
# The Agricultural Cooperative Extension System: An Overview

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SUMMARY

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# The Agricultural Cooperative Extension System: An Overview

The Smith-Lever Act of 1914 (7 U.S.C. §§341 et. seq.) established the Agricultural Cooperative Extension System (CES), or simply *extension*, which delivers research-based knowledge to farmers, ranchers, and the nonuniversity public nationwide. Extension operates through a three-tiered system—federal oversight by the U.S. Department of Agriculture (USDA), state-level activities led by land-grant institutions (LGIs), and local implementation by extension agents—and includes over 100 programs affiliated with LGIs.

The federal government provides annual appropriations to LGIs, often with matching nonfederal requirements. Extension programs are funded through capacity and competitive grants. Capacity grants provide federal funding to LGIs for the activities of all three pillars of the land-grant university system (teaching, research, and extension), and funding is distributed according to formulas established by legislation, including the Smith-Lever Act of 1914 (38 Stat. 372) and the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (P.L. 95-113, §§1444-1445). Competitive grants are awarded through a peer-review process to specific extension projects proposed by eligible applicants.

Between FY2017 and FY2024, federal appropriations for extension activities increased, in current-year dollars, from $477.4 million to $561.7 million. Adjusted for inflation, however, the total decreased from $582.8 million to $561.7 million over the same period. Inflation-adjusted appropriations for capacity grants decreased from $509.8 million in FY2017 to $471 million in FY2024, while competitive grants increased, from $62.7 million to $83.1 million.

Since the establishment of the land-grant university system in 1862, Congress has continued to shape and support the central role of extension at LGIs. Potential congressional concerns include the allocation of capacity federal funding for extension activities, compared with competitive federal funding, which may affect who delivers agricultural research outreach and training. Another issue of interest may be the differences in extension funding among LGIs, which may affect agricultural knowledge dissemination, extension focus, audience targeting, and staff salaries, and may disadvantage minority applicants. In the 2018 farm bill, Congress considered the use of matching fund requirement waivers and required USDA to annually report allocations and matching funds in agricultural extension and research programs. Members of Congress may continue to be interested in monitoring how waivers of state matching funds, or the lack of such waivers, is affecting federal fund allocations toward LGIs, and whether the funding allocations are different from those for the LGIs that are not eligible to receive waivers. In May 2024, the House and Senate released proposals for the 2024 farm bill, which include funding reauthorizations for various extension programs and provisions related to both capacity and competitive funding and other provisions, including increased funding for extension at LGIs.

Federal funding supports all three pillars of the agricultural knowledge system at LGIs. Some studies suggest that public returns on federal investments in research and extension are higher than the costs of the investments. In considering future funding levels, Congress may wish to examine additional authorities or requirements on the use of funding within the broader mission of the land-grant university system.

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# Introduction

The Smith-Lever Act of 1914 (7 U.S.C. §§341 et. seq.) created the Agricultural Cooperative Extension System (CES) associated with each land-grant institution (LGI).[1] As amended, this act directs LGIs "to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture, uses of solar energy with respect to agriculture, home economics, and rural energy, and to encourage the application of the same … in cooperation with the United States Department of Agriculture [USDA]."[2] The CES, known simply as *extension*, is now a nationwide, noncredit educational network with programs in every state and U.S. territory.[3] Extension is a cooperative venture between USDA's National Institute of Food and Agriculture (NIFA) and LGIs. Its objective is to deliver practical education in agriculture, science, and engineering to individuals and communities across the United States through research-based knowledge.

This report describes the structure, service delivery, and funding mechanisms of extension. It analyzes funding trends from FY2017 to FY2024. It closes with a discussion of issues of potential congressional interest.

# Background

The foundations of extension date back to the early 1800s with the emergence of agricultural clubs and societies. By 1819, periodicals such as *American Farmer* were fostering a culture of knowledge sharing among farmers, promoting new techniques and best practices.[4] The Morrill Act of 1862 (12 Stat. 503) eventually led to the establishment of 56 LGIs in all 50 states, the District of Columbia, and territories. One of the missions of these new universities was the teaching of agricultural and mechanical arts.[5] The subsequent Morrill Act of 1890 (26 Stat. 417) led to the establishment of 18 historically Black colleges and universities (HBCUs) that belong to the U.S. land-grant university system.[6] The Equity in Educational Land-Grant Status Act of 1994 (P.L. 103-382, §§531-535) added specified tribal colleges and universities (TCUs) to the land-grant system.[7]

Extension offices operate within the main and satellite campuses of LGIs and in field offices in every U.S. jurisdiction. They are in all 50 U.S. states, the District of Columbia, Puerto Rico, Guam, the U.S. Virgin Islands, American Samoa, and the Northern Mariana Islands (see **Figure 1**

[1] A land-grant institution (LGI) is a college or university that receives funds from the federal government or state legislature under the Morrill Acts of 1862, or 1890, or under the Equity in Educational Land-Grant Status Act of 1994. See CRS Report R45897, *The U.S. Land-Grant University System: Overview and Role in Agricultural Research*.

[2] 7 U.S.C. §341.

[3] The term "extension" will be used throughout this report to represent the Cooperative Extension System (CES).

[4] Rose M. Hayden-Smith, "UC's Land-Grant Mission Fuels Nation's Growth, Prosperity," *California Agriculture*, vol. 66, no. 2 (April 2012), pp. 42-45, https://calag.ucanr.edu/Archive/?article=ca.v066n02p42&sharebar.

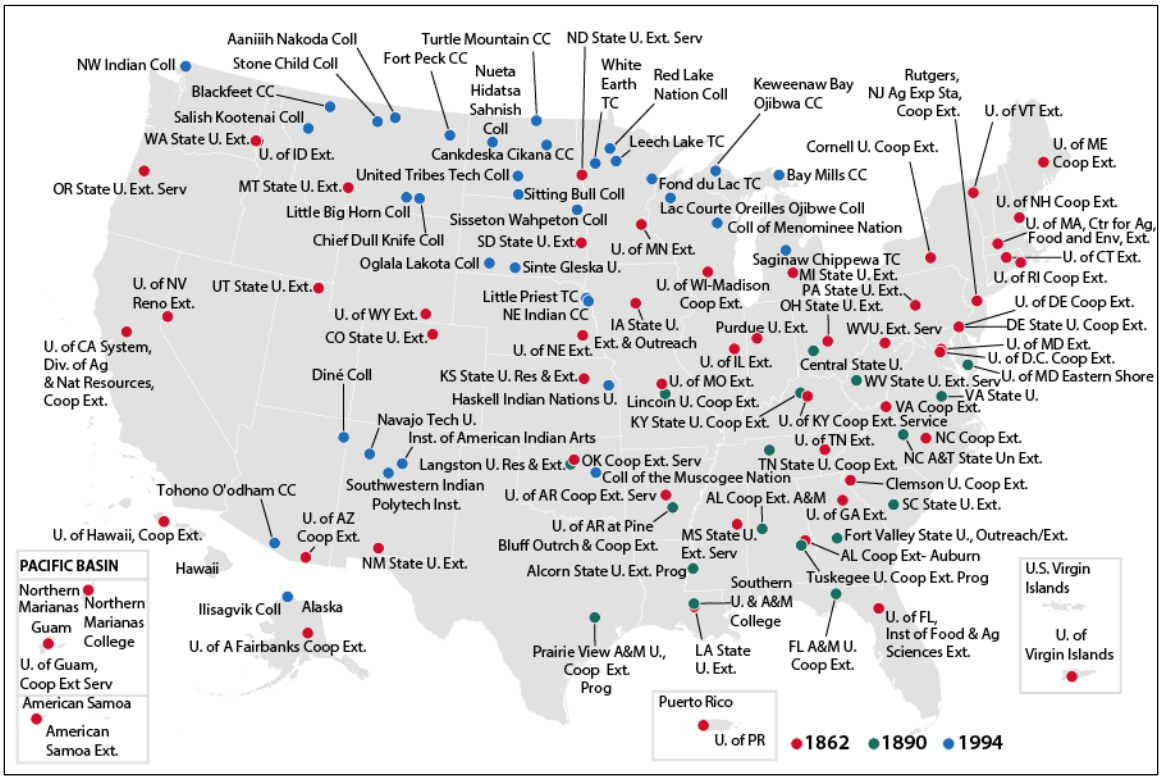
[5] CRS Report R45897, *The U.S. Land-Grant University System: Overview and Role in Agricultural Research*, and Audrey E. H. King and M. Craig Edwards, "The Ever-Evolving Brand of the Land-Grant Institution: A Historical Overview," *Journal of Applied Communications*, vol. 105, no. 4 (2021), article 7, https://newprairiepress.org/cgi/viewcontent.cgi?article=2417&context=jac.

