerships on technologies such as robotics including unmanned aerial systems and cyberphysical systems. 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, sensors, autonomous systems, precision animal agriculture, and machine learning as applied to agriculture. NIFA will continue to invest in research on the microbiomes of foods, food animals, plants, human gut, and soils, as well as agricultural biosecurity to protect our Nation's food supply agricultural economy. In support of the Executive Order on Maintaining American Leadership in Artificial Intelligence which was released on February 11, 2019, NIFA will invest in approaches to improve management and application of big data, applications of artificial intelligence in agriculture, and data-driven entrepreneurship in rural America. An additional focused component of NIFA's investments in support of rural prosperity will support research and related activities addressing societal acceptance and economic implications of agricultural technologies, including gene editing and big data.

The agency proposes to invest $49 million in Education and Workforce Development programs to promote development of the workforce needed to spur innovations in the agricultural economy, enhance rural prosperity, and advance competitiveness of U.S. agriculture. To connect rural skillsets to jobs of the future, investments will be increased in K-14 curricula development and training/retraining of workers for developing a technology- and data-savvy workforce ready for the field and industrial jobs. This Education and Workforce Development program contributes towards the OMB and OSTP guidance to align future STEM education activities with the priority areas of the 5-year Federal Strategic Plan for STEM education released on December 4, 2018.

(7) An increase of $50,000,000 for Competitively Facility Grants at Land-Grant Universities (1862, 1890, & 1994) ($0 available in 2019).

NIFA requests funding to execute this competitive grants program, which will require a 50 percent match with non-federal dollars. This new grant program will address the aging and decrepit infrastructure and fixed equipment of land-grant universities, which currently conduct research in inadequate and often deteriorating 19th and 20th Century university facilities. NIFA estimates that this program will contribute to reducing a backlog of around $8.4 billion for the renovation or replacement of older (50+ years) (see: http://www.aplu.org/projects-and-initiatives/agriculture-human-sciences-and-natural-resources/DeferredMaintenance_SchoolsofAg.pdf) mission-critical buildings, including laboratories, animal and plant research houses/farms, greenhouses, and pilot facilities. This program will support facilities that address regional needs, accommodate collaborations with other universities and states, and enhance collaborations with USDA-ARS. Approximately 10-15 grants will be awarded in 2020. These infrastructure investments will ensure America's global preeminence and competitiveness, and have a direct impact on the quality of science, ensure safety in the classroom and experiment stations.

The infrastructure and fixed equipment funded through this program will allow scientists to conduct research addressing challenges to agriculture such as increasing productivity and profitability, fostering rural economy and preparing workforce for the future of agriculture. They will allow the agricultural colleges to take advantage of opportunities offered by modern advances in technology, computational science and interdisciplinary systems-level strategies, much of which require modern facilities and equipment. The investment sought in this request can immediately create local jobs in rural communities, and realize savings over time in lower cost capital, energy conservation, and operations and maintenance (O&M) solutions.

(8) An increase of $9,500,000 for Federal Administration ($27,482,000 available in 2019 under the Research and Education Activities Account).

a) A decrease of $406,000 for Grants Management Systems under Federal Administration ($7,830,000 available in 2019).

Funds for Grants Management and Reporting will continue to support NIFA's investments in building a modern grants management and reporting system as part of the USDA-wide ezFedGrants system. These funds will continue to enhance the current capabilities in addition to planning and implementing functionality to enable the processing of the more complex competitive grant programs in ezFedGrants. Continuation of the base funding is crucial to build on the first ezFedGrants release NIFA implemented in 2017, and to support operation and maintenance of current legacy systems during the remainder of the transition to ezFedGrants.

The ezFedGrants solution provides applicants and recipients a single portal from which to view the status of multiple proposals and awards. Submission of "just in time" documentation and post-award action requests will be handled through this portal. Once fully implemented, the functionality available on the USDA grants platform will support NIFA's goals to increase transparency, simplify processes, and provide self-service functionality to applicants, recipients, and peer reviewers. ezFedGrants is being developed in partnership with USDA OCFO. Funding is provided by agencies for the unique business functionalities required by the individual agencies, and is shared across agencies per the governance model adopted by ezFedGrants for core system functionality development.

b) A decrease of $11,862,000 to consolidate Other General Administration-Research ($11,862,000 available in 2019).

The consolidation of general administration costs will streamline administration funds.

c) An increase of $9,500,000 under Federal Administration for move costs ($0 available in 2019).

NIFA currently leases commercial space in the Waterfront Centre building, which is not owned by the General Services Administration (GSA). Funding will be used to acquire, design, and build out adequate space and for movement of personnel and equipment to a new location. On August 9, 2018, USDA announced a proposal to relocate most employees of NIFA outside of the National Capital Region, maintaining certain functions within in the National Capital Region. A Federal Register notice was issued on August 15, 2018, to provide an opportunity for communities across the Nation to submit an Expression of Interest (EOI) in hosting NIFA, and/or another USDA agency, the Economic Research Service. Locating the majority of NIFA functions outside the National Capital Region includes a significant opportunity to improve USDA's ability to attract and retain highly qualified staff with training and interests in agriculture, many of whom come from land-grant universities; to place these important USDA resources closer to many of our stakeholders, most of whom live and work far from the Washington, DC area and to benefit the American taxpayers through significant savings on employment costs and rent, which will allow more employees to be retained in the long run, even in the face of tightening budgets. USDA received 136 EOI from 35 States. USDA has retained a consulting firm to evaluate those EOI and the consultant will provide a benefit-cost analysis during the site selection process. That analysis will be made available as soon as feasible.

d) An increase of $19,798,000 to consolidate Other General Administration under Federal Administration (0 available in 2019).

NIFA's programs are managed at the national level with a staff that represents 316 permanent full-time employees at the end of 2018. Grants management includes developing program regulations, establishing broad program goals, reviewing proposals, preparing grant documents, post-award

review of progress, and similar activities necessary to achieve program goals. Between zero and five percent of funds provided from programs may be used to support administration of the programs as established by law. Building lease and DHS security payments are included. Additional funds may be used to address security needs as well as costs for lease charges for tax escalation. The consolidation of general administration costs will offer opportunities to streamline administration funds management.

e) A decrease of $7,790,000 to consolidate Other General Administration-Extension ($7,790,000 available in 2019).

The consolidation of general administration costs will streamline administration funds.

A) A decrease of $39,243,000 to eliminate certain research programs ($39,243,000 available in 2019).

Program	2019 ($000)	Decrease ($000)	2020 ($000)
Animal Health and Disease Research Program	4,000	-4,000	0
Global Change, UV-B Monitoring	1,405	-1,405	0
Aquaculture Research	1,350	-1,350	0
Minor Crop Pest Management (IR-4)	11,913	-11,913	0
Potato Research	2,500	-2,500	0
Alfalfa and Forage Research	2,250	-2,250	0
Aquaculture Centers	5,000	-5,000	0
Supplemental and Alternative Crops	825	-825	0
Farm Business Management and Benchmarking	2,000	-2,000	0
Sun Grants	3,000	-3,000	0
Capacity Building for Non-Land Grant Colleges of Agriculture	$5,000	-$5,000	0
Total	$39,243	-$39,243	0

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.

(9) A decrease of $626,000 for 1890 Capacity Building Grants ($19,336,000 available in 2019).

The 1890 Capacity Building Grants aims to strengthen teaching, research, and extension programs in the food and agricultural sciences by building the institutional capacities of the 19 eligible 1890 LGUs - in the need areas of curriculum design and materials development, faculty development; and strengthened research and extension programs in needed areas of studies and experimentation, and development support systems.

(10) A decrease of $63,000 for Hispanic-Serving Institutions Grant Program ($9,219,000 available in 2019).

The Hispanic-Serving Institutions (HSIs) Grant Program promotes and strengthens the ability of HSIs to carry out education, applied research, and related community development programs. Grant funds may be used to support activities of HSIs to enhance educational equity for underrepresented students; to strengthen institutional educational capacities to respond to identified State, regional, national, or international educational needs; to attract and support undergraduate and graduate students beginning with mentoring of students at the high school level and continuing with the provision of financial support for students through their attainment of a doctoral degree; and to facilitate collaborative initiatives between two or more HSIs or/and between the HSIs and units of the government or the private sector. This program advances several USDA's Strategic Goals, including Goal #4: Facilitate Rural Prosperity and Economic Development, through workforce development; and Goal #7: Provide all Americans access to a safe, nutritious and secure food supply, by fostering community based programs.

Approximately 118 of the 492 HSIs, which serve 3.5 million students in rural and urban communities, have participated in this program. Every year, this program provides approximately 1,500 students with experiential

learning and career experiences, and 800 faculty with research and mentoring experiences. This program is not only serving underrepresented students, but also USDA agencies to recruit and retain talented students for employment. USDA agencies hired 40 students who participated in this program in 2016-17.

(11) A decrease of $23,000 for Tribal Colleges Education Equity Program ($3,439,000 available in 2019).

The Tribal Colleges Education Equity Grants program provides funding to enhance educational opportunities for Native Americans in the food and agricultural sciences and strengthens institutional capacity to deliver relevant formal education opportunities. Priority is given to funding work that strengthens the stewardship of Tribal lands through technology and research; ensures productive and sustainable use of our Tribal forest system lands; and provides Native Americans access to a safe, nutritious, and secure food supply. This program advances several USDA's Strategic Goals, especially Goal #4: Facilitate Rural Prosperity and Economic Development. In addition, the program supports the recommendation of the Task Force on Agriculture and Rural Prosperity on workforce development.

(12) A decrease of $3,009,000 for Veterinary Medical Services Act ($8,000,000 available in 2019).

Veterinary Medicine Loan Repayment Program (VMLRP) serves rural ranchers and farmer by helping qualified veterinarians offset a significant portion of the debt incurred in pursuit of their veterinary medicine degrees in return for their service in certain high-priority veterinary shortage situations. In this program, NIFA enters into educational loan repayment agreements with veterinarians who agree to provide veterinary services in veterinarian shortage situations for a determined period of time.

Funding will help to defray qualifying educational loans of up to 50 veterinarians in geographical areas that have a shortage of veterinarians; or who are in an area of veterinary practice that the Secretary determines has a shortage of veterinarians, such as food animal medicine, public health, epidemiology, and food safety.

(13) A decrease of $194,000 to consolidate the Alaska Native-serving and Native Hawaiian-serving Institutions Program and Grants for Insular Area Program ($5,194,000 available in 2019).

a) An increase of $5,000,000 for the new Competitive Program for Native Alaskans, Native Hawaiians, and Insular Area Institutions ($0 available in 2019).

This is a new program with funding directed from combining the Alaska Native-Serving and Native Hawaiian-Serving Institutions Education Competitive Grants (ANNH, with $3,194,000 available in 2019) Program and the Grants for Insular Area Programs ($2,000,000 available in 2019). The funding for the new combined program will be $194,000 less than what was available for the two separate programs in 2019. A decrease is proposed because of increased economies of scale and efficiencies in grant administration at the Universities.

The Alaska Native-serving and Native Hawaiian-serving Institution program has been successful and benefitted a large number of students in Alaska and Hawaii. Through this program, Universities of Hawaii and Alaska have established technical capabilities to serve a larger number of students across the Pacific and Atlantic Oceans. In addition, according to the Department of Education definitions, institutions in Insular Areas also serve Native-Hawaiian and are eligible for this program. Hence, to eliminate duplication and in turn, enhance effectiveness and efficiency, funding from this program is being directed to the new Competitive Program for Native Alaskans, Native Hawaiians, and Insular Area Residents.

Distance Education Grants (DEG) for Insular Areas have benefitted students in Insular Areas but more needs to be done to enhance food security on these islands. Universities, such as Hawaii and Alaska, have established programs and infrastructural capacities to serve the insular area institutions but have been hindered by administrative hurdles. The proposed new Competitive Program for Native Alaskans, Native Hawaiians, and Insular Area Residents will remove these hurdles and encourage greater collaboration.

This new program will be administered under the same provisions as the ANNH and Grants for Insular Area Programs (including both the Distance Education Grants and the Resident Instruction Grants programs) as before and therefore, will have similar purposes and eligibility. NIFA will administer this program to promote and strengthen the ability of Alaska, Hawaii and Insular Area Institutions to carry out education, applied research, and related community development programs through competitive funding of single institutional and collaborative projects within a

broadly defined arena of food and agricultural sciences. Priority will be given to those projects that deliver enhanced educational equity for underrepresented students; collaborative projects that utilize the existing educational capacities of larger institutions to strengthen small institutions and branch campuses to prepare students for careers related to the food, agricultural, and natural resources industries, and human sciences systems of the U.S.; and maximize the development and use of resources to improve food and agricultural security in the region. This program directly contributes to advancing USDA's Strategic Goals, specifically Goal #4: Facilitate Rural Prosperity and Economic Development. The proposed consolidation supports USDA Strategic Goal #1: Ensure USDA programs are delivered efficiently, effectively, and with integrity and a focus on customer service.