[6] For more information on 1890 Institutions, see CRS In Focus IF11847, *1890 Land-Grant Universities: Background and Selected Issues*.

[7] For more information on 1994 Institutions, see CRS In Focus IF12009, *1994 Land-Grant Universities: Background and Selected Issues*, and Gary A. Halvorson, "The Role of a 1994 Land Grant College," *Rangelands*, vol. 38, no. 1 (February 2016), pp. 14-15, https://www.sciencedirect.com/science/article/pii/S0190052815001376.

for a map). There are over 100 extension programs affiliated with LGIs. As of FY2024, there were 56 extension programs affiliated with 1862 Institutions,[8] 19 affiliated with 1890 Institutions,[9] and 35 affiliated with 1994 Institutions.[10]

**Figure 1. Map of U.S. Extension Programs Located at Land-Grant Institutions**




**Source:** CRS from data available at U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA), "College Partners Directory," https://www.nifa.usda.gov/land-grant-colleges-and-universities-partner-website-directory.

**Note:** Colors of dots indicate years in which statutes establishing given land-grant institutions were enacted.

[8] The Massachusetts Institute of Technology (MIT) is an 1862 LGI. While the U.S. Department of Agriculture (USDA) has confirmed that MIT is eligible to apply for grants that are available only to LGIs, the State of Massachusetts chooses to allocate its federal capacity grants to the University of Massachusetts Amherst, which focuses on the agricultural arts. See letter from Sonny Ramaswamy, Director of USDA National Institute of Food and Agriculture (NIFA), to Laureen Horton, Manager, Grants and Contracts, MIT, April 14, 2016, https://ras.mit.edu/document/land-grant-institution-confirmation-status-letter-april-2016.

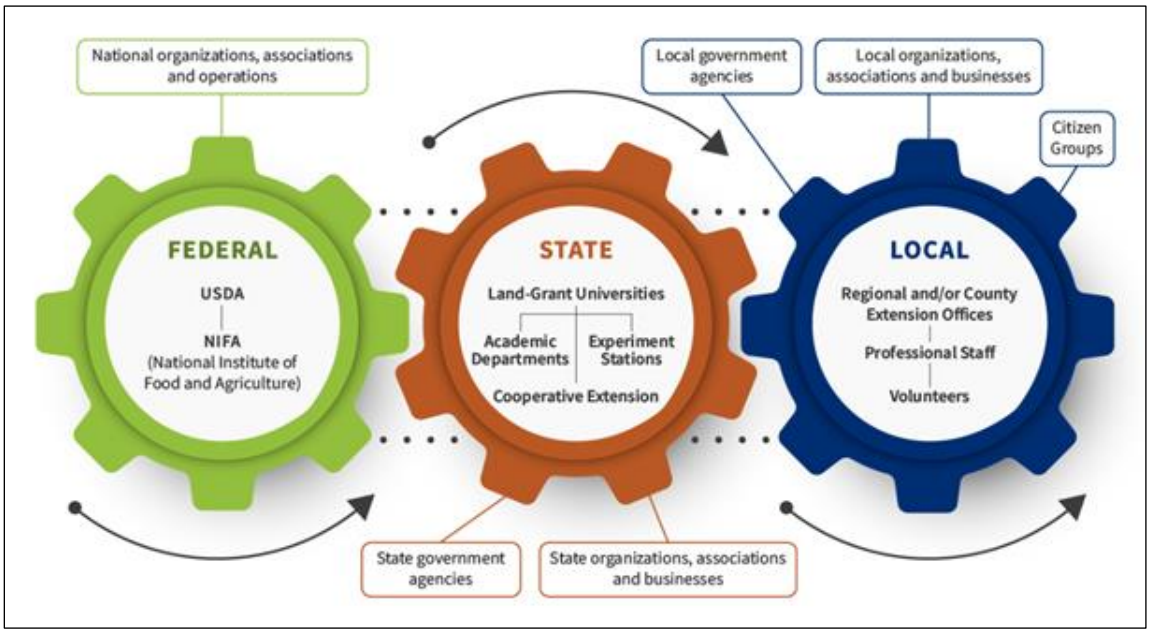
[9] The Alabama CES is the primary outreach and engagement organization for the land-grant mission of Alabama A&M University and Auburn University in cooperation with Tuskegee University. See more at Alabama CES, "About Us," 2024, https://www.aces.edu/blog/category/about-us/. Additionally, the NC Cooperative Extension is the primary extension organization for the land-grant mission of NC State and North Carolina Agricultural and Technical State universities. See more at NC State University, "Extension History and Milestones," https://www.ces.ncsu.edu/extension-history-and-milestones/.

[10] NIFA, "Land-Grant Colleges and Universities," https://www.nifa.usda.gov/about-nifa/how-we-work/partnerships/land-grant-colleges-universities.

## Structure of Extension

As illustrated in **Figure 2**, practical, research-based knowledge is delivered through a three-tiered system of service delivery at the federal, state, and local levels.

**Figure 2. Three-Tiered System of Service Delivery**




**Source:** USDA, NIFA, "Cooperative Extension System," https://www.nifa.usda.gov/about-nifa/how-we-work/extension/cooperative-extension-system.

At the federal level, NIFA distributes funding for extension's work. At the state level, LGIs (1862, 1890, and 1994 Institutions) serve as the primary centers for extension activities. These LGIs receive federal funds, often matched by state funds, to support educational services and initiatives and to pay the salaries of extension workers. Extension agents from LGIs and regional and county offices (sometimes called *field offices*) collaborate with local agricultural producers and community members to implement knowledge from agricultural research. Educational workshops, programs, and consultations are organized to adapt to the specific needs of local communities. Extension educators and specialists from LGIs and field offices provide expertise in areas such as agriculture, family and consumer sciences, food safety, nutrition, youth development (e.g., the 4-H organization), and community development.[11] In this partnership, USDA, through NIFA, provides the comprehensive financial support and direction; LGIs and associated entities, such as the academic departments and state Agricultural Experiment Stations (AESs),[12] supply research, content, and teaching; and field offices help extension workers from LGIs to disseminate knowledge to the public.

[11] NIFA, "Cooperative Extension System," https://www.nifa.usda.gov/about-nifa/how-we-work/extension/cooperative-extension-system.

[12] State Agricultural Experiment Stations (AESs) are scientific research centers that study issues and potential improvements to food production and agribusiness and are located at LGIs or affiliated with one in each state. For more information, see NIFA, "State Agricultural Experiment Stations," https://www.nifa.usda.gov/grants/programs/capacity-grants/state-agricultural-experiment-stations.