The Alaska Native-Serving and Native Hawaiian Institution and the Institutions in the Insular Areas have many complex challenges due to the geographical dispersion of these land-grant colleges – on islands in the Pacific and Atlantic Oceans; the unique needs of capacity building at these institutions – some are small community colleges while others consist of sprawling systems with very strong food and agriculture education programs; and the challenges faced by some of these communities – high food insecurity, obesity, and low education. This program is needed to help the institutions build capacity to address these challenges.

b) A decrease of $3,194,000 to consolidate Alaska Native-serving and Native Hawaiian-serving Institutions ($3,194,000 available in 2019).

A decrease is proposed to direct funding to a new program that combines the Alaska Native-Serving and Native Hawaiian-Serving Institutions Education Competitive Grants (ANNH) Program and the Grants for Insular Area Programs.

c) A decrease of $2,000,000 to consolidate for Grants for Insular Areas Program ($2,000,000 available in 2019).

A decrease is proposed to direct funding to a new program that combines the Alaska Native-Serving and ANNH and the Grants for Insular Area Programs.

B) A decrease of $12,400,000 to eliminate certain education programs ($12,400,000 available in 2019).

Program	2019 ($000)	Decrease ($000)	2020 ($000)
Multicultural Scholars, Graduate Fellowship and Institution Challenge Grants	9,000	-9,000	0
Secondary and 2-year Post-Secondary Education	900	-900	0
Veterinary Services Grant Program	$2,500	-$2,500	0
Total	$12,400	-$12,400	0

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.

(14) A decrease of $570,000 for Smith-Lever Act, Section 3(b) and (c) ($300,000,000 available in 2019).

Smith-Lever Act, Section 3(b) and (c) base capacity funds help the land-grant universities to support their Cooperative Extension Service through development of practical applications of existing or improved practices or technologies in agriculture, through dissemination of information to communities through demonstrations and publications and through positive youth development programming. This program serves farmers, ranchers, foresters, consumers and youth in every county in the country. Funding support will ensure continuation of highly successful program activities, such as the 4-H program.

Funding provided through the Smith-Lever program reaches 6 million youth ages 5 to 19 years. NIFA will continue to support the 4-H program to promote teamwork, problem-solving, communication, critical thinking, and professionalism. A continued investment in the 4-H program through Smith-Lever 3(b) and (c) funding will ensure youth are provided opportunities to grow leadership skills necessary for success.

(15) An increase of $1,690,000 for 1890 Extension Program ($45,620,000 available in 2019).

Capacity funds for 1890 Institutions Extension are used to support continuing agricultural and forestry extension activities at 1890 LGUs that science-based educational programs to help youth, families, and communities to address various issues such as workforce training, obesity, food security, and financial literacy. This program is critically needed because wide disparities continue to persist in educational attainment and quality of life among the African American communities. The requested increase in funding will accommodate costs associated with funding the Central State University Cooperative Extension Program. Currently, Central State University is the only 1890 Land-Grant University that is not receiving their allocation based on the section 1444 program formula. This has limited their ability to build an effective extension program. The increased funding will allow Central State University to enhance its extension program without harming funding to other 1890 Universities.

The funds distributed to the 19 Historically Black Colleges and Universities are leveraged with matching funding from non-federal sources that support several of USDA's strategic goals and objectives, including (a) Maximize the ability of American agricultural producers to prosper by feeding and clothing the world; (b) Strengthen the stewardship of private lands; (c) Ensure productive and sustainable use of our national forest system lands; and (d) Provide all Americans access to a safe, nutritious, and secure food supply.

(16) A decrease of $12,834,000 for Expanded Food and Nutrition Education Program ($67,934,000 available in 2019).

The Expanded Food and Nutrition Education Program (EFNEP) is a national nutrition education program funded through NIFA and conducted by Cooperative Extension. In 2018, NIFA provided EFNEP funding to 76 land-grant universities. Using an evidence-based, hands-on, interactive approach, EFNEP's paraprofessional peer educators worked directly with 118,976 adults, 365,369 youth and reached more than 345,000 family members indirectly. EFNEP employs and trains more than 1,900 peer educators annually. By training and supervising these peer educators, EFNEP increases the employability of individuals and self-reliance of families and communities, while also developing strategic local partnerships that integrate programming into communities and teaching participants in the context of their lives. Poor health disproportionately affects minority and low-income populations, which are impacted by EFNEP participation.

(17) A decrease of $21,000 for Federally Recognized Tribal Extension Program (FRTEP) ($3,039,000 available in 2019).

NIFA provides funding through the FRTEP program to help establish Extension offices on Indian reservations that provide evidence-based knowledge to increase reservation farm productivity, engage youth, and promote a healthier, more prosperous knowledge-empowered community. FRTEP continues to provide high quality, culturally relevant, science-based programming in 4-H/youth development, agricultural and natural resource management, horticulture, food preservation, and entrepreneurial business development. At the current funding level, FRTEP is able to serve 36 Extension offices in 19 States, which includes 33 of the 573 Federally Recognized Indian Tribes.

(18) A decrease of $3,000,000 for Food Safety Outreach Program ($7,000,000 available in 2019).

The Food Safety Modernization Act (FSMA) shifted the focus of food safety regulation from response to contamination to prevention of contamination, with a strong focus on education and training. In 2015, NIFA in collaboration with FDA established a national infrastructure that included a National Coordination Center and four Regional Centers across the U.S. to facilitate training and technical assistance for producers and processors that are impacted by FSMA. Since its inception in 2015, the Food Safety Outreach Program has awarded over $11.6 million for 50 awards to Community Based Organizations, Cooperative Extension at 1890 and 1862 LGUs, and local food hubs. This program has led to a significant change in conditions of many small and mid-sized producers and processors by providing appropriate and affordable training to assist them in meeting the FSMA guidelines for Preventative Controls and Produce Safety.

Annual funding of NIFA's grant program offers flexibility to update and address training gaps that are identified as FDA provides additional guidance and amendments to the FSMA legislation. A significant component of NIFA's training portfolio is directed towards niche, minority serving, hard to reach and under-served audiences. These audiences are not currently represented under FDA's training grants portfolio. This funding is critical for southern region states such as Mississippi, Alabama, and Louisiana, where small farmers depend on the support and trainings received through the Southern Center in addition to large agriculture states

such as California and Arizona where a significant number of small and mid-sized farm communities have been trained.

(19) A decrease of $2,030,000 for Extension Services at 1994 Institutions Program ($6,446,000 proposed in 2019).

This program supports the 1994 Land-Grants to create extension offices for their reservation communities. Each extension office works with reservation communities to build programs that target local needs such as: Agriculture; Community Resources and Economic Development; Family Development and Resource Management; 4-H and Youth Development; Leadership and Volunteer Development; Natural Resources and Environmental Management; and Nutrition, Diet, and Health.

(20) A decrease of $1,000,000 for Rural Health and Safety ($3,000,000 available in 2019).

Opioid abuse continues to be a public health emergency across the United States and the impact is particularly devastating in rural communities. While healthcare plays a pivotal role in the treatment of addiction and recovery, its prevention education resources are finite, particularly in rural areas. The infrastructure and the expertise within the land-grant university system and Cooperative Extension are in place to address this issue through preventative and educational approaches. The Rural Health and Safety Education Program is the only NIFA funding opportunity which specifically fund projects to improve health in rural communities through a Cooperative Extension outreach model. With this funding request, USDA proposes to support research-informed, outcome-based educational approaches and programs as well as collaborations with the health care system which promote protective factors and reduce the impact of risk factors leading to the prevention of opioid initiation, misuse, and abuse. Funds are needed to support the demand for Cooperative Extension services, which has grown each year as this health crisis continues to devastate American families and rural communities.

C) A decrease of $8,395,000 to eliminate Children, Youth, and Families at Risk Program (CYFAR) ($8,395,000 available in 2019).

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.

The Children, Youth, and Families at Risk (CYFAR) funds the 1862 and 1890 extension systems to support low-income children, youth, and families through community projects, which demonstrate skill development relevant for resilience in nutrition, parenting, leadership development, physical activity, science and technology and workforce preparation skills. The broad integrated goals of this program may be more effectively addressed through higher priority programs in this request, including AFRI, Smith-Lever, 1890 Extension, FRTEP and 1994 Extension programs. This would allow for greater focus on national priorities, and efficiency in program management and implementation.

D) A decrease of $2,500,000 to eliminate Food and Animal Residue Avoidance Database (FARAD) Program ($2,500,000 available in 2019).

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.

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

E) A decrease of $19,730,000 to 1890 Facilities Program ($19,730,000 available in 2019).

The Budget proposes a new competitive grant program that will address the aging and decrepit infrastructure and fixed equipment of land-grant universities, which currently conduct research in inadequate and often deteriorating 19th and 20th Century university facilities. These funds have historically been used to upgrade research, extension, and teaching facilities at the eligible 1890 land-grant colleges, including Tuskegee University, West Virginia State University, and Central State University. The pause in program operations resulting from the decrease will allow time for preparation of forward looking facilities plans. NIFA will work with stakeholders to reassess how this program could be enhanced to train the rural workforce and address the needs of rural communities moving forward.

While not a substitute for the 1890 Facilities Program, the Competitive Facility Grants Program may fill some of the needs of the 1890 Institutions.

F) A decrease of $552,000 to eliminate Agriculture in the Classroom ($552,000 available in 2019).

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.

The broad goals of this relatively small program may be more effectively addressed through higher priority programs in this request. This would allow for greater focus on national priorities, and efficiency in program management and implementation.

G) A decrease of $11,620,000 to eliminate certain extension programs ($11,620,000 available in 2019).

Program	2019 ($000)	Decrease ($000)	2020 ($000)
New Technologies for Agricultural Extension	1,550	-1,550	0
Farm Safety and Youth Farm Safety Education and Certification	4,610	-4,610	0
Renewable Resources Extension Act	$4,060	-$4,060	0
Women and Minorities in STEM	400	-400	0
Food and Agriculture Service Learning	1,000	-1,000	0
Total	$11,620	-$11,620	0

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.

(21) A decrease of $303,000 for Regional Rural Development Centers ($2,000,000 available in 2019).

The Regional Rural Development Centers collaborate to address national issues that span regions – like e-connectivity, the changing interface between rural, suburban, and urban places, workforce quality and jobs creation. Charged with developing and providing knowledge essential to assist rural development, they bring a scientific lens and skilled personnel to critical rural development issues and practice – and directly contribute to advancing USDA's Strategic Goals, specifically Goal #4: Facilitate Rural Prosperity and Economic Development. The RRDCs identify resources and convene public/private partners that directly contribute to achieving specific goals listed in the Presidential Executive Order on Promoting Agriculture and Rural Prosperity in America.

Other Federal agencies (USDA/Rural Development, Agricultural Marketing Service, Economic Research Service; Homeland Security/FEMA, Health and Human Services/Substance Abuse and Mental Health Administration) coordinate with the RRDCs to engage the expertise of Land-Grant research and extension personnel to achieve shared mission interests in rural America.

The four RRDCs are the only established conduit to 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.

The funds will be used to support workforce training, strengthen rural economies, and prevent and reduce opioid use at the community level. With USDA funding, the RRDCs are a longstanding and trusted source of economic and community development data, decision tools, education, and guidance for our nation's rural communities. Extensive leveraging of additional resources occurs because of these investments (i.e. the Southern RDC generated $5.86 external grant dollars for every $1 in funding between 2010-17). As one example of the RRDCs impact, in coordinating the Stronger Economies Together (SET) program over the last seven years, the Centers have engaged more than 100 multi-county regions in a process to develop a regional economic development plan. To date, these regions have secured over $776 million in funding to promote regional tourism, infrastructure, and workforce and economic development.

H) A decrease of $20,000,000 to eliminate Crop Protection/Pest Management (CP/PM) ($20,000,000 available in 2019).

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. Critical extension and applied research activities currently addressed through CP/PM program can potentially be considered in various components of AFRI.

I) A decrease of $15,000,000 to eliminate certain integrated programs ($15,000,000 available in 2019).