## Topics of Coverage

Extension programs primarily focus on informal education, including traditional extension initiatives such as teaching in campus and field classrooms, public schools, and online platforms. Additionally, they integrate extension with research projects to conduct applied or participatory research. Teaching content covers various subjects, including modern agricultural science, technology adoption, business operations, and financial literacy. Extension efforts also include youth education in agriculture and natural resources, often with hands-on learning experiences such as 4-H. According to NIFA, extension services aim to translate scientific findings into practical applications, identify emerging research questions, and promote the application of science and technology to improve U.S. rural and urban agriculture.[13] The methods that extension programs use to disseminate information or instruction vary according to the intended purpose, topic, and audience, and include personalized visits, office calls, telephone consultations, tailored letters, demonstrations, conferences, discussions, immersive field trips, bulletins, leaflets, circulars, and other training meetings.[14]

# Extension Programs at LGIs by Type of Funding

There are two types of funding streams for extension programs: capacity grants and competitive grants. FY2024 enacted appropriations (P.L. 118-42, Consolidated Appropriations Act, 2024 provide a total of $561.7 million for extension activities (see **Table 1**).[15] USDA allocates capacity grants on a noncompetitive basis using predetermined formulas, criteria, and other metrics. In contrast, competitive grants involve a selection process where individuals, LGIs, organizations, and other eligible entities apply for funding by submitting proposals or applications. USDA awards grants after peer review, on the basis of the quality of proposals or the potential impact or alignment with funding priorities of the particular grant program. Some capacity and competitive programs have no requirement to match federal with nonfederal (e.g., state and local) funds, while others have a 100% match requirement.[16]

## Extension Programs Funded Through Capacity Grants

Capacity grants are federal funds provided to specific LGIs, forestry schools, and veterinary schools for research, teaching, and extension. The grants use a statutory formula considering factors such as rural and farm population, number of small farms, total population, and other metrics (see below for each formula). These grants often require nonfederal matching funds, although this requirement may be waived in some circumstances.[17] In FY2024, capacity grant

[13] NIFA, "Extension," https://www.nifa.usda.gov/about-nifa/how-we-work/extension, accessed May 9, 2024.

[14] Jeremy Elliot-Engel, Courtney Crist, and Gordon Jones, "The Power of Extension: Research, Teaching, and Outreach for Broader Impacts," in *Teaching in the University: Learning from Graduate Students and Early-Career Faculty*, ed. Donna Westfall-Rudd, Courtney Vengrin, and Jeremy Elliot-Engel (Blacksburg, VA: Virginia Tech Publishing, 2022), https://pressbooks.lib.vt.edu/universityteaching/chapter/the-power-of-extension-research-teaching-and-outreach-for-broader-impacts/.

[15] The appropriation for FY2024 is Division B of a six-bill minibus (P.L. 118-42) and was enacted on March 9, 2024, following four continuing resolutions. For more information, see CRS Insight IN12158, *Agriculture and Related Agencies: FY2024 Appropriations*.

[16] NIFA, "Matching Requirement," https://www.nifa.usda.gov/matching-requirement. Matching funds must derive from a nonfederal source. This source is typically appropriations from the state legislature but may include others.

[17] Section 7404 of the 2008 farm bill (P.L. 110-246) amended the matching requirements, such that the insular areas and the District of Columbia, respectively, are required to provide matching funds of an amount equal to 50% or more (continued...)

programs for extension activities received $471 million in federal funding. For recent annual appropriations of all capacity and competitive programs for extension activities, see **Table 1**.

## Extension Funding for 1862 Institutions

The Smith-Lever Act of 1914 (38 Stat. 372), as amended, provides capacity grants to 1862 Institutions for extension activities. Smith-Lever Act Section 3(b) and 3(c) capacity grants are distributed on the basis of rural and farm population proportions among states.[18] Matching requirements apply, with federal funds matched on a dollar-for-dollar basis with nonfederal funds, except in the District of Columbia and insular areas, which are subject to matching requirements of at least 50% of the Smith-Lever Act funds they receive.[19] For FY2024, Congress appropriated $325 million for the Smith-Lever Act Section 3(b) and 3(c) programs for 1862 Institutions.

## Extension Funding for 1890 Institutions

The National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA; P.L. 95-113, 7 U.S.C. §§3221-3229) established capacity grants for extension programs at 1890 Institutions, similar to Smith-Lever Act funding for 1862 Institutions.[20] The 2008 farm bill (P.L. 110-246) modified the funding formula, requiring allocation of at least 20% of the total annual appropriation under the Smith-Lever Act for Section 3(b) and 3(c) grants to 1890 Institutions. This funding requires dollar-for-dollar matching from nonfederal sources.[21] USDA may waive or modify the matching funds requirement under certain circumstances, for example, if a state is unlikely to meet it.[22] Congress appropriated $72 million for extension services at 1890 Institutions for FY2024.

## The Food and Nutrition Education or Expanded Food and Nutrition Education Program

Established under NARETPA within Smith-Lever Act Section 3(d), the Expanded Food and Nutrition Education Program (EFNEP; 7 U.S.C. §3175) operates as an extension capacity grant program. EFNEP capacity grants fund education efforts that emphasize nutrition education for

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of the Smith-Lever Act funds they receive. These amendments also authorize the Secretary of Agriculture to waive the matching requirement of an insular area or the District of Columbia for any fiscal year if the Secretary determines that its government is unlikely to meet the matching requirement for that fiscal year.

[18] Smith-Lever 3(b) and (c) capacity funds for 1862 LGI extension programs are distributed on the basis of the FY1962 distribution of extension funds, according to the following formula: 20% equally to each state, 40% in amounts proportionate to the relative rural population of each state to the total rural population of all states; and 40% in amounts proportionate to the relative farm population of each state to the total farm population of all states.

[19] See NIFA, "Smith-Lever Act Capacity Grant," https://www.nifa.usda.gov/grants/programs/smith-lever-act-capacity-grant.

[20] Capacity funds for the extension services at 1890 Institutions are distributed according to the following formula: 20% equally to each state, 40% 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% 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.

[21] Congress amended the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA) through the Agricultural Research, Extension, and Education Reform Act of 1998 (AREERA) to require matching funding. This matching requirement increased from 30% in FY2000 to 100% from FY2007 onward.

[22] For more information on waiver requirements to receive federal funds, see CRS In Focus IF11847, *1890 Land-Grant Universities: Background and Selected Issues*, and Association of Public and Land-Grant Universities, "Land-Grant but Unequal," policy brief, September 2013, https://www.aplu.org/library/land-grant-but-unequal-state-one-to-one-match-funding-for-1890-land-grant-universities/file.

low-income individuals and families.[23] Congress appropriated $70 million to this program for FY2024.

### The Renewable Resources Extension Act

The Renewable Resources Extension Act program (RREA; 16 U.S.C. §§1671 et seq.) was established by the Renewable Resources Extension Act of 1978 (P.L. 95-306). RREA funds extension efforts that aim to help forest and range landowners and managers make informed decisions based on research.[24] These decisions involve managing various resources such as vegetation, water, fisheries, wildlife, soil, and recreation.[25] Congress appropriated $4 million to this program for FY2024.

## Extension Programs Funded Through Competitive Grants

NIFA awards competitive grants directly to specific extension projects proposed by eligible applicants, determined through a national peer-review process. NIFA's primary competitive grants program is the Agriculture and Food Research Initiative (AFRI), established by the 2008 farm bill and reauthorized in subsequent farm bills.[26] Grants from AFRI support extension, research, and education activities in six priority areas outlined in statute: plant health, animal health, food safety, bioenergy, agriculture systems, and economics.[27] The 2008 farm bill established the requirement that AFRI allocate at least 30% of its total funding to integrate extension activities with research and education activities. Integrated projects include at least two of the three functions of the land-grant university system (i.e., research, teaching, and extension), including collaborations between research and extension initiatives within a project.[28] In FY2024, competitive grant programs for extension activities received $83.1 million in federal funding.

[23] Expanded Food and Nutrition Education Program (EFNEP) capacity funds for 1862 and 1890 Institutions are distributed according to the following formula: 4% designated for USDA administrative expenses—a base amount assigned to 1862 Institutions, reflecting their FY1981 allocation—$100,000 allocated to each 1862 and 1890 Institution, and 15% of funds exceeding FY2007 appropriations directed to 1890 Institutions. This distribution is based on the ratio of the population living at or below 125% of the federal income poverty guidelines in the state where the 1890 Institution is situated, compared with the total poverty threshold population in all states with 1890 Institutions. The remaining funds are distributed to each state, determined by the ratio of the poverty threshold population in that state to the total poverty threshold population in all states. See NIFA, "Expanded Food and Nutrition Education Program (EFNEP)," https://www.nifa.usda.gov/grants/programs/capacity-grants/efnep/expanded-food-nutrition-education-program.

[24] According to NIFA, "States are eligible for funds appropriated under this Act according to the respective capabilities of their private forests and rangelands for yielding renewable resources and relative needs for such resources identified in the periodic Renewable Resource Assessment provided for in Section 3 of the Forest and Rangeland Renewable Resources Planning Act of 1974 and the periodic appraisal of land and water resources provided for in Section 5 of the Soil and Water Resources Conservation Act of 1977." For more information on how funds are allocated for the program, see NIFA FY2024 Request for Applications, https://www.nifa.usda.gov/sites/default/files/2023-10/FY24-RREA-RFA-508-MOD1-P.pdf.

[25] NIFA, "Renewable Resources Extension Act Capacity Grant," https://www.nifa.usda.gov/grants/programs/capacity-grants/renewable-resources-extension-act-capacity-grant.

[26] 7 U.S.C. §3157(b). See USDA, "Agriculture and Food Research Initiative (AFRI)," https://www.nifa.usda.gov/grants/programs/agriculture-food-research-initiative-afri.

[27] 7 U.S.C. §3157(b)(2).

[28] Funding for all integrated projects is provided on a competitive basis. Examples include the Integrated Research, Education, and Extension (IREE) Competitive Grants Program and the Organic Agriculture Research and Extension Initiative (OREI). See NIFA, "Integrated Programs Application Information," https://www.nifa.usda.gov/integrated-programs-application-information.

**Table 1** lists extension programs funded by NIFA through competitive grants and the appropriations they received in recent years.

## Tribal Colleges Extension Program Capacity Applications or Extension Services at 1994 Institutions

The Equity in Educational Land-Grant Status Act of 1994 (P.L. 103-382, 7 U.S.C. §301 note), as amended by the Agricultural Research, Extension, and Education Reform Act of 1998 (AREERA; P.L. 105-185), established the Tribal Colleges Extension Program: Capacity Applications. The program funds projects at 1994 Institutions that aim to establish extension offices for their reservation communities; 1994 Institutions need to apply for these grants, which are awarded on a competitive basis for capacity-like purposes.[29] These extension offices collaborate with reservation communities to develop programs addressing local needs, aiming for diversified and targeted outreach.[30] Congress appropriated $11 million to this program for FY2024.

## The Facilities Improvements at 1890 Institutions

The Food, Conservation, and Energy Act of 2008 (P.L. 110-246) established the Facilities Grants Program (7 U.S.C. §3222b). The 1890 Facilities Grants Program provides funding for 1890 Institutions to acquire and enhance facilities and equipment related to food, agriculture, natural resources, and human sciences, including libraries.[31] Congress appropriated $21.5 million to this program for FY2024.

## The Rural Health and Safety Education Program or Rural Health and Safety Education Competitive Grants Program

The Rural Development Act of 1972 (P.L. 92-419), as amended, established the Rural Health and Safety Education Competitive Grants program (RHSE; 7 U.S.C. §2662(i)). RHSE funds projects that aim to develop rural health leadership and to support health education (for both individuals and families) and farm safety.[32] Congress appropriated $4 million to this program for FY2024.

## The Food Animal Residue Avoidance Database

The Food Animal Residue Avoidance Database (FARAD) program (7 U.S.C. §7642) was established by AREERA (P.L. 105-185). FARAD collaborates with the Food and Drug Administration (FDA) to ensure food safety by providing a computer-based system that offers practical information on avoiding residues in animal agriculture.[33] Congress appropriated $2 million to this program for FY2024.

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[29] See NIFA, "Tribal Colleges Extension Program - Capacity Applications," https://www.nifa.usda.gov/grants/funding-opportunities/tribal-colleges-extension-program-capacity-applications.

[30] Ibid.

[31] See NIFA, "1890 Facilities Grants Program," https://www.nifa.usda.gov/grants/funding-opportunities/1890-facilities-grants-program.

[32] See NIFA, "Rural Health and Safety Education Competitive Grants Program," https://www.nifa.usda.gov/grants/funding-opportunities/rural-health-safety-education-competitive-grants-program.

[33] Food residues in animal agriculture are compounds found in edible tissues from food animals, including drugs, pesticides, metabolites, and other substances formed during food production. For more information, see Edmond J. Riviere, Arthur L. Craigmill, and Stephen F. Sundlof, "Food Animal Residue Avoidance Databank (FARAD): An Automated Pharmacologic Databank for Drug and Chemical Residue Avoidance," *Journal of Food Protection*, vol. 49, (continued...)

## The Women and Minorities in Science, Technology, Engineering, and Mathematics Fields Program

The 2008 farm bill established the Women and Minorities in Science, Technology, Engineering, and Mathematics (STEM) Fields Program (7 U.S.C. §5925(d)(7)). The program funds projects that aim to support research, teaching, and extension activities that foster participation of women and minorities from rural areas in STEM, with a focus on K-14 students (kindergarten through 12th grade plus two years of postsecondary schooling; e.g., vocational technical institutions or community or junior colleges).[34] Congress appropriated $2 million to this program for FY2024.

## The Food Safety Outreach Program or National Food Safety Outreach Program

The Food Safety Outreach Program (FSOP; 7 U.S.C. §7625) was established by the FDA Food Safety Modernization Act of 2010 (FSMA; P.L. 111-353). FSOP funds projects that focus on food safety training, extension, education, outreach, and technical assistance and that aim to improve public health.[35] Congress appropriated $10 million to this program for FY2024.

## The Food and Agriculture Service Learning Program

AREERA (P.L. 105-185) established the Food and Agriculture Service Learning Program (7 U.S.C. §7633). The program funds projects that aim to increase children's knowledge of agriculture and improve their nutritional health.[36] Congress appropriated $1 million to this program for FY2024.

## The Farm and Ranch Stress Assistance Network

The 2018 farm bill established the Farm and Ranch Stress Assistance Network (7 U.S.C. §5936). The program funds projects that aim to maintain a network connecting individuals engaged in farming, ranching, and other agriculture-related occupations to stress assistance programs.[37] Congress appropriated $10 million to this program for FY2024.