Program	2019 ($000)	Decrease ($000)	2020 ($000)
Methyl Bromide Transition Program	$2,000	-$2,000	0
Organic Transition Program	5,000	-5,000	0
Food and Agriculture Defense Initiative	8,000	-8,000	0
Total	$15,000	-$15,000	0

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.

(22) An increase of $507,000 for Tribal Colleges Endowment Fund – Interest Earned ($4,595,000 available in 2019).

The Tribal Colleges Endowment Fund provides funding for institutional development to support food, agriculture and the mechanic arts. Educational activities, facilities, faculty hiring and development are all allowable expenditures. Annual funding available to the 1994 institutions is based on the amount of interest earned from an endowment corpus. Each 1994 Land-Grant receives a portion of the funding through a formula based in part on the percentage of the student body that is American Indian.

NIFA education funding is often the main resource for faculty and degree programs in STEM at the 1994 Land-Grant Colleges, especially in the food, agriculture and natural resource sciences.

The increase is due to the projected interest to be earned on the fund Corpus.

GEOGRAPHIC BREAKDOWN OF OBLIGATIONS AND STAFF YEARS

Table NIFA-10. Geographic Breakdown of Obligations and Staff Years (thousands of dollars, staff years (SY))

Distribution of Federal Payments

TABLE 1 - FISCAL YEAR 2018
DISTRIBUTION OF FEDERAL PAYMENTS FOR RESEARCH AT STATE AGRICULTURAL EXPERIMENT STATIONS & OTHER STATE INSTITUTIONS

STATE	HATCH ACT AS AMENDED			COOP	1890 UNIV	ANIMAL	SPECIAL	COMPETITIVE	HIGHER	TOTAL
	HATCH FORMULA	REGIONAL RESEARCH	TOTAL	FORESTRY RSH (MS)	& TUSK UNIV (EA)	HEALTH & DIS RSCH	AND OTHER GRANTS	RESEARCH GRANTS	EDUCATION GRANTS	FEDERAL FUNDS
AL	$ 3,870	$ 1,190	$ 5,061	$ 1,091	$ 5,386	$ 50	$ 609	$ 5,339	$ 4,452	$ 21,989
AK	1,064	196	1,259	578	-	-	-	1,835	101	3,774
AS	1,377	30	1,407	45	-	-	-	300	253	2,005
AZ	1,500	1,035	2,535	394	-	59	902	9,583	202	13,675
AR	3,294	986	4,280	948	2,330	82	1,350	7,373	1,137	17,500
CA	4,633	2,220	6,853	845	-	244	4,091	25,340	2,213	39,586
CO	2,110	1,631	3,741	373	-	269	2,056	12,399	-	18,838
CT	1,583	667	2,250	455	-	14	-	149	-	2,869
DE	1,130	499	1,629	229	1,248	19	-	3,367	951	7,445
DC	751	144	895	-	-	-	-	119	-	1,014
FL	2,977	894	3,872	907	2,163	59	2,301	16,918	1,853	28,072
GA	4,397	1,722	6,119	1,133	3,093	78	7,817	12,301	400	30,940
GU	1,416	168	1,583	106	-	-	-	-	269	1,959
HI	1,113	525	1,638	312	-	6	929	3,019	1,726	7,630
ID	1,918	816	2,734	619	-	55	196	3,036	-	6,641
IL	5,432	1,380	6,812	517	-	47	682	16,791	-	24,849
IN	5,191	1,163	6,355	558	-	63	-	5,253	330	12,559
IA	5,388	2,175	7,563	537	-	259	929	13,544	-	22,833
KS	3,294	1,070	4,363	332	-	153	200	5,246	-	10,294
KY	5,157	1,397	6,554	722	3,691	68	150	4,867	550	16,602
LA	2,976	931	3,906	1,009	2,049	55	-	1,351	495	8,866
ME	1,688	696	2,383	907	-	18	433	5,438	-	9,179
MD	2,209	875	3,084	414	1,565	20	2,354	13,381	1,190	22,007
MA	1,852	854	2,706	435	-	45	-	853	-	4,039
MI	5,212	1,250	6,462	989	-	115	3,910	11,491	786	23,753
FM	1,452	-	1,452	-	-	-	-	-	122	1,574
MN	5,103	1,221	6,324	804	-	166	8,723	10,318	303	26,639
MS	3,767	1,138	4,905	1,071	2,543	62	1,239	4,595	1,190	15,603
MO	5,054	1,091	6,145	702	3,716	84	1,352	3,746	892	16,636
MT	1,851	914	2,765	681	-	40	8,504	2,006	1,428	15,424
NE	3,043	1,248	4,291	250	-	146	428	6,268	232	11,615
NV	1,059	500	1,559	127	-	15	-	9,122	-	10,823
NH	1,361	500	1,861	476	-	10	250	645	-	3,242
NJ	1,845	1,492	3,338	353	-	22	3,820	2,753	-	10,285
NM	1,530	551	2,081	291	-	41	280	2,060	1,038	5,791
NY	4,832	2,137	6,968	845	-	91	-	10,517	1,346	19,768
NC	6,353	1,629	7,982	1,050	4,247	125	-	14,158	-	27,562
ND	2,159	822	2,981	168	-	38	277	2,033	506	6,002
MP	1,368	-	1,368	-	-	-	-	-	-	1,368
OH	6,270	1,323	7,593	640	1,120	91	-	16,423	639	26,506
OK	3,262	809	4,071	599	2,427	78	457	2,583	101	10,317
OR	2,496	1,295	3,790	1,112	-	72	-	5,174	200	10,348
PW	-	-	-	-	-	-	-	-	150	150
PA	5,943	1,686	7,629	763	-	81	-	10,372	-	18,845
PR	3,898	1,002	4,900	86	-	9	-	1,325	2,414	8,734
RI	1,023	518	1,541	147	-	20	-	1,217	-	2,927
SC	3,310	1,056	4,366	866	2,289	19	399	1,299	1,200	10,438
SD	2,315	829	3,144	209	-	67	2,815	3,578	453	10,267
TN	4,884	1,152	6,036	784	3,410	69	600	13,459	2,235	26,593
TX	6,992	1,639	8,631	886	5,168	268	2,147	15,474	5,912	38,486
UT	1,332	1,008	2,340	188	-	25	-	3,168	-	5,721
VT	1,412	439	1,851	496	-	15	7,817	2,762	-	12,942
VI	1,392	161	1,553	45	-	-	-	-	-	1,598
VA	4,156	1,064	5,220	968	2,891	49	310	7,268	2,008	18,714
WA	2,727	1,790	4,518	1,030	-	115	2,525	15,297	131	23,614
WV	2,551	729	3,280	660	1,542	14	-	437	2,624	8,558
WI	5,157	1,362	6,519	825	-	83	2,012	6,004	949	16,392
WY	1,276	729	2,006	312	-	27	-	121	156	2,622
OTHER	-	-	-	-	-	-	-	28,745	5,587	34,332
SBIR	5,709	1,863	7,572	1,054	1,682	123	1,802	8,399	198	20,829
BRAG	-	-	-	-	-	-	3	3,378	-	3,381
FEDERAL ADMIN	5,377	1,698	7,075	1,019	1,626	160	3,030	7,815	2,677	23,401
FEDERAL ADMIN - DIRECT	-	-	-	-	-	-	-	-	-	18,435
SUBTOTAL	183,792	59,909	243,701	33,961	54,185	4,000	77,699	401,818	51,598	885,397
UNOBLIG BAL	-	-	-	-	-	-	1,364	481,190	33,847	516,401
SUBTOTAL	183,792	59,909	243,701	33,961	54,185	4,000	79,062	883,008	85,445	1,401,798
TRIBAL ENDOWMENT	-	-	-	-	-	-	-	-	-	11,880
TOTAL	**183,792**	**59,909**	**243,701**	**33,961**	**54,185**	**4,000**	**79,062**	**883,008**	**85,445**	**1,413,678**

TABLE 2 - FISCAL YEAR 2019

DISTRIBUTION OF FEDERAL PAYMENTS FOR RESEARCH AT STATE AGRICULTURAL EXPERIMENT STATIONS & OTHER STATE INSTITUTIONS

STATE	HATCH ACT	COOP FORESTRY RSH (MS)	1890 UNIV & TUSK UNIV (EA)	ANIMAL HEALTH & DIS RSCH	SPECIAL RESEARCH GRANTS	OTHER RESEARCH	FED ADMIN DIRECT APPROP	COMPETITIVE RESEARCH GRANTS	HIGHER EDUCATION GRANTS	GRANTS MANAGEMENT SYSTEMS	TOTAL FEDERAL FUNDS
FEDERAL ADMIN	$ 7,075	$ 1,019	$ 1,626	$ 160	$ 687	$ 2,275	$ 11,862	$ 20,000	$ 2,646	$ 7,830	$ 55,180
UNOBLIGATED BALANCE	236,167	32,942	52,559	3,840	16,481	54,601	-	380,000	54,942	-	831,991
SUBTOTAL, OBLIGATIONS	243,701	33,961	54,185	4,000	17,168	56,876	11,862	400,000	57,588	7,830	887,171

TABLE 3 - FISCAL YEAR 2020

DISTRIBUTION OF FEDERAL PAYMENTS FOR RESEARCH AT STATE AGRICULTURAL EXPERIMENT STATIONS & OTHER STATE INSTITUTIONS

STATE	HATCH ACT	COOP FORESTRY RSH (MS)	1890 UNIV & TUSK UNIV (EA)	COMPETITIVE FACILTY MODERN LGUs	RELOCATION/ REPAIR EXPENSES	OTHER RESEARCH	FED ADMIN DIRECT APPROP	COMPETITIVE RESEARCH GRANTS	HIGHER EDUCATION GRANTS	GRANTS MANAGEMENT SYSTEMS	TOTAL FEDERAL FUNDS
FEDERAL ADMIN	$ 7,062	$ 866	$ 1,615	$ 1,500	$ 9,500	$ 832	$ 19,798	$ 25,000	$ 1,814	$ 7,424	$ 75,410
UNOBLIGATED BALANCE	236,176	28,001	52,202	48,500	-	19,966	-	475,000	39,459	-	899,305
SUBTOTAL, OBLIGATIONS	243,238	28,867	53,817	50,000	9,500	20,798	19,798	500,000	41,273	7,424	974,715