## The Farm Safety and Youth Farm Safety Education Programs or Youth Farm Safety Education and Certification Program

The Youth Farm Safety Education and Certification program (7 U.S.C. §343(d)) is authorized under Section 3(d) of the Smith-Lever Act of 1914, as amended (7 U.S.C. §§341 et seq.). The

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no. 10 (October 1986), pp. 826-830, https://doi.org/10.4315/0362-028x-49.10.826. Although codified by the 1998 farm bill, FARAD existed since 1985 as a pilot extension project within four universities. Also, see NIFA, "Food Animal Residue Avoidance Databank," https://www.nifa.usda.gov/grants/programs/animal-programs/food-animal-residue-avoidance-databank.

[34] See NIFA, "Women and Minorities in Science, Technology, Engineering, and Mathematics Fields Program," https://www.nifa.usda.gov/grants/funding-opportunities/women-minorities-science-technology-engineering-mathematics-fields.

[35] See NIFA, "Food Safety Outreach Program," https://www.nifa.usda.gov/grants/programs/food-safety/food-safety-outreach-program.

[36] See NIFA, "Food and Agriculture Service Learning Program," https://www.nifa.usda.gov/grants/funding-opportunities/food-agriculture-service-learning-program.

[37] See NIFA, "Farm and Ranch Stress Assistance Network," https://www.nifa.usda.gov/grants/programs/farm-ranch-stress-assistance-network-frsan.

program funds projects that aim to provide nonformal education in effective farm safety initiatives.[38] Congress appropriated $5 million to this program for FY2024.

### The New Technologies for Agricultural Extension Program

The 2008 farm bill established the New Technologies for Agricultural Extension program under Section 3(d) of the Smith-Lever Act of 1914 (7 U.S.C. §§341 et seq.). The program provides funds aiming to increase the capability of extension programs to adopt new and innovative technology applications.[39] Congress appropriated $1.6 million to this program for FY2024.

### The Children, Youth, and Families at Risk Program

The Children, Youth, and Families at Risk program was established under Section 3(d) of the Smith-Lever Act of 1914, as amended (7 U.S.C. §343(d)). The program provides funds for the development and delivery of educational programs aiming to address the specialized needs of at-risk youth and families.[40] Congress appropriated $8 million to this program for FY2024.

### The Federally Recognized Tribes Extension Program

The Federally Recognized Tribes Extension Program (FRTEP) was established with the 1990 farm bill (P.L. 101-624) and authorized under Section 3(d) of the Smith-Lever Act of 1914, as amended (7 U.S.C. §343(d)). FRTEP provides funds for extension programs on Indian reservations and in tribal jurisdictions.[41] Congress appropriated $4 million to this program for FY2024.

## Extension Funding

Total federal appropriations for extension activities (capacity and competitive programs and federal administration expenses) gradually increased, in current-year dollars, from $477.4 million in FY2017 to $561.7 million in FY2024 (**Table 1**).[42] However, adjusting for inflation shows that the total has decreased over time, from $582.8 million in FY2017 to $561.7 million in FY2024 (**Figure 3**). Annual inflation-adjusted appropriations for capacity grants have decreased, from $509.8 million in FY2017 to $471 million in FY2024. Annual inflation-adjusted appropriations

[38] See NIFA, "Youth Farm Safety Education and Certification Program," https://www.nifa.usda.gov/grants/funding-opportunities/youth-farm-safety-education-certification-program.

[39] See NIFA, "New Technologies for Ag Extension," https://www.nifa.usda.gov/grants/programs/environmental-resource-economics-programs/new-technologies-ag-extension.

[40] See NIFA, "Children, Youth and Families at Risk (CYFAR)," https://www.nifa.usda.gov/grants/programs/4-h-positive-youth-development/4-h-access-equity-opportunity/children-youth-families-risk-cyfar.

[41] See NIFA, "Federally-Recognized Tribes Extension Program," https://www.nifa.usda.gov/grants/programs/nifa-tribal-programs/federally-recognized-tribes-extension-program.

[42] **Table 1** includes the Agriculture in the K-12 Classroom (AITC) grant program, which was established by NARETPA, as amended (7 U.S.C. §3152(j)). The program funds educational activities that aim to support agricultural literacy by providing resources, training, and support to schools, educators, and volunteers in K-12 classes. Although AITC is a competitive grant program, it is listed under "Other Expenses" by NIFA and in congressional appropriation documents. Also, the Enhancing Agricultural Opportunities for Military Veterans (AgVets) Program, a pilot program that provides grants to nonprofit organizations for training programs and services for farming and ranching opportunities for military veterans, was first funded in FY2024 Enacted Appropriation. Section 760 of the Consolidated Appropriations Act, 2017 (H.R. 244) provides funds for the program. For more information, see NIFA, "Enhancing Agricultural Opportunities for Military Veterans (AgVets)," https://www.nifa.usda.gov/grants/programs/enhancing-agricultural-opportunities-military-veterans-agvets.

for competitive grants fluctuated but generally increased over the same period, from approximately $62.7 million in FY2017 to $83.1 million in FY2024.

## Table 1. Federal Appropriations for Extension Activities, FY2017-FY2024

Dollars in millions

| Program | *U.S. Code* | FY2017 | FY2018 | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 | FY2024 |
|---|---|---|---|---|---|---|---|---|---|
| **Total, Extension Activities** | | **477.4** | **483.5** | **505.6** | **526.6** | **538.5** | **550.7** | **565.5** | **561.7** |
| **Capacity Grants** | | | | | | | | | |
| **Total** | | **417.6** | **417.6** | **436.7** | **446.1** | **451.1** | **459.1** | **471.1** | **471.0** |
| Smith-Lever Section 3(b) and 3(c) programs at 1862 Institutions | 7 U.S.C. §§343(b), 343(c) | *300.0* | *300.0* | *315.0* | *315.0* | *315.0* | *320.0* | *325.0* | *325.0* |
| Extension Services at 1890 Institutions | 7 U.S.C. §3221 | *45.6* | *45.6* | *48.6* | *57.0* | *62.0* | *65.0* | *72.0* | *72.0* |
| Renewable Resources Extension Act | 16 U.S.C. §§1671 et seq. | *4.1* | *4.1* | *4.1* | *4.1* | *4.1* | *4.1* | *4.1* | *4.0* |
| Smith-Lever Section 3(d): Food and Nutrition Education | 7 U.S.C. §343(d) | *67.9* | *67.9* | *69.0* | *70.0* | *70.0* | *70.0* | *70.0* | *70.0* |
| **Competitive Grants** | | | | | | | | | |
| **Total** | | **51.4** | **57.6** | **60.6** | **72.2** | **79.1** | **82.5** | **85.3** | **83.1** |
| Extension Services at 1994 Institutions | 7 U.S.C. §343(b)(3) | *4.4* | *6.4* | *6.4* | *8.0* | *8.5* | *9.5* | *11.0* | *11.0* |
| Facilities Improvements at 1890 Institutions | 7 U.S.C. §3222b | *19.7* | *19.7* | *19.7* | *20.5* | *21.5* | *21.5* | *21.5* | *21.5* |
| Rural Health and Safety Education | 7 U.S.C. §2662(i) | *3.0* | *3.0* | *3.0* | *4.0* | *4.0* | *5.0* | *5.0* | *4.0* |
| Food Animal Residue Avoidance Database | 7 U.S.C. §7642 | *1.3* | *2.5* | *2.5* | *2.5* | *2.5* | *2.5* | *2.5* | *2.0* |
| Women and Minorities in STEM Fields | 7 U.S.C. §5925 | *0.4* | *0.4* | *0.4* | *0.4* | *0.4* | *1.0* | *2.0* | *2.0* |
| Food Safety Outreach | 7 U.S.C. §7625 | *5.0* | *7.0* | *8.0* | *8.0* | *10.0* | *10.0* | *10.0* | *10.0* |
| Food & Agricultural Service Learning | 7 U.S.C. §7633 | — | *1.0* | *1.0* | *1.0* | *2.0* | *2.5* | *2.0* | *1.0* |

| Program | *U.S. Code* | FY2017 | FY2018 | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 | FY2024 |
|---|---|---|---|---|---|---|---|---|---|
| Farm and Ranch Stress Assistance Network | 7 U.S.C. §5936 | — | — | *2.0* | *10.0* | *10.0* | *10.0* | *10.0* | *10.0* |
| Farm Safety and Youth Farm Safety Education Programs | 7 U.S.C. §343(d) | *4.6* | *4.6* | *4.6* | *4.6* | *5.0* | *5.0* | *5.0* | *5.0* |
| New Technologies for Agricultural Extension | 7 U.S.C. §343(d) | *1.6* | *1.6* | *1.6* | *1.6* | *3.6* | *3.6* | *3.6* | *1.6* |
| Children, Youth, and Families at Risk | 7 U.S.C. §343(d) | *8.4* | *8.4* | *8.4* | *8.4* | *8.4* | *8.4* | *8.4* | *8.0* |
| Federally Recognized Tribes Extension Program | 7 U.S.C. §343(d) | *3.0* | *3.0* | *3.0* | *3.2* | *3.2* | *3.5* | *4.3* | *4.0* |
| **Other Expenses** | | | | | | | | | |
| **Total** | | **8.4** | **8.3** | **8.3** | **8.3** | **8.3** | **9.1** | **9.1** | **7.6** |
| Agriculture in the K-12 Classroom[a] | 7 U.S.C. §3152(j) | *0.6* | *0.6* | *0.6* | *0.6* | *0.6* | *1.0* | *1.0* | *0.5* |
| Other Federal Administration for Extension Activities | | *7.8* | *7.8* | *7.8* | *7.8* | *7.8* | *8.1* | *8.1* | *7.1* |

**Source:** Compiled by CRS from National Institute of Food and Agriculture (NIFA), congressional budget justification documents, extension activities tables from FY2017 to FY2024 at https://www.usda.gov/cj.

**Notes:** Data reflect appropriated funding levels, not obligations or outlays. Values are not adjusted for inflation. STEM = science, technology, engineering, and mathematics.

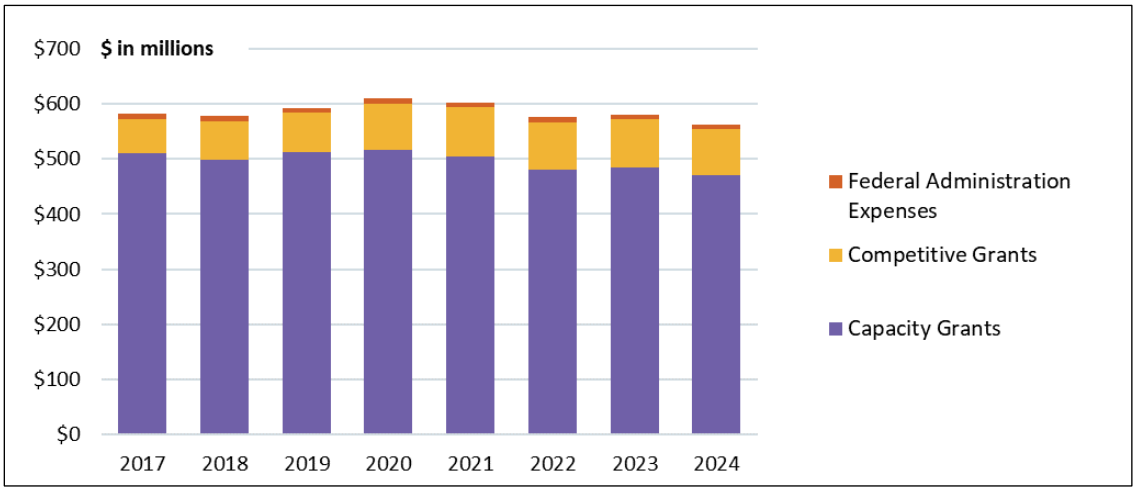
a. Although Agriculture in the K-12 Classroom is a competitive grant program, it is offered as a cooperative agreement with the eligible entity that receives the funding and is listed under "Other Expenses" by NIFA and in congressional appropriation documents.

## Capacity Versus Competitive Funding for Extension Activities

**Figure 3** illustrates federal funding on extension categorized by type and year. The amounts for capacity grants decreased gradually from $509.8 million in FY2017 to $471 million in FY2024, in inflation-adjusted dollars. Competitive grants increased from $62.7 million in FY2017 to $88.5 million in FY2021, then decreased to $83.1 million by FY2024. Federal expenses in administering extension activities decreased from $10.3 million in FY2017 to $7.6 million in FY2024, in inflation-adjusted dollars. Overall, total extension funding fluctuated since FY2017, starting at $582.8 million in FY2017, peaking at $609.5 million in FY2020, and then decreasing to $561.7 million by FY2024, in inflation-adjusted dollars.

**Figure 3. Federal Funding for Extension Activities by Type and Year**

Dollars in millions, adjusted for inflation




**Source:** Compiled by CRS from National Institute of Food and Agriculture (NIFA), congressional budget justification documents under extension activities tables from FY2017 to FY2024.

**Notes:** Data are inflation-adjusted to FY2023 dollars using the gross domestic product (GDP) chained price index for FY2017-2022, and inflation-adjusted dollar amounts for FY2023 are calculated using the FY2024 estimated GDP chained price index, May 2024, U.S. Office of Management and Budget, "Historical Tables: Table 10.1—Gross Domestic Product and Deflators Used in the Historical Tables: 1940–2029," https://www.whitehouse.gov/wp-content/uploads/2024/03/hist10z1_fy2025.xlsx.

# Considerations for Congress

Since the establishment of the land-grant university system in 1862, Congress has continued to shape and support the central role of LGIs in agricultural research, teaching, and extension. Areas of potential congressional interest regarding extension include the balance between capacity and competitive funding, differences in the allocation of funds among LGIs, the effectiveness of matching fund waivers and their impact on the scope of topics covered by extension services and their outreach, and the balance between extension and research funding.

## Balance Between Capacity and Competitive Funding

An ongoing debate about federal funding for extension activities concerns the allocation of federal resources between capacity grants and competitive grants, mirroring a similar discourse

taking place in agricultural research at LGIs.[43] The balance between these two grant types influences who provides the outreach and training to farmers, ranchers, and local communities.[44] Advocates of competitive, peer-reviewed funding processes for extension programs assert that there are broader candidate pools (since more entities, not just LGIs, are eligible to apply) with more diverse expertise in providing extension services and that financial support is awarded on the basis of the merits of the projects and not because of predetermined criteria.[45] Additionally, USDA claims that because of the rigorous nature of the peer-review process, only the highest quality proposals are selected for funding from a large pool of institutions and organizations.[46] Proponents of capacity grants state that stable funding enables long-term planning and investments into extension activities.[47] This is because capacity funding is determined using census-based formulas and is funded through annual appropriations, offering predictability to the states and their LGIs each year.[48] Additionally, some claim that a nationally competitive grant process tends to underfund multidisciplinary projects that aim to address local and state-specific issues because competitive grants tend to encourage applicants to focus on national concerns rather than more local topics.[49] According to a 2017 NIFA external evaluation study, when extension and research activities are integrated, a capacity funding model is superior to a competitive funding model because the former leverages federal dollars from various nonfederal sources, including state, local/county, nonprofit, or corporate funding.[50]