Table 1 for FY 2018
Distribution of Federal Payments for Extension Activities

STATE	SMITH-LEVER FORMULA	FARM SAFETY	YOUTH FARM SAFETY	1890's UNIV & TUSK UNIV	FEDERALLY-RECOGNIZED TRIBES	EFNEP	SAFETY OUTREACH PROGRAM	YOUTH AT RISK	NEW TECHNOLOGIES AT AG EXT	1890 FACILITIES	RENEWABLE RESOURCES	INDIAN TRIBAL 1994 COLLEGES	OTHER	TOTAL FEDERAL FUNDS
AL	$7,147	-	-	$4,381	-	$2,206	-	$140	-	$1,906	$120	-	$600	$16,500
AK	1,230	$172	-	-	$166	263	-	140	-	-	97	$125	93	2,287
AS	1,465	-	-	-	-	103	-	-	-	-	-	-	-	1,568
AZ	2,145	-	-	-	568	714	-	-	-	-	62	427	2,174	6,091
AK	5,988	-	-	1,928	-	1,414	-	-	-	905	98	-	2,183	12,515
CA	7,992	180	-	-	-	3,600	$600	-	-	-	96	-	3,628	16,096
CO	3,297	180	-	-	-	662	-	280	-	-	58	-	1,181	5,658
CT	2,226	-	-	-	70	539	-	-	-	-	46	-	-	2,881
DE	1,344	-	-	1,187	-	412	-	-	-	701	60	-	879	4,583
DC	1,212	-	-	-	-	110	-	-	-	-	14	-	500	1,836
FL	4,816	-	-	1,892	87	2,413	1,281	-	-	918	92	-	5,017	16,516
GA	8,206	180	-	2,615	-	2,372	-	140	-	1,003	108	-	1,167	15,790
GU	1,525	-	-	-	-	104	-	-	-	-	14	-	-	1,642
HI	1,387	-	-	-	-	347	120	-	-	-	96	-	698	2,649
ID	2,952	-	-	-	241	388	-	-	-	-	52	-	-	3,632
IL	9,776	180	-	-	-	2,184	-	-	-	-	105	-	1,322	13,568
IN	9,193	711	$100	-	-	1,283	75	93	-	-	54	-	-	11,508
IA	9,616	-	-	-	-	958	800	140	-	-	46	-	1,100	12,661
KS	5,672	180	-	-	-	763	-	500	-	-	46	125	1,339	8,626
KY	9,380	-	-	3,262	-	1,808	-	280	-	1,086	185	-	166	16,166
LA	5,243	-	-	1,710	-	1,991	299	140	-	839	83	-	590	10,896
ME	2,434	180	-	-	-	499	73	170	-	-	59	-	899	4,314
MD	3,433	-	-	1,371	-	1,025	150	-	-	807	60	-	-	6,846
MA	2,741	-	-	-	-	1,037	220	-	-	-	46	-	590	4,634
MI	9,242	180	-	-	80	1,866	-	140	$1,488	-	77	575	1,544	15,192
FM	1,592	-	-	-	-	106	-	-	-	-	-	-	-	1,698
MN	9,063	-	-	-	87	1,059	150	1,433	-	-	61	562	2,218	14,632
MS	7,054	-	-	2,037	80	1,836	-	140	-	886	203	-	695	12,931
MO	9,114	180	-	3,354	-	1,718	137	140	-	1,186	87	-	997	16,913
MT	2,869	-	-	-	328	382	-	140	-	-	65	1,260	578	5,622
NE	5,154	180	100	-	-	610	70	140	-	-	46	250	1,802	8,353
NV	1,285	-	-	-	222	293	-	140	-	-	48	-	-	1,988
NH	1,768	-	-	-	-	325	115	-	-	-	46	-	599	2,854
NJ	2,732	-	-	-	79	1,138	-	140	-	-	46	-	-	4,136
NM	2,231	180	-	-	-	595	300	-	-	-	68	375	180	3,929
NY	8,501	-	-	-	-	3,403	225	220	-	-	86	-	1,000	13,434
NC	11,883	178	-	3,698	79	2,707	-	440	-	1,120	105	-	4,553	24,764
ND	3,504	-	-	-	83	420	-	-	-	-	46	1,025	572	5,651
MP	1,450	-	-	-	-	103	-	-	-	-	-	-	-	1,552
OH	11,280	180	100	1,151	-	2,397	75	610	-	1,299	77	-	2,597	19,766
OK	5,829	-	-	2,067	251	1,227	-	300	-	992	80	-	-	10,747
OR	3,931	-	-	-	81	599	800	158	-	-	88	-	1,216	6,873
PA	10,642	180	-	-	-	2,690	-	140	-	-	81	-	903	14,637
PR	6,917	-	-	-	-	1,431	75	-	-	-	14	-	645	9,082
RI	1,135	-	-	-	-	386	-	-	-	-	46	-	4,629	6,196
SC	5,842	-	-	1,871	-	1,873	-	160	-	7,407	89	-	-	17,243
SD	3,728	180	-	-	-	463	-	-	-	-	46	375	402	5,194
TN	9,064	176	-	2,938	-	2,135	-	-	-	1,090	86	-	-	15,489
TX	13,370	180	-	4,462	-	4,556	-	420	-	1,511	112	-	1,600	26,210
UT	1,846	180	-	-	-	410	-	140	-	-	49	-	415	3,040
VT	1,904	-	-	-	-	319	800	140	-	-	46	-	-	3,210
VI	7,420	-	-	-	-	102	-	170	-	-	14	-	-	7,706
VA	1,491	-	-	2,466	70	1,846	-	160	-	993	101	-	1,948	9,073
WA	4,403	-	-	-	173	793	150	-	-	-	83	325	1,733	7,660
WV	4,247	-	-	1,404	-	1,127	148	420	-	826	70	-	-	8,243
WI	9,146	180	-	-	84	1,032	-	140	-	-	80	751	954	12,367
WY	1,685	-	-	-	88	276	-	-	-	-	51	-	-	2,099
PEER PANEL/OTHER	1	8	-	-	-	-	57	5	-	-	162	13	8,989	9,236
SUBTOTAL	291,743	4,126	300	43,795	2,917	67,417	6,720	8,059	1,488	25,475	4,060	6,188	64,895	527,184
FEDERAL ADMINISTRATION	8,258	172	13	1,825	122	517	280	336	62	789	162	258	10,623	23,135
OBLIGATIONS	300,000	4,298	313	45,620	3,039	67,934	7,000	8,395	1,550	26,264	4,222	6,446	75,518	550,319
BALANCE	-	-	-	-	-	-	-	-	-	19,730	-	-	2,172	21,902
TOTAL	300,000	4,298	313	45,620	3,039	67,934	7,000	8,395	1,550	45,994	4,222	6,446	77,691	572,221

Table 2 for FY 2019
Distribution of Federal Payments for Extension Activities

STATE	SMITH-LEVER FORMULA	FARM SAFETY YOUTH FARM SAFETY EDUCATION AND CERTIFICATION	1890's UNIV & TUSKEGEE UNIV	FEDERALLY-RECOGNIZED TRIBES	EFNEP	YOUTH AT RISK	NEW TECH AT AG EXT	1890 FACILITIES	RENEWABLE RESOURCES
FEDERAL ADMINISTRATION	$8,258	$184	$1,825	$122	$517	$336	$62	$789	$162
UNOBLIGATED BALANCE	291,743	4,426	43,795	2,917	67,417	8,059	1,488	18,941	3,898
TOTAL	300,000	4,610	45,620	3,039	67,934	8,395	1,550	19,730	4,060

	RURAL HEALTH & SAFETY	FOOD SAFETY OUTREACH	FEDERAL ADM-SPECIAL PROJECTS	EXTENSION AT 1994 INSTITUTIONS	FOOD ANIMAL RESIDUE	WOMEN & POC IN STEM	MANDATORY PROGRAMS a/	TOTAL FEDERAL FUNDS
FEDERAL ADMINISTRATION	$60	$200	$8,357	$178	$50	$16	$2,796	$23,912
UNOBLIGATED BALANCE	1,440	4,800	-	4,268	1,200	384	39,134	493,910
TOTAL	1,500	5,000	8,357	4,446	1,250	400	41,930	517,822

a/ Mandatory Programs includes: Food Insecurity Nutrition Incentive Program, Beginning Farmer and Ranchers Development & Risk Management

Table 3 for FY 2020
Distribution of Federal Payments for Extension Activities

STATE	SMITH-LEVER FORMULA	1890's UNIV & TUSKEGEE UNIV	FARM SAFETY YOUTH FARM SAFETY EDUCATION AND CERTIFICATION	FEDERALLY-RECOGNIZED TRIBES	EFNEP	YOUTH AT RISK	NEW TECH AT AG EXT	1890 FACILITIES
FEDERAL ADMINISTRATION	$8,258	$1,934	$184	$234	$521	$336	$35	$868
UNDISTRIBUTED	291,743	46,416	4,426	5,605	67,513	8,059	840	20,835
TOTAL	300,000	48,350	4,610	5,839	68,034	8,395	875	21,703

	RENEWABLE RESOURCES	GRANTS TO YOUTH ORGANIZATIONS	FOOD SAFETY OUTREACH	HOME VISITS FOR REMOTE AREAS	EXTENSION AT 1994 INSTITUTIONS	MANDATORY PROGRAMS a/	TOTAL FEDERAL FUNDS
FEDERAL ADMINISTRATION	$162	$40	$200	$800	$269	$3,000	$16,841
UNDISTRIBUTED	3,898	960	4,800	19,200	6,455	42,000	522,751
TOTAL	4,060	1,000	5,000	20,000	6,724	45,000	539,591

a/ Mandatory Programs includes: Food Insecurity Nutrition Incentive Program, Beginning Farmer and Ranchers Development & Risk Management

TABLE 1 - FISCAL YEAR 2018
DISTRIBUTION OF FEDERAL PAYMENTS FOR INTEGRATED ACTIVITIES

STATE	HOMELAND SECURITY	METHYL BROMIDE	ORGANIC TRANSITION	CROP PROTECTION/ PEST MANAGEMENT	RURAL DEVELOPMENT CENTERS	SPECIALTY CROP RESEARCH INITIATIVE	EMERGENCY CITRUS DISEASE RESEARCH AND EXTENSION PROGRAM	ORGANIC AGRICULTURAL RESEARCH AND EXTENSION INITIATIVE	TOTAL FEDERAL FUNDS
AL	-	-	-	$ 285	-	$ 2,677	$ 2,922	-	$5,885
AK	-	-	-	166	-	-	-	-	166
AS	-	-	-	-	-	-	-	-	-
AZ	-	-	-	285	-	-	3,846	-	4,131
AR	-	-	-	180	-	-	-	-	180
CA	$ 868	-	$ 500	1,532	-	2,075	2,773	-	7,749
CO	-	-	-	150	-	-	-	$ 324	475
CT	-	-	-	180	-	-	-	-	180
DE	-	-	-	173	-	-	-	-	173
DC	-	-	-	-	-	-	-	-	0
FL	540	-	-	1,072	-	3,687	11,530	-	16,829
GA	328	$376	-	502	-	2,601	-	2,000	5,806
GU	-	-	-	-	-	-	-	-	-
HI	22	-	-	-	-	-	-	-	22
ID	-	-	-	178	-	-	-	-	178
IL	-	-	-	209	-	37	-	531	776
IN	617	-	-	299	-	-	-	-	916
IA	328	-	-	300	-	-	-	50	678
KS	540	500	-	277	-	-	-	-	1,316
KY	137	-	-	145	-	-	-	-	282
LA	-	-	-	-	-	-	-	-	-
ME	-	-	-	175	-	-	-	1,956	2,131
MD	-	-	268	285	-	-	-	1,998	2,551
MA	-	-	-	623	-	-	-	-	623
MI	888	-	1,000	1,415	$475	1,757	-	-	5,535
FM	-	-	-	-	-	-	-	-	-
MN	-	-	753	210	-	1,871	-	1,573	4,407
MS	-	-	-	147	475	-	-	-	622
MO	46	-	-	195	-	-	-	-	241
MT	-	-	-	300	-	3,266	-	2,000	5,566
NE	-	-	-	212	-	-	-	-	212
NV	-	-	-	231	-	-	-	-	231
NH	-	-	-	136	-	-	-	-	136
NJ	137	-	-	304	-	5,833	-	-	6,274
NM	46	-	-	219	-	-	-	-	265
NY	944	-	1,388	1,610	-	2,958	-	-	6,900
NC	328	487	321	1,960	-	8,542	-	-	11,638
ND	-	-	-	179	-	-	-	-	179
MP	-	-	-	-	-	-	-	-	-
OH	328	-	-	234	-	-	-	-	562
OK	-	-	-	115	-	-	-	-	115
OR	-	-	-	295	-	-	-	2,000	2,295
PA	328	500	-	559	475	-	-	585	2,447
PR	-	-	-	95	-	-	-	-	95
RI	-	-	-	262	-	-	-	-	262
SC	-	-	-	195	-	50	-	1,999	2,244
SD	-	-	-	-	-	-	-	-	-
TN	-	-	-	209	-	50	-	-	259
TX	374	-	-	915	-	3,228	1,153	-	5,669
UT	-	-	-	129	475	-	-	-	604
VT	-	-	-	284	-	-	-	2,532	2,816
VI	-	-	-	-	-	-	-	-	-
VA	-	-	-	180	-	3,746	-	-	3,926
WA	328	-	-	300	-	5,695	-	-	6,322
WV	46	-	500	95	-	-	-	-	641
WI	328	-	-	580	-	-	-	50	958
WY	137	-	-	493	-	-	-	-	630
BRAG	-	8	-	17	-	358	341	108	833
SBIR	-	46	51	92	20	789	359	191	1,549
PEER PANEL/OTHER	-	3	19	18	-	96	-	36	171
FED ADMIN	320	80	200	800	80	2,055	0	747	4,282
SUBTOTAL	7,958	2,000	5,000	20,000	2,000	51,370	22,925	18,680	129,933
UNOBLIGATED BALANCE	362	362	362	362	362	362	362	362	2,896
TOTAL	8,320	2,362	5,362	20,362	2,362	51,732	23,287	19,042	132,829

Table 2 for FY 2019
Distribution of Federal Payments for Integrated Programs

STATE	METHYL BROMIDE	ORGANIC TRANSITION RISK ASSESSMENT	CP/PM	RURAL DEVELOPMENT CENTERS	HOMELAND SECURITY	OREI	SCRI	TOTAL FEDERAL FUNDS
SBIR	$ 46	$ 51	$ 92	$ 20	-	$191	$1,153	$ 1,554
BIOTECH RISK	8	-	17	-	-	108	358	491
FEDERAL ADMIN OBLIGATED	80	200	800	80	$ 320	747	3,002	5,229
UNOBLIGATED	1,866	4,749	19,091	1,900	7,680	17,633	70,528	123,446
TOTAL	2,000	5,000	20,000	2,000	8,000	18,680	75,040	130,720

Table 3 for FY 2020
Distribution of Federal Payments for Integrated Programs

STATE	RURAL DEVELOPMENT CENTERS	OREI	SCRI	TOTAL FEDERAL FUNDS
SBIR	$ 17	$199	$1,192	$ 1,407
BIOTECH RISK	-	-	358	358
FEDERAL ADMIN OBLIGATED	68	800	3,200	4,068
UNOBLIGATED	1,612	19,001	75,250	95,864
TOTAL	1,697	20,000	80,000	101,697

CLASSIFICATION BY OBJECTS

Table NIFA-11 Classification by Objects (thousands of dollars)

Item No.	Item	2017 Actual	2018 Actual	2019 Estimate	2020 Budget
	Personnel Compensation:				
	Washington D.C.	$33,765	$35,747	$36,819	$37,924
11	Total personnel compensation	33,765	35,747	36,819	37,924
12	Personal benefits	10,423	11,764	12,117	12,480
	Total, personnel comp. and benefits	44,188	47,511	48,936	50,404
	Other Objects:				
21.0	Travel and transportation of persons	1,769	2,385	3,425	2,405
22.0	Transportation of things	7	6	9	6
23.1	Rental payments to GSA	5,626	5,292	5,792	5,966
23.3	Communications, utilities, and misc. charges	6,042	1,362	1,956	1,374
24.0	Printing and reproduction	221	193	277	195
25.1	Advisory and assistance services	6,679	9,781	14,048	9,865
25.2	Other services from non-Federal sources	287	337	484	340
25.3	Other goods and services from Federal sources	1,334	1,000	1,000	1,000
25.4	Operation and maintenance of facilities	420	2,466	3,542	2,487
25.5	Research and development contracts	10,184	16,346	23,476	16,486
25.7	Operation and maintenance of equipment	-	28	40	28
25.8	Subsistence and support of persons	-	1,647	2,365	1,661
26.0	Supplies and materials	340	115	165	116
31.0	Equipment	228	139	200	140
41.0	Grants, subsidies, and contributions	1,372,603	1,473,283	2,121,781	1,502,315
	Total, Other Objects	1,405,740	1,514,380	2,178,560	1,544,384
99.9	Total, new obligations	1,449,928	1,561,891	2,227,496	1,594,788
	DHS Building Security Payments (included in 25.3)....	$742	$815	$963	$992
	Position Data:				
	Average Salary (dollars), ES Position	$ 188,071	$ 193,135	$ 193,503	$ 195,438
	Average Salary (dollars), GS Position	$ 110,872	$ 115,590	$ 114,074	$ 115,215
	Average Grade, GS Position	12.1	12.3	12.3	12.3

* Fiscal Year 2019 and Fiscal Year 2020 contain two new programs
(Scholarships for 1890 Students and Gus Schumacher Nutrition Inventive Program)

SMALL BUSINESS INNOVATION RESEARCH PROGRAM

The Small Business Innovation Research Act (SBIR), codified at §9 of the Small Business Act, 15 U.S.C. at §638 was designed to strengthen the role of small, innovative firms in federally funded research and development. Under this program, small firms receive at least a fixed minimum percentage of research and development awards made by Federal agencies with sizable research and development budgets. The Small Business Research and Development Enhancement Act of 1992 (Public Law 102-564, October 28, 1991) as amended, reauthorized the SBIR program through September 30, 2022, mandates that 3.2 percent of FY 2017, 3.2 percent of FY 2018, 3.2 percent of FY 2019, and 3.2 percent of FY 2020 for extramural research and development funds within the Department are set-aside and used to fund the SBIR program.

Table NIFA-15. Funding for SBIR by Agency (thousands of dollars)

Agency	2017	2018	2019	2020
Agricultural Research Service ...	$1,668	$1,939	$1,900	$1,900
Animal and Plant Health Inspection Service	27	31	31	31
National Institute of Food and Agriculture.....	23,851	25,194	24,372	24,063
Economic Research Service	93	93	92	92
Forest Service	634	731	1,200	1,200
National Agriculture Statistics Service	31	32	32	32
Total.....	26,305	28,021	27,627	27,318

*Estimates are provided for 2019 and 2020. A report to the Small Business Administration for planned investments in 2019 and 2020 will be updated based on final appropriations.

The staff functions of USDA's SBIR program (solicitation, review and evaluation of proposals) 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. Research proposals are solicited to enhance the protection of the Nation's forested lands and forest resources and help to ensure the continued existence of healthy and productive forest ecosystems.
2. Plant Production and Protection – Biology. Research proposals are solicited that employ biological approaches to examine means of enhancing crop production by reducing the impact of destructive agents, developing effective crop systems that are economically and environmentally sound, enhancing the impact of new methods of plant manipulation, and developing new crop plants and new uses for existing crops.
3. Animal Production and Protection. Research proposals are solicited to find ways to enable producers of food animals to increase production efficiency and to assure a reliable and safe supply of animal protein and other animal products while conserving resources and reducing production costs.
4. Conservation of Natural Resources. Research proposals are solicited to develop technologies for the conservation of soil, water, air and other natural resources on landscapes that produce agricultural, natural and forest/rangeland goods and services.
5. Food Science and Nutrition. Research proposals are solicited to develop new knowledge and a better understanding of the characteristics of foods and their nutritional impact; to apply new knowledge to improve our foods and diets; and to apply new knowledge to the production of useful new food products, processes, materials, and systems, including the application of nutritional information to consumer foods and food service systems.
6. Rural and Community Development. Research proposals are solicited to develop knowledge and technology that will promote, foster, or improve the well-being of rural Americans.
7. Aquaculture. Research proposals are solicited to develop new technologies to promote the aquaculture production of animal and plant species in both freshwater and marine environments.
8. Biofuels and Biobased Products. Research proposals are solicited to develop new or improved technologies that will lead to increased production of industrial products from agricultural materials.
9. Small and Mid-Size Farms. Research proposals are solicited that will promote and improve the sustainability and profitability of small and mid-sized farms and ranches.
10. Plant Production and Protection – Engineering. The objective of this topic area is to enhance crop production by creating and commercializing technologies that enhance system efficiency and profitability and that protect crops from pests and pathogens in economically and environmentally sound ways. Projects that promote energy conservation or efficiency are strongly encouraged.

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 2014 Farm Bill. The scope of the final RFAs will depend upon the final appropriations levels 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 science developments. For the most up-to-date AFRI RFA publication schedule, please refer to the NIFA website at: https://nifa.usda.gov/afri-request-applications.

The Expected FY 2020 RFA Publication Dates for AFRI are January 2019 for the Foundational and Applied Science and the Education and Workforce Development RFAs and October 2019 for the Sustainable Agricultural Systems RFA. The earlier release dates for the Foundational and Applied Science and Education and Workforce Development programs result from NIFA's release of a single funding opportunity announcement for each RFA spanning two years of appropriations (i.e., FY 2019 and FY 2020). 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.

FY 2020 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)), as amended, in six priority areas. The six priority areas are: 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. The alignment of AFRI program Requests for Applications (RFAs) with the Farm Bill priorities are described in the following document.

Through AFRI, NIFA seeks to ensure our nation's food security by addressing the challenges that U.S. agriculture faces, promoting America's global competitive edge in agricultural exports, and supporting the country's investments in agricultural research, education, and extension. A major food systems challenge is the need to substantially increase food production for a burgeoning global population, projected to approach ten billion in just three decades. Much of the increased food production is expected to come from the U.S. and represents a tremendous economic opportunity for the U.S. agricultural sector and rural communities, while ensuring global nutritional security. Increased domestic and global production of food, however, must occur on diminishing arable land and increasingly variable and unpredictable water availability due to extreme weather events. Additionally, American agriculture will need to maintain its global competitive edge, particularly over nations such as China and Brazil whose investments in agricultural research and development have recently outpaced that of the U.S. A well-trained workforce and next generation of researchers are needed to meet these challenges posed by the ever-changing production agriculture landscape. The generation of new knowledge critical to advancing food and agriculture will require increased investment at academic institutions and non-academic research organizations in America.

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 variability, water management, natural resources and the environment, rural development, human nutrition, and food safety. These efforts are addressed through the three major components of AFRI including the Foundational and Applied Science Program, the Sustainable Agricultural Systems Program, and the Education and Workforce Development Program. Research, education, and extension work is supported by AFRI in the six priority areas established in the Farm Bill cited above.

Fundamental and applied research that aligns with the six Farm Bill priority areas is supported by the AFRI Foundational and Applied Science Program. The Foundational and Applied Science Program also funds crosscutting programs which support interdisciplinary work in two or more AFRI Farm Bill priorities to generate knowledge to position U.S. agriculture at the global forefront, including the Critical Agricultural Research and Extension (CARE) program area which is intended to result in implementable solutions to critical problems faced by food producers and consumers.

Increased funding for the Foundational and Applied Science Program will increase the funding rate (i.e., the number of grants awarded), especially for new investigators, which is essential for continued development of the next generation of scientists that is critical for sustaining a vigorous research enterprise in agricultural sciences. Discoveries made through research supported by the Foundational and Applied Science Program, in turn, provide the base of knowledge required for subsequent transformative future research, extension, and education programs at NIFA (especially those in the AFRI Sustainable Agricultural Systems Program) that aim to solve applied problems in the food and agricultural sciences. Additional high-priority science will be supported in collaboration with other Federal science agencies. These interagency programs are aligned with NIFA's relevant programs aimed at developing the foundational knowledge needed to address the societal challenges. Thus, the Foundational and Applied Science Program is both complementary and essential to the success of the Sustainable Agricultural Systems Program.

Through AFRI grants, NIFA will support the FY 2020 Administration Research and Development Budget Priorities for ensuring American prosperity.

Agriculture and Food Research Initiative Requests for Applications

In FY 2020, the AFRI program will issue three Requests for Applications (RFA) to solicit new grant awards; one RFA will be issued for each of the Foundational and Applied Science, Sustainable Agricultural Systems, and Education and Workforce Development programs. All three of these RFAs collectively address the six AFRI priority areas established in the Farm Bill Priority. All AFRI grant awards will be new in FY 2020.

FY 2020 President's Budget	
Program	**New Grant Awards**
Agriculture and Food Research Initiative	$500,000,000

The NIFA 2020 budget proposes to support the AFRI program at $500,000,000, which includes:

- Increased support for data science and artificial intelligence applications in agriculture through Food and Agriculture Cyberinformatics and Tools (FACT) to be included in the Foundational and Applied Science Program;
- Increased investment in the Sustainable Agricultural Systems Program, initiated in FY 2018, to support innovative, transformative, integrated, and transdisciplinary systems-level approaches to improve production systems for food, feed, fiber and biomass feedstock and to address challenges impacting agricultural production systems, including farm profitability;
- Increased investments in the Education and Workforce Development program for training and retraining of agricultural workers to develop a technology- and data-savvy agricultural workforce;
- Increased support for the Critical Agricultural Research and Extension (CARE) and interdisciplinary crosscutting programs, as part of the Foundational and Applied Science Program;
- Additional support for research on application of emerging advanced technologies;

- Continued support for high priority areas including production agriculture, resilient and climate-smart farming systems, soil health, agricultural biosecurity, food and agricultural microbiomes, and pollinator health;
- 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; and
- A new Predictive Science initiative in the Sustainable Agricultural Systems RFA, resulting in decision tools and other applications for researchers, extension specialists, producers, and consumers.

AFRI Requests for Applications (RFA):

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 Farm Bill. The Foundational and Applied Science Program priorities are designed to include the scope of topics listed within each of the six AFRI priority areas established in the Farm Bill. NIFA will invest $316,962,000 of appropriated AFRI funds to support *new* grants in the Foundational and Applied Science Program, as well as interagency programs. These investments will allow enhanced focus in promising new areas of agricultural science such as maximizing value of data-driven research in agricultural science under the Food and Agriculture Cyberinformatics and Tools initiative. NIFA proposes to continue increased investments in the plant and animal breeding program areas that support classical breeding efforts to improve crop and animal productivity, local adaptation of cultivars and breeds, and development of public cultivars. Additional areas of investments are aligned with the FY 2020 Administration Research and Development Budget Priorities and the recommendations of the Task Force on Agriculture and Rural Prosperity. To ensure American prosperity, additional investments will be made in emerging technologies such as gene editing for agricultural applications, autonomous systems and machine learning for agricultural applications such as robotics to address labor shortages in farming, and production of new agriculture-based products. Enhanced investments will also foster research on agricultural biosecurity; on precision livestock farming; on the microbiome of foods, food animals, plants, and soils; and on strategies to mitigate antimicrobial resistance.