## Differences in Funding Between LGI Types

Differences in funding between types of LGIs, particularly capacity funding, can impact the development and spread of agricultural knowledge. Funding also affects the focus of extension topics, how various institutions cater to their specific audiences, and the resources allocated for extension activities and training.[51] Additionally, differences in funding among the LGI types may

[43] U.S. Congress, House Committee on Agriculture, Subcommittee on Conservation, Research, and Biotechnology, *A Review of Title VII: USDA Implementation of Research Programs*, March 23, 2023, https://agriculture.house.gov/calendar/eventsingle.aspx?EventID=7577, and U.S. Congress, Senate Committee on Agriculture, Nutrition, and Forestry, *Farm Bill 2023: Research Programs*, December 6, 2022, https://www.agriculture.senate.gov/hearings/farm-bill-2023-research-programs. Several bills have been introduced during the 118th Congress regarding capacity and competitive funding for the different extension programs. Among them are H.R. 5622, H.R. 4586, H.R. 7920, H.R. 6379, and H.R. 5246. Certain provisions from these bills can be found in the House discussion draft of the 2024 Farm, Food, and National Security Act of 2024 (2024 farm bill) at https://agriculture.house.gov/uploadedfiles/discussion_draft_ffns.pdf. Similar provisions regarding capacity and competitive funding toward extension programs are also found in the Senate discussion draft of the Rural Prosperity and Food Security Act at https://www.agriculture.senate.gov/imo/media/doc/final_research.pdf.

[44] For more information on the impact of capacity and competitive grants, see Simon Tripp et al., *Quantitative and Qualitative Review of NIFA Capacity Funding*, TEConomy Partners, LLC, March 2017, https://www.nifa.usda.gov/resource/nifa-capacity-funding-review-teconomy-final-report.

[45] Wallace E. Huffman et al., "Winners and Losers: Formula Versus Competitive Funding of Agricultural Research," *Choices*, vol. 21, no. 4 (2006), https://www.choicesmagazine.org/2006-4/grabbag/2006-4-13.htm.

[46] NIFA, "Competitive (AFRI and Non-AFRI)," https://www.nifa.usda.gov/grants/programs/competitive-AFRI-nonAFRI.

[47] Simon Tripp et al., *Quantitative and Qualitative Review of NIFA Capacity Funding*, TEConomy Partners, LLC, March 2017, https://www.nifa.usda.gov/resource/nifa-capacity-funding-review-teconomy-final-report.

[48] Ibid.

[49] Wallace E. Huffman and Robert E. Evenson, "Do Formula or Competitive Grant Funds Have Greater Impact on State Agricultural Productivity," *American Journal of Agricultural Economics*, vol. 88, no. 4 (2006), pp. 783-798.

[50] Simon Tripp et al., *Quantitative and Qualitative Review of NIFA Capacity Funding*, TEConomy Partners, LLC, March 2017, https://www.nifa.usda.gov/resource/nifa-capacity-funding-review-teconomy-final-report.

[51] Wallace E. Huffman et al., "Winners and Losers: Formula Versus Competitive Funding of Agricultural Research," *Choices*, vol. 21, no. 4 (2006), https://www.choicesmagazine.org/2006-4/grabbag/2006-4-13.htm.

have negative consequences for minority applicants.[52] **Table 2** outlines some differences in federal extension capacity grant appropriations among LGI types in FY2024. In that fiscal year, 1890 Institutions received 22% ($72 million) of the appropriations provided for extension capacity grants at 1862 Institutions. Similarly, 1994 Institutions received approximately 3% of the funds provided to 1862 Institutions.

**Table 2. FY2024 Federal Extension Capacity Grant Appropriations by Institution Type**

| | 1862 Institutions | 1890 Institutions | 1994 Institutions |
|---|---|---|---|
| Funding Program | Smith-Lever Section 3(b) and 3(c) programs | National Agricultural Research, Extension, and Teaching Policy Act of 1977 | Tribal Colleges Extension Program |
| Total Appropriation | $325 million | $72 million | $11 million |
| Total Number of Institutions | 57 | 19 | 35 |
| Average Appropriations per Institution | $5.7 million | $3.7 million | $0.3 million |

**Source:** CRS, using appropriations acts and conference reports from Consolidated Appropriations Act, 2024 (P.L. 118-42), Division B, pp. 9-10.

Some stakeholders have noted that the funding differences can be attributed to variations in LGI size (number of students, programs, degrees) and their regional context.[53] Others advocate for more parity in funding levels. For example, the American Indian Higher Education Consortium, a nonprofit group representing TCUs, has consistently advocated for increased appropriations for 1994 Institutions, framing the funding differences with 1862 Institutions as an inequity.[54]

## Matching Fund Waivers

Federal capacity grants for the different LGIs generally require one-to-one nonfederal matching funds as a way to encourage states to provide funding for those institutions. However, current law permits USDA to waive up to 50% of the matching requirement for 1890 LGIs if the state is unlikely to provide sufficient funds to match the federal funds. The option of waiving nonfederal matching funds within the 1890 Institutions was intended to address persistent concerns that these institutions were continually unsuccessful in obtaining federal funding because they were unable to obtain complete state matching funds.[55]

[52] Ibid.

[53] For example, 1862 and 1890 land-grant universities located in the South encounter comparable agronomic, climatic, and social conditions, compared with 1862 and 1890 land-grant universities outside of the South, which experience distinct contexts. See more in Norbert L. W. Wilson et al., "The Distribution of Competitive Research Grants from the National Institute for Food and Agriculture: A Comparison of 1862 Land Grant Universities, 1890 Land Grant Universities, and Other Institutions," *Applied Economic Perspectives and Policy*, vol. 46, no. 1 (March 2024), pp. 76-94, https://doi.org/10.1002/aepp.13413.

[54] American Indian Higher Education Consortium, *Fiscal Year 2024/25 Agriculture Appropriations Requests: Tribal Colleges and Universities*, https://webassets.aihec.org/Policy-Advocacy/FY2022%20AppropriationsFunding%20Requests/FY2025_TCUs_Land%20Grant%202.pdf.

[55] For further exploration of this topic, see CRS In Focus IF11847, *1890 Land-Grant Universities: Background and Selected Issues*, and Association of Public and Land-Grant Universities, "Land-Grant but Unequal," policy brief, September 2013, https://www.aplu.org/library/land-grant-but-unequal-state-one-to-one-match-funding-for-1890-land-grant-universities/file.

While a waiver allows an 1890 Institution to receive its full allocation of federal funding, such a waiver may reduce the total public support for the institution (combined federal and state funding) compared with what it would have received if a complete match had been provided.[56] Also, although waivers for matching funds allow for federal funding of 1890 Institutions without complete state funding, they may increase disparities in total funding provided between the 1890 and 1862 Institutions. The 2018 farm bill (7 U.S.C. §3221(a)) established a transparency requirement for USDA to report annually the allocations made to, and matching funds received by, 1890 Institutions and 1862 Institutions for agricultural extension programs. The new transparency requirement aimed to encourage full state matching funds. Data from 2019 to 2022 show that 42% of the 1890 Institutions (8 of 19) have received full nonfederal matching funds (**Table 3**).[57]

In September 2023, the Secretaries of Education and Agriculture sent letters to 16 governors, emphasizing that, over 30 years, they calculated a more than $12 billion cumulative funding disparity between the 1890 Institutions and their 1862 peers in their states.[58] These letters highlighted the underfunding of 1890 LGIs and urged governors to rectify the situation, bringing up the importance of equitable funding in line with the Second Morrill Act of 1890.[59]

**Table 3. 1890 Land-Grant Universities Extension Funding**

FY2019-2022

| State | Institution | Total to State | Match Requirement | Total Waiver Requested | State Actual Match Total | State Percentage Match |
|---|---|---|---|---|---|---|
| **AL** | Alabama A&M University | $10,685,002 | $10,685,002 | $0 | $10,685,002 | 100% |
| **AL** | Tuskegee University | $10,687,920 | $10,687,920 | $2,049,868 | $8,638,052 | 80% |

[56] In one example, from 2000 to 2017, Lincoln University in Missouri used more than $43 million in university resources to fully fund or supplement state matching funds to meet the 50% waiver requirement to receive federal funds. The university ceased providing these funds in 2018 because of competing priorities. In 2022, for the first time since Congress required nonfederal matching funds for 1890 capacity grants, the state legislature provided the full match. Rebecca Rivas, "Lincoln University Poised to Receive Full State Match for Land-Grant Funding," *Missouri Independent*, May 6, 2022, https://www.lincolnu.edu/News/2022/05/land-grant-full-funding.html#:~:text=Lincoln%20University%20Poised%20To%20Receive%20Full%20State%20Match%20for%20Land%2Dgrant%20Funding,-Contact&text=Missouri%20lawmakers%20took%20the%20historic, federal%20land%2Dgrant%20funding%20available.