Request for Applications (RFA)	New Grant Awards
Foundational and Applied Science Program	$316,962,000

Sustainable Agricultural Systems RFA | In FY 2020, NIFA will invest $134,066,000 in the AFRI Sustainable Agricultural Systems Program, which will build on advances made in research, education, and extension outcomes through the previous AFRI investments, and will address the challenges to agricultural systems comprehensively and collectively. This integration will enable NIFA's goal of advancing the convergence of agricultural and food sciences with engineering, social sciences, nanotechnology, computational sciences, and advanced manufacturing to generate new scientific discoveries, new products, new markets and, consequently, new high-skill jobs. These systems-level projects will marshal the many facets of the agricultural system, from farms to supply-chain businesses to consumers, to transform the way we produce, process, transport, and consume food. In doing so, it will address interrelated challenges of agricultural productivity, water availability, food safety, environmental resilience, and nutritional security. Through investments in technology, data, and innovation, NIFA will catalyze transformative changes throughout U.S. agricultural systems and contribute to the following goals:

- Solutions to Labor Challenges- Alleviate labor challenges across agricultural supply chain through automation, breeding for automation, ensuring farm and processing industry safety, utilizing predictive analytics and decision tools, and assessing economic and social impacts;
- Land Stewardship- Improve soil health through management of microbiomes, water, and nutrients in agricultural production systems at farm, regional or

landscape scales in the context of land ownership, conservation policy, and other socioeconomic factors;

- Food and Agricultural Biosecurity- Secure supply chain of food, feed, and other agricultural products from outbreaks of food-borne illnesses, natural disasters and pests and diseases of plants and animals through surveillance, monitoring, and response;
- Rural Agriculture-based Economy- Foster economic development and prosperity in rural America by catalyzing production of high-value biobased chemicals, food and feed ingredients, and other products using agricultural feedstock, enhancing local human capital, and attracting broadband and other supportive infrastructure; and
- Nutritional Security- Enhance health in rural America by ensuring accessible, affordable, safe, and nutritious food to sustain healthy lifestyles.

Investments in systems-level coordinated agricultural projects under the Sustainable Agricultural Systems Program will require larger support, up to $10 million per project, to generate transformative new scientific discoveries, new products, and new markets that will provide high-skill jobs and ensure America's global leadership in agriculture.

In addition to the large Coordinated Agricultural Projects, NIFA will offer opportunities for mid-size predictive science grants as a part of this program. Predictive science will advance our knowledge of the dynamics, changing forces, and sources related to predictability of the agricultural production system across all scales by using a diversity of qualitative and quantitative approaches. This effort will integrate information from diverse sources to allow producers to make informed decisions and take potentially game-changing actions to drive innovation in addressing one of the goals listed above.

Request for Applications (RFA)	New Grant Awards
Sustainable Agricultural Systems Program	$134,066,000

Education and Workforce Development RFA | NIFA will invest $48,973,000 of appropriated AFRI funding in Education and Workforce Development for education and training grants that focus on further enhancing the three distinct components of the pipeline for developing the workforce in the food and agricultural sciences: 1) enhancing agricultural workforce development through institutional grants to provide K-14 teachers and administrators with increased knowledge of food and agricultural sciences, and help them develop improved curricula to train agricultural workforce for the future; 2) training or retraining of agricultural workers to develop a technology- and data-savvy workforce, ready for the field and industrial jobs; 3) developing pathways by providing undergraduates in agriculture and allied disciplines with the applied technical and leadership skills required for careers in agricultural sectors and farming enterprises or in graduate programs; and 4) advancing science to support graduate and post-graduate education in agriculture and related disciplines through pre- and post-doctoral fellowships. This investment will address the projected shortfalls in the availability of qualified agricultural workers within the United States.

Request for Applications (RFA)	New Grant Awards
Education and Workforce Development Program	$48,973,000

Table 1. Funding allocations by Request for Applications for the FY 2020 President's Budget for the Agriculture and Food Research Initiative (AFRI).

FY 2020 President's Budget	
Program	**New Grant Awards**
Agriculture and Food Research Initiative	$500,000,000
Request for Applications (RFA)	
Foundational and Applied Science Program[1]	$316,962,000
Sustainable Agricultural Systems Program	$134,066,000
Education and Workforce Development Program	$48,973,000

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

Table 2. Estimated funding allocations by Farm Bill Priority Area for the FY 2020 President's Budget for the Agriculture and Food Research Initiative (AFRI).

FY 2020 President's Budget				
Farm Bill Priority Area	Agriculture and Food Research Initiative	**RFA Topic Area**		
		Foundational and Applied Science	Sustainable Agricultural Systems	Education and Workforce Development
A. Plant Health and Production and Plant Products	27%	25%	30%	27%
B. Animal Health and Production and Animal Products	22%	21%	24%	21%
C. Food Safety, Nutrition, and Health	15%	14%	15%	20%
D. Bioenergy, Natural Resources, and Environment	12%	13%	11%	10%
E. Agriculture Systems and Technology	13%	15%	8%	12%
F. Agriculture Economics and Rural Communities	12%	12%	12%	10%

Table 3. Funding allocations by Request for Applications for FY 2016 to FY 2018 appropriations, FY 2019 Annualized Continuing Resolution (CR), and FY 2020 President's Budget for the Agriculture and Food Research Initiative (AFRI).

AFRI Program Areas	**2016 Enacted**	**2017 Enacted**	**2018 Enacted**	**2019 Annualized CR**	**2020 President's Budget**
Sustainable Agricultural Systems Program	---	---	87,912,000	98,901,000	134,066,000
Sustainable Bioenergy Challenge Area	27,566,000	27,963,000	8,269,000[1]	---	---
Climate Variability and Change Challenge Area	15,312,000	15,492,000	---	---	---
Water for Food Production Systems Challenge Area	69,917,000	61,497,000	17,052,000[1]	---	---
Childhood Obesity Prevention Challenge Area	25,049,000	21,893,000	8,676,000[1]	---	---
Food Safety Challenge Area	14,309,000	17,198,000	4,910,000[1]	---	---
SUBTOTAL	***152,154,000***	***144,043,000***	***126,819,000***	***98,901,000***	***134,066,000***
Foundational and Applied Science Program	177,029,000	210,105,000	246,667,000	264,983,000	316,962,000
Education and Workforce Development Program	20,818,000	20,852,000	26,511,000	36,116,000	48,973,000
Total	***350,000,000***	***375,000,000***	***400,000,000***	***400,000,000***	***500,000,000***

1 Funding for Challenge Areas in FY 2018 was for existing grants only

OTHER COMPETITIVE PROGRAM RFAS

Non-AFRI competitive programs included in the Congressional Directive and/or Farm bill language are listed below. FY 2019 estimates for discretionary funding are based on the FY 2019 Full-Year Continuing Resolution (CR). Programs funded by mandatory funding are included based on the Agriculture Improvement Act of 2018 (2018 Farm Bill).

Program	Authority	Scope of RFA and Budget Justification	2019 Estimate ($000s)	2020 Budget ($000s)	RFA Dates
Sustainable Agriculture Research and Education Program	7 U.S.C. 5811, 7 U.S.C. 5812, 7 U.S.C. 5831, & 7 U.S.C. 5832 in accordance with the general authorities in 7 U.S.C. 343(d)	The FY 2019 RFAs will provide continuation funding for four regional centers and one national coordination center which were identified in FY2018 through a competitive rigorous review process. The centers will emphasize projects to help farmers and ranchers to adopt practices that are productive, profitable, environmentally sound, and good to communities. The will focus on projects submitted by farmers and ranchers as well as limited support to innovative projects and graduate education. Grants awarded by the four regional administrative councils will support projects that address crop and livestock production and marketing, stewardship of private lands, 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 FY 2020 RFA will continue funding the centers for competitively reviewed projects to help farmer, ranchers, and foresters to adopt sustainable agricultural practices.	$35,000	$19,009	2019: April 30, 2019 2020: February 1, 2020
Methyl Bromide	7 U.S.C. 7626	The FY 2019 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, extension-only, and state-of-the-commodity projects that use a systems approach to evaluate and deliver economically viable short- to medium-term solutions for all commodities impacted by the loss of methyl bromide. The President has not requested funding for this program FY 2020.	$2,000	$0	2019: February 22, 2019

Program	Authority	Scope of RFA and Budget Justification	2019 Estimate ($000s)	2020 Budget ($000s)	RFA Dates
Minor Crop Pest Management Program – Interregional Research Project #4	7 U.S.C. 3157 (Formerly 7 U.S.C. 450i(e). 7 U.S.C. 450i was transferred to 7 U.S.C. 3157)	The FY 2019RFA will focus on continued funding projects that provide safe, effective, and economical pest management solutions for minor agricultural uses and specialty crops. NIFA anticipates funding five projects: one to establish a national headquarters and four to establish geographically-based regional IR-4 centers (North Central, Northeastern, Southern, and Western) The President has not requested funding for this program FY 2020.	$11,913	$0	2019: February 28, 2019
Organic Transition Program	7 U.S.C. 7626	The FY 2019 RFA will focus on 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. The program will focus on the development and implementation of biologically based pest management practices that mitigate the ecological, agronomic, and economic risks associated with a transition from conventional to organic agricultural production systems. The program also supports the development of cultural practices and other allowable alternatives to substances recommended for removal from NO"'s National List of Allowed and Prohibited substances. The President has not requested funding for this program in FY 2020.	$5,000	$0	2019: April 30, 2019
Crop Protection/Pest Management	7 U.S.C. 7626	The FY 2019 RFA will focus on integrated pest management (IPM) projects that respond to pest management challenges with coordinated regional and national research and extension programs and that promote further development and use of IPM approaches. The program will develop projects and programs to help end-users discover and implement effective, affordable, and environmentally-sound IPM strategies to reduce economic, environmental, and societal losses caused by diseases, insects, weeds, and other pests that affect crops and livestock and pests that affect human well-being and community vitality. In FY 2019 only the Applied	$20,000	$0	2019: February 22, 2019

Program	Authority	Scope of RFA and Budget Justification	2019 Estimate ($000s)	2020 Budget ($000s)	RFA Dates
		Research and Development Program area will offer funding for new projects. The President has not requested funding for this program in FY 2020.			
Specialty Crop Research Initiative	7 U.S.C. 7632	The FY 2019 and FY 2020 SCRI 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 will also continue to require that applications address one of the five legislatively mandated focus areas.	$80,000	$80,000	2019: April 30, 2019 2020: October 1, 2019
Beginning Farmer and Rancher Development Program	7 U.S.C. 3319f(c)(1)	The FY 2019 and FY 2020 BFRDP RFA's 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) BFR's, 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 RFA's.	$15,000	$15,000	2019: April 30, 2019 2020: December 15, 2019
Organic Agriculture Research and Extension Initiative	7 U.S.C. 5925b(a)	The FY2019 and FY2020 RFAs will focus on solving critical organic agricultural issues, priorities and enhancing the ability of producers and processors who have already adopted organic standards to grow and market high quality organic agricultural products. Focus will be on the eight legislatively-defined goals: (1) Facilitating the development 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	$18,680	$20,000	2019: April 30, 2019 2020: November 15, 2019

Program	Authority	Scope of RFA and Budget Justification	2019 Estimate ($000s)	2020 Budget ($000s)	RFA Dates
		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 and marketing, food safety, socioeconomic conditions, and farm business management, (7) Examining optimal conservation, soil health, and environmental outcomes relating to organically produced agricultural products, (8) Developing new and improved seed varieties that are particularly suited for organic agriculture.			
Gus Schumacher Nutrition Incentive Program	7 U.S.C. 7517	Funding for the FY 2019 and FY 2020 Gus Schumacher Nutrition Incentive Program, formerly known as the Food Insecurity Nutrition Incentive Program, will be used for the incentive programs focusing on increasing fruit and vegetable consumption among Supplemental Nutrition Assistance Program (SNAP) participants, and funding the Produce Prescription Programs. The program will test strategies that could contribute to our understanding of how best to increase the purchase of fruits and vegetables by SNAP participants to inform future efforts. Funds for the Training & Technical Centers will be used for methods development for the collection and evaluation of data from grantees, and provide training and technical assistance.	$45,000	$48,000	2019: May 1, 2019 2020: May 1, 2020

STATUS OF PROGRAMS

National Institute of Food and Agriculture Activities

Current Activities

Hatch Act

The Hatch Act provides formula funds to support research at the State Agricultural Experiment Stations which improves production, marketing, distribution, and utilization of crops and livestock for the food supply, health, and welfare of the American people, while conserving resources, enhancing nutrition and sustaining rural living conditions. Students are provided training opportunities to assist in scientific research projects conducted at the stations. Hatch Act formula funds are matched by non-Federal funds and are used to support research in forest and natural resources; crop resources; animal resources; people, communities, and institutions; competition, trade adjustment, price, and income policy; and food science and human nutrition.