[57] As of May 2024, the Farm, Food, and National Security Act of 2024 House discussion draft and the Rural Prosperity and Food Security Act Senate discussion draft for the 2024 farm bill (available at https://agriculture.house.gov/uploadedfiles/discussion_draft_ffns.pdf and https://www.agriculture.senate.gov/imo/media/doc/final_research.pdf, respectively) both include provisions regarding extension funding at 1890 Institutions. One of the provisions would increase the authorization of appropriations for extension at 1890 Institutions to no less than 40% (currently 20%) of the appropriations allocated under the Smith-Lever Act to 1862 Institutions (Section 7110 in the House discussion draft and Section 7108 in the Senate discussion draft).

[58] U.S. Department of Education, "Secretaries of Education, Agriculture Call on Governors to Equitably Fund Land-Grant HBCUs," press release, September 18, 2023, https://www.ed.gov/news/press-releases/secretaries-education-agriculture-call-governors-equitably-fund-land-grant-hbcus.

[59] For more information, see letters from Miguel Cardona, U.S. Secretary of Education, and Thomas J. Vilsack, U.S. Secretary of Agriculture, to state governors, September 18, 2023, https://sites.ed.gov/whhbcu/files/2023/09/Secretary-letter-1890.pdf.

| State | Institution | Total to State | Match Requirement | Total Waiver Requested | State Actual Match Total | State Percentage Match |
|---|---|---|---|---|---|---|
| **AR** | University of Arkansas at Pine Bluff | $9,376,889 | $6,884,384 | $681,838 | $8,695,051 | 92% |
| **DE** | Delaware State University | $5,253,880 | $5,253,880 | $0 | $5,253,880 | 100% |
| **FL** | Florida A&M University | $9,304,355 | $9,304,355 | $4,544,962 | $6,000,526 | 63% |
| **GA** | Fort Valley State University | $12,660,565 | $12,660,565 | $316,860 | $12,343,705 | 97% |
| **KY** | Kentucky State University | $15,698,950 | $15,698,950 | $0 | $15,698,950 | 100% |
| **LA** | Southern University | $8,149,505 | $8,149,505 | $0 | $8,149,505 | 100% |
| **MD** | University of Maryland Eastern Shore | $6,617,887 | $6,617,887 | $1,683,219 | $4,934,668 | 73% |
| **MO** | Lincoln University | $16,614,509 | $16,614,509 | $5,877,707 | $10,736,802 | 63% |
| **MS** | Alcorn State University | $9,699,237 | $9,699,237 | $0 | $9,699,237 | 100% |
| **NC** | North Carolina A&T State University | $17,628,838 | $17,628,838 | $339,009 | $17,289,829 | 98% |
| **OH** | Central State University | $15,388,762 | $15,388,762 | $1,334,673 | $14,054,089 | 92% |
| **OK** | Langston University | $10,269,538 | $10,269,538 | $3,662,853 | $6,606,685 | 62% |
| **SC** | South Carolina State University | $8,978,344 | $8,978,344 | $0 | $8,978,344 | 100% |
| **TN** | Tennessee State University | $14,423,696 | $14,423,696 | $0 | $14,423,696 | 100% |
| **TX** | Prairie View A&M University | $22,814,576 | $22,814,576 | $8,159,582 | $14,654,994 | 62% |
| **VA** | Virginia State University | $10,462,522 | $10,462,522 | $0 | $10,462,522 | 100% |

| State | Institution | Total to State | Match Requirement | Total Waiver Requested | State Actual Match Total | State Percentage Match |
|---|---|---|---|---|---|---|
| **WV** | West Virginia State University | $6,855,071 | $6,855,071 | $1,623,906 | $5,231,165 | 75% |

**Source:** CRS calculations using data from NIFA *Allocation and Matching* reports FY2019-FY2022, https://www.nifa.usda.gov/resources.

**Note:** Dollar amounts are not adjusted for inflation.

Members of Congress may choose to evaluate the effectiveness of the transparency requirement and may consider alternative requirements to encourage states to provide 100% matching funding for these institutions. For example, removing the option to apply for a waiver could encourage some states to increase their matching funds to ensure that their 1890 Institutions qualify for these federal funding programs. Conversely, such a change could result in some institutions becoming ineligible to receive any federal funds if their states do not increase their matching contributions.

## Optimizing Federal Funding for Agricultural Teaching, Research, and Extension

LGIs are tasked with generating original agricultural research and disseminating it through teaching, research, and extension services to the nonuniversity public. Every year, through annual appropriations, the federal government provides federal funding to support all components of the agricultural knowledge system within the land-grant university system. Consequently, within this system, extension services are intertwined with the research and education efforts undertaken by the LGIs.[60] According to USDA, returns from public agricultural extension programs and research are positive and complementary and contribute to agricultural productivity gains.[61] Some studies indicate a positive return on investment from federal spending on both extension and research, with some suggesting returns exceeding 100% for extension investments.[62] While extension and research are funded through separate accounts, they often compete for federal funding within the broader research, teaching, and extension mission funding area of USDA. In a budget-constrained environment, options for Congress include considering whether the current balance of funding between extension and research produces the optimal return on public investment in agriculture.

[60] David Ching, "What Is a Land-Grant University?," Purdue University, March 13, 2023, https://stories.purdue.edu/what-is-a-land-grant-university/.

[61] USDA, "Strategic Plan Fiscal Years 2022–2026," https://www.usda.gov/sites/default/files/documents/usda-fy-2022-2026-strategic-plan.pdf.

[62] Antonio F. D. Avila and Robert E. Evenson, "Total Factor Productivity Growth in Agriculture: The Role of Technological Capital," in *Handbook of Agricultural Economics: Volume 4*, ed. Prabhu Pingali and Robert Evenson (Alpharetta, GA: Elsevier: 2010), pp. 3769-3822, https://www.sciencedirect.com/science/article/abs/pii/S1574007209040729; Yu Jin and Wallace E. Huffman, "Measuring Public Agricultural Research and Extension and Estimating Their Impacts on Agricultural Productivity: New Insights from U.S. Evidence," *Agricultural Economics*, vol. 47, no. 1 (January 2016), pp. 6-7, https://doi.org/10.1111/agec.12206; and Matthew Clancy, Keith Fuglie, and Paul Heisey, "U.S. Agricultural R&D in an Era of Falling Public Funding," *Amber Waves*, November 10, 2016, https://www.ers.usda.gov/amber-waves/2016/november/u-s-agricultural-r-d-in-an-era-of-falling-public-funding/.

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