McIntire-Stennis Cooperative Forestry Research

The McIntire-Stennis Cooperative Forestry Research program provides formula funds to support research related to use of the Nation's forest resources. Timber production, forest land management, wood utilization, and the associated development of new products and distribution systems are some of the topics of this research. Additional areas of investigation include wildlife, recreation, water, range, and environmental quality, which are essential to the long-term productivity and profitability of the integrated system of forest resources.

Evans-Allen Program

The Evans-Allen formula funds research program for legislatively eligible 1890 Colleges and Universities. The programs place emphasis on small-scale agriculture, human nutrition, rural development and quality of living, crop resources, and animal resources. In addition, this program supports the development of agricultural expertise by providing training opportunities for students to assist in the research projects being conducted at these institutions.

Animal Health and Disease Research

The Animal Health and Disease Research formula program provides funding to accredited schools or colleges of veterinary medicine and/or State Agricultural Experiment Stations that conduct animal health and disease research. State Comprehensive Plans for animal health research, approved by NIFA, are being followed by the eligible institutions. Provisions of Section 1433 of National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA) permit selection of studies within each State based on the highest-priority needs and the capabilities of the institutions to conduct the needed research.

Special Grants

The Special Grants Program concentrates on problems of national, regional, and local interest beyond the normal emphasis in the formula programs. Program objectives are to facilitate or expand promising breakthroughs of importance to the Nation in areas of food and agricultural sciences and to facilitate or expand ongoing State-Federal food and agricultural research programs. Generally, funding is for projects that have regional and/or national impact, such as those projects addressing global change, pest control issues, aquaculture centers and research, sustainable agriculture, potato, alfalfa forage and research, and supplemental and alternative crops.

Agriculture and Food Research Initiative (AFRI)

AFRI supports fundamental and applied research, extension, and education to address food and agricultural sciences. Competitive awards are made to eligible recipients to address critical issues in U.S. agriculture in the areas of food security and hunger, climate change, sustainable bioenergy, childhood obesity, food safety, and water in agriculture. 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; renewable energy, natural resources, and environment; agriculture systems and technology; and agriculture economics and rural communities.

Small Business Innovation Research (SBIR) Program

The Small Business Innovation Development Act was designed to strengthen the role of small, innovative firms in Federally funded research and development. The research areas supported under the SBIR program address critical issues in U.S. agriculture in the areas of global food security and hunger, weather, sustainable bioenergy, childhood obesity, and food safety. 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 development; biofuels and biobased products; aquaculture; and small and mid-sized farms.

Biotechnology Risk Assessment Research Grants Program (BRAG)

BRAG is a competitive program for research grants to identify and develop appropriate management practices to minimize physical and biological risks associated with genetically engineered animals, plants, and microorganisms.

Tribal Colleges Research Grants Program

The Tribal Colleges Research Grants Program is a competitive program for conducting agricultural research activities that address tribal, National, or multi-State priorities.

Farm Business Management and Benchmarking Program

The Farm Business Management and Benchmarking Program provides support to improve the farm management knowledge and skills of agricultural producers, and establish and maintain a national, publicly available farm financial management database to support improved farm management. Funds are awarded on a competitive basis under the program.

Sun Grant Program

The Sun Grant Program funds six sun grant centers that award subgrants to enhance national energy through the development, distribution, and implementation of biobased energy technologies. Through biobased energy and product technologies, activities are supported that promote diversification, and the environmental sustainability of, agricultural production in the U.S., and economic diversification in rural areas of the U.S. Funds also are 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.

Capacity Building for Non-Land Grant Colleges of Agriculture

The Capacity Building for Non-Land Grant Colleges of Agriculture (NLGCA) Program competitively awards grants to assist the institutions in maintaining and expanding the capacity of the NLGCA Institutions to conduct education, research, and outreach activities relating to agriculture, renewable resources, and other similar disciplines.

Higher Education Programs

Institution Challenge, Multicultural Scholars, and Graduate Fellowship Grants Program

This competitive program supports challenge grants to stimulate and enable colleges and universities to provide the quality of education necessary to produce graduates capable of strengthening the Nation’s food and agricultural scientific and professional workforce. The program provides funding for multicultural scholars grants to institutions for scholarships to attract and educate more students from groups currently underrepresented in the food and agricultural sciences for careers in agriscience and agribusiness. Also supported are 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.

1890 Institution Capacity Building Grants Program
This competitive program advances the teaching and research capacity, and expands the competitiveness of the 1890 Land-Grant Institutions and Tuskegee University.

Hispanic-Serving Institutions Education Grants
This competitive program promotes and strengthens the ability of Hispanic-Serving Institutions to carry out higher education teaching programs in the food and agricultural sciences.

Tribal Colleges Endowment Fund
This fund distributes interest earned by an endowment established for the 1994 Land-Grant Institutions (legislatively eligible tribally controlled colleges). The Endowment Fund enhances education in agricultural sciences and related areas for Native Americans by building education capacity at these institutions.

Tribal Colleges Education Equity Grants
This program is a formula program designed to enhance educational opportunities for Native Americans by strengthening instructional programs in food and agriculture.

Secondary Education, Two-year Postsecondary Education, and Agriculture in the K-12 Classroom
This competitive program promotes and strengthens the ability of public secondary schools' education in agribusiness and agriscience and increases the number and/or diversity of young Americans pursuing college degrees in the food and agricultural sciences.

Alaska Native-Serving and Native Hawaiian-Serving Institutions
This competitive program is designed to recruit, support and educate minority scientists and professionals, and advance the educational capacity of these Native-serving institutions.

Grants for Insular Areas
This competitive program supports activities at higher education institutions located in U.S. insular areas. Grants support enhancement of resident instruction programs that focus on agriculture, natural resources, forestry, veterinary medicine, home economics, and disciplines closely allied to food and agriculture production and delivery systems. Funds may be used to acquire, alter, or repair facilities or relevant equipment for conducting agricultural research. The grants also fund distance education programs that strengthen the capability of the institutions to carry out collaborative distance food and agricultural education programs using digital network technologies.

Veterinary Medicine Loan Repayment Program (VMLRP)
VMLRP provides for a competitive 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.

Veterinary Services Grant Program
This is a competitive program for developing, implementing, and sustaining veterinary services. The program supports activities that 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 an agreement under the Veterinary Medicine Loan Repayment Program.

Smith-Lever 3(b) and (c)
Federal contributions for cooperative extension work are primarily derived from Section 3(b) and (c) formula funds appropriated under the Smith-Lever Act of 1914. These funds comprise about two-thirds of the total Federal funding for extension activities. Federal funds are matched by non-Federal sources, primarily States and counties, and support the major educational efforts that are central to the mission of the Cooperative Extension System and common to most extension units, such as

agricultural production; nutrition, diet, and health; natural resources and environmental management; community resources and economic development; family development and resource management; 4-H and youth development; and leadership and volunteer development.

Smith-Lever 3(d)

Other sources of Federal funding for extension activities include the Smith-Lever section 3(d) or targeted funds, which are provided to the States to address special programs or concerns of regional and national importance and are distributed through administrative or non-statutory formulas and merit-reviewed projects. The following extension programs are funded under the Smith-Lever 3(d) funding mechanism: Expanded Food and Nutrition Education Program (EFNEP); Farm Safety and Youth Farm Safety Education and Certification; Children, Youth, and Families at Risk; Federally-Recognized Tribes Extension Program (FRTEP); and New Technologies for Agricultural Extension. EFNEP funds are distributed on a formula basis and are not required to be matched. Funds under other Smith-Lever 3(d) programs are distributed on a competitive process.

Extension 1890 Institutions

This program distributes funding on a formula basis to support extension programs for the legislatively eligible 1890 Colleges and Universities. The program primarily addresses the needs of small-scale and minority agricultural producers and other limited-resource audiences. These funds are used to maintain the extension infrastructure at the 1890 institutions and the partnership with the Cooperative Extension System.

1890 Facilities Program

Federal funds provide the primary support for enhanced extension, research, and teaching facilities at all of the 1890 Land-Grant Institutions. Some examples of the use of funds include the renovation of office space and laboratories; much needed computer and equipment purchases; the acquisition of satellite downlinking and distance learning capabilities; and the construction of joint research and extension multi-purpose/conference centers. The 1890 Facilities Program enables the 1890 Land-Grant Institutions to improve their capacity and better address the needs of students, farmers, and rural populations with limited resources.

Renewable Resources Extension Act (RREA)

RREA provides funding for expanded natural resource education programs. Funds are distributed primarily by an administratively-derived formula to all States for educational programs and projects and a limited number of special emphasis national programs. The Cooperative Extension System provides research-based education about renewable natural resources. Extension education enables the management of renewable natural resources in a way that better serves individual land owners, local communities, and the Nation.

Rural Health and Safety Education (RHSE)

RHSE helps rural residents avoid the numerous obstacles to maintaining their health status. The program funds individual and family-centered Extension education projects that enhance rural health, strengthen economic vitality and, over time, break the rural poverty cycle. In addition, RHSE supports projects implementing new educational programs or approaches focused on the prevention and/or reduction of opioid misuse and abuse, with demonstrated evidence of impact on the prevention and/or reduction of opioid misuse and abuse.

Agriculture in the Classroom

The program helps advance agricultural literacy through a grassroots network of State coordinators, school teachers, 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.

Extension Services at 1994 Institutions
The program provides funding 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.

Food Animal Residue Avoidance Database Program
The program is a computer-based decision support system designed to provide livestock producers, extension specialists, and veterinarians with practical information on how to avoid drug, pesticide, and environmental contaminant residue problems.

Women and Minorities in Science, Technology, Engineering, and Mathematics (STEM) Fields
The program supports projects to increase the participation of women and underrepresented minorities from rural areas in STEM fields that are relevant to USDA. Priorities identified include: promoting a safe, sufficient, and nutritious food supply for all Americans and for people around the world; fostering sustainable agricultural policies that foster economic viability for small and mid-sized farms and rural businesses, protecting natural resources, and promoting value-added agriculture; developing national leadership in weather mitigation and adaptation; building a modern workplace with a modern workforce; and developing support for 21st century rural communities.

Food Safety Outreach Program
The program is designed to develop food safety training, education and technical assistance for small farm owners and food processors affected by the Food Safety Modernization Act.

Food and Agriculture Service Learning Program
Food and agriculture service implementation projects are intended to increase or further develop existing farm to school initiatives and other food and agriculture experiential learning initiatives within schools in a State or region. The projects also promote training and technical assistance, evaluation activities, curriculum development, or incorporate farm to school strategies in trainings and professional opportunities along with working closely with agricultural producers in the local and regional areas.

Section 406 Programs
Per Section 406 of AREERA, grants are awarded on a competitive basis to support integrated, multifunctional agricultural research, extension, and education activities. Programs include:

Methyl Bromide Transition Program (MBTP)
MBTP supports the discovery and implementation of practical pest management alternatives for commodities affected by the methyl bromide phase-out.

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

Crop Protection/Pest Management Program (CP/PM)
CP/PM supports integrated pest management projects that respond to pest management challenges with coordinated state-based, regional and national research, education, and extension programs.

Regional Rural Development Centers

Funding is used to support Regional Rural Development Centers to improve the social and economic well-being of rural communities in their respective regions. The centers 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 such as e-commerce, the changing interface between rural, suburban, and urban places, and workforce quality and jobs creation.

Food and Agriculture Defense Initiative (FADI)

This program provides support for the National Plant Diagnostic Network and the National Animal Health Laboratory Network to identify and respond to high risk biological pathogens in the food and agricultural system. The network is used to increase the ability to protect the Nation from plant and animal disease threats by providing surveillance, early detection, mitigation, and recovery functions that serve to minimize the threats. The funds also are used to support the Extension Disaster Education Network.

Selected Examples of Recent Progress

Hatch Act

Research shows that beets make clean biofuels. Energy beets are an economical source of sugar for biofuel and chemical production. Researchers at North Dakota State University found that fermentable sugars stored as raw, thick juice have a carbon footprint that is about 30 percent and 50 percent lower than beet stored as taproots and corn grain, respectively. Beet ethanol produced using this method shows great promise for greatly reducing greenhouse gases within the U.S., showing that energy beets qualifies as an advanced biofuel.

McIntire-Stennis Cooperative Forestry

Over the last 20 years, Maine’s forests have become younger and less dense. As a result, forests are not providing optimal climate benefits through carbon sequestration and storage. However, more carbon could be stored over the next 100 years, according to new research from the New Hampshire Agricultural Experiment Station at the University of New Hampshire (UNH). Findings from the research suggest that a shift in forestry practices that include less frequent harvests of smaller amounts of wood from each acre would lead to 14 to 33 percent more carbon stored over the next 100 years. The practice would leave more trees to grow older and larger, further increasing their ability to store more carbon.

Evans-Allan

The barber pole worm is the world’s greatest threat to profitable sheep and goat production, but the overuse of anti-parasitic remedies has led to drug resistance. Researchers at Fort Valley State University in Georgia created the Targeted Selective Treatment (TST), which reduces the use of synthetic drugs by up to 90 percent. TST saves farmers $150-$200 per 100 animals per year and identifies parasite-resistant breeding stock.

Special Grants

Under the Sustainable Agriculture Research and Education Program, graduate students at the University of California - Davis began field tests on very rare commodities: high-yield, disease-resistant bean varieties that can thrive on organic farms. Most crops bred for conventional farming can be difficult to grow in organic systems. To create a winning variety, breeders cross plants with desired traits and select the best offspring over multiple generations. It takes several years of plot testing to give birth to a variety good enough to name and sell. With each new generation of crops, breeders select plants that perform well in the system in which they are being raised. These new bean varieties could make a big difference in performance and profitability of organic legumes like pinto, black, and kidney beans, as well as heirloom-like varieties with high culinary quality.

AFRI

Plants need to continually adapt to changes or stresses in their environments, such as drought and pests. In response, crop breeders need to develop new varieties that are adapted to a new location or changing growing conditions in the same area. Researchers at the University of Wisconsin-Madison wanted to know whether the last 100 years of selecting for corn that is acclimated to a particular location has changed its ability to adapt to new or stressful environments. Stretching across 20 States and into Canada, the researchers handled more than 850 unique corn varieties where they measured traits like yield and plant height while recording weather conditions. They found that the regions of the corn genome that have undergone a high degree of selection were associated with a reduced capacity to respond to variable environments than genomic regions that were not directly acted on by breeders. The outcome is that the modern corn varieties are very productive in the environments they are grown in, but might have a harder time handling changes in those environments.

Limited resource farmers and forest landowners face many economic challenges. Researchers at Alabama A&M University (an 1890 Land-Grant University) developed an integrated research, extension, and outreach program to promote sustainable loblolly-pine/meat goat silvopasture systems. Silvopasture is the integration of forage, livestock, and timber production on one section of land. The practice presents opportunities to increase the diversity of plants and animals, sustainably increase land productivity, and improve cash flow and income. The study shows that silvopasture production generates sufficient return to labor and management, up to $198 per acre, to justify the investment.

U.S. production of Atlantic salmon dropped more than 35 percent since 2000 due to an increase in the death rate of salmon embryos. The survival rate of fertilized salmon eggs had been as high as 80 percent. But beginning in 2000, salmon embryos began dying in large numbers. Research at the University of Maine shows that female salmon with high levels of two types of hormone produce eggs that achieve an 80 percent survival rate. The research is helping producers adjust their breeding programs to take hormone levels into account.

Titanium dioxide coating followed by oxygen plasma treatment reduces *E. coli* contamination of beef products. University of Georgia scientists examined a combination of methods to reduce Shiga toxin-producing *E. coli* (STEC) bacterial contamination during slaughter of beef cattle or in meat processing facilities. STEC infection can cause illnesses in humans, ranging from mild or bloody diarrhea to kidney failure. The team reported that the protocol developed could reduce the risk of STEC on beef carcass and trims.

Small Business Innovation Research

Industry Vision Automation Corporation in Maryland received Phase I and Phase II Small Business Innovation Research grants to design a system to remove the calyx (green leafy stem area) from strawberries during processing. Currently this process is done manually with a knife. They developed a neural network structure and algorithm designed to detect and sort out berries with defects, detect the orientation of the strawberries, and cut them using a high pressure water cutting system. The company developed an initial prototype unit with user interface that consists of subsystems of hardware control electronics, calyxes cutting line detection algorithm, high-pressure water cutting system, residual rejection system and controls.

Higher Education Programs

1890 Institutions Capacity Building Grants

Sweet potatoes are one of the top three vegetable crops grown in Mississippi, and one that is susceptible to major yield loss from virus infection. Alcorn State University in Mississippi partnered with Louisiana State University to develop 13 virus-resistant sweet potato lines. The project also gave students, lab technicians, and extension agents training in plant tissue culture techniques, disease diagnosis techniques, and field practices.

Hispanic Serving Institutions Education

The LEADERS (learning, enhancing and developing experiential research skills) program is a collaborative project between Texas A&M University – Kingsville and New Mexico State University to increase the number of underserved animal science students in STEM. The project offered more experiential learning and professional development opportunities for students including internships, university exchange program, educational tours, and mentoring. The project has realized significant gains in student achievement: in just two years, the percent of students with grade point averages (GPA) between 3.0 and 3.99 increased from 77 to 82 percent. The number of participating students reporting a GPA of higher than 3.0 increased from 73 to 97 percent.

Tribal Colleges Education Equity Grants

Fond du Lac Tribal and Community College in Minnesota provided hands-on practical application experience to over 87 college students in multiple sections of their Environmental Science, Alternative Energy, Environmental Ethics, Geospatial Technologies, and Biology classes. These students produced 20 research posters, air quality research, and extended growing season solar and passive heat powered greenhouse. The community outreach through their events, networks, and presentations served approximately 635 students and community members. All of this research and the resulting projects will create a campus that encourages STEM learning and create a model for sustainability on their campus that honors the Anishinaabe culture.

Alaska Native-Serving and Native Hawaiian-Serving Institutions

Hawaii relies on local agricultural activities to ensure food security across its islands. The University of Hawaii created a comprehensive agriculture program that engages students in multidisciplinary analysis of the food and farming systems of Hawaii, the U.S., and beyond. Of the 100 students in the agricultural program, 41 percent are Native Hawaiian and 70 percent are women. Twenty-three disadvantaged students received $1,000 in stipends to complete the program. The program covers agro-ecology, political science, epidemiology, food security, ethics, traditional ecological knowledge, and indigenous resource management.

Grants for Insular Areas

The Agricultural Experiment States for the University of the Virgin Islands (UVI) mentored undergraduate students in educational agricultural research projects. Four UVI undergraduate students took part in an extensive seven-day tour of the University of Florida Agricultural Research and Education Centers and related science-oriented educational centers. Two students will be supported to attend a regional or a national conference to present their research results. Such opportunities are expected to develop leadership and workforce skills needed by the students.

VMLRP

In FY 2018, $8 million was appropriated to the VMLRP to repay educational loans for eligible veterinarians in return for service in one of the 187 areas of the U.S. lacking sufficient veterinary resources. Studies indicate significant and growing shortages of food supply veterinarians, with a leading cause of the shortage being the heavy cost of training. According to the American Veterinary Medical Association, the average educational debt for 2016 veterinary school graduates was $143,757. To relieve the financial burden and retain rural veterinarians in areas where they can help assure agricultural biosecurity, animal health, food safety and public health, this program incentivizes veterinarians, including new graduates, to commit to three years of veterinary service in a designated veterinary shortage area. As of October 2018, 75 award offers in 30 States were made to participants who started their service in January 2019.

Smith-Lever 3(b) and (c)

One in five school-age (K-12) youth in Iowa is of color. Iowa's 4-H program took steps to ensure that participation in its programs mirror this trend. In 2014, Iowa State University Extension and Outreach 4-H Youth Development shifted from the concept of inclusion of diverse youth to one of belonging. Iowa 4-H created four Culturally-based Youth Leadership Accelerators (CYLAs) that mobilize cultural strengths and culturally-based narratives to introduce and strengthen the relationship between youth and 4-H. The CYLAs also connect underrepresented youth, whose families may be unfamiliar with post-secondary education, to the college experience. Each CYLA includes a day at the Iowa State University campus, an overnight experience, and a day of culturally-based workshops with embedded 4-H program priorities: Healthy Living, STEM, Citizenship and Leadership, and Communication and the Arts. Much of the curriculum is entrenched in ethnic or cultural literature and research. In only

two years, CYLAs have brought more than 500 young leaders of color into Iowa 4-H. In some cases, the youth joined existing 4-H clubs and learning communities. Many more worked with volunteers to develop new culturally-based clubs. CYLA graduates also helped lead statewide programming.

Smith-Lever 3(d)

EFNEP

The University of Florida's EFNEP, through Escambia County, partnered with the Council on Aging in the area. They are working with a subgroup called “Grandparents Raising Grandchildren." This group consists of grandparents who have obtained temporary custody of their grandchildren or adopted them because the grandchildren’s biological parents are either incarcerated or deceased due to drug or alcohol addiction. The opioid epidemic is affecting many families and EFNEP helps by supplying the grandparents with education and tools that equip them in their endeavor to raise healthy and happy children. For example, each participant is given a challenge to purchase a healthy item from each of the five food groups with the $10 that is provided for them. This is one example of how EFNEP is reaching additional audiences as family structures change due to societal challenges. Through EFNEP low-income families with young children and low-income youth gain skills to stretch their food dollar, make healthier and safer food choices, gain food preparation skills and become more physically active, all in support of improved health.

Federally-Recognized Tribes Extension Program

University of Minnesota Extension and Leech Lake Tribal College are working together with the Bank of Ojibwe to ensure that residents on the reservation are more food secure and increase scientific, agricultural, and health literacy among youth. More than 700 residents participated in events that revived agricultural traditions and teach food preservation, traditional skills, and the saving of seeds from culturally important plants.

Extension 1890 Institutions

Feral swine causes thousands of dollars in damage to landscaping, vegetable and fruit crops, and underground irrigation systems in Texas each year. They also spread bacteria to livestock and occasionally prey on livestock, especially newborn lambs, goats, and calves. The feral swine population in Texas has been estimated at 2.6 million – and could grow tremendously, as one sow can reproduce more than 40 piglets in one year. Research and extension agents at Prairie View A&M University in Texas provided residents in one county with information on how to trap, prevent, and eliminate feral swine issues. Preliminary results indicate savings on an average of $11,000 per year in property damage for producers and landowners.

Extension Services at 1994 Institutions

The United Tribes Technical College in Bismarck, North Dakota worked to increase community outreach through its children’s gardening project. The children’s garden is a community garden program that includes orchard crops and Haskap berry plants. It also includes raised beds that have plants specifically for herb gardens and is designed to enable mobility-impaired gardeners to raise a home garden without having to bend or dig. There is a continuous effort at combining traditional knowledge and science included in the Arikara garden, the medicinal wheel garden, and continued rejuvenation of indigenous plants in the Dragonfly Garden plots to make this project helpful and successful.

Food Safety Outreach Program

Roughly one in six Americans (48 million people) get sick from foodborne diseases, according to the Centers for Disease Control. Kansas State University worked to strengthen food safety education and outreach activities for Kansas and Missouri Fruit and Vegetable Producers. The team hosted novel and interactive food safety education courses for small fruit and vegetable producers which included pre-workshop on-farm assessments for 32 farms, 2 on-farm trainings, 6 classroom training session, 22 post-workshop assessments. The workshops and on-farm activities included over 100 small producers on 54 farms in Kansas and Missouri. These hands on trainings included water testing tailored to enhance produce safety and the utilization of an on-farm smartphone app, app.farmament.com, developed with a Specialty Crop Block grant. This app, designed to assist with the traceability guidelines in the Food Safety Modernization Act, is leveraging Food Safety Outreach Program funds to

enhance utility by small producers. The training activities increased participation in the On-Farm Readiness Reviews as well as Good Agricultural Practices (GAPs) training attendance, with several new farms receiving GAP certifications.

Regional Rural Development Centers

Tackling the opioid crisis requires education and action across various community sectors and by individuals, professionals, and families. The North Central Regional Center for Rural Development at Michigan State University and Purdue Extension in Indiana host a quarterly webinar series, Combating Opioids, to share information, data, resources, and best practices or evidence-based interventions that can be implemented at the local level to make a difference in addressing opioid misuse and abuse, especially in rural communities. There have been over 575 participants from across the country on 5 webinars and over 1,000 views to archived presentations and materials housed on the project's website.