



United States
Department of
Agriculture

National Institute
of Food
and Agriculture

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The logo for the National Institute of Food and Agriculture (NIFA), featuring the letters "NIFA" in a large, white, serif font against a dark background with a stylized sun or light effect behind the letters.

REQUEST FOR APPLICATIONS

Agriculture and Food Research Initiative

Competitive Grants Program

Education and Workforce Development Program

FUNDING YEAR: Fiscal Year 2022

APPLICATION DEADLINE: Varies by Program Area (see [Part I § C](#))

FUNDING OPPORTUNITY NUMBER: USDA-NIFA-AFRI-009041

ASSISTANCE LISTING NUMBER: 10.310

LETTER OF INTENT DEADLINE: Not Required

INITIAL ANNOUNCEMENT
National Institute of Food and Agriculture
United States Department of Agriculture

Assistance Listing: The AFRI Education and Workforce Development RFA is listed in the Assistance Listings under number 10.310.

Table 1: Key Dates and Deadlines

Task Description	Deadline
Application:	5:00 P.M. Eastern, on the 2022 deadline dates indicated in Part I § C
Letter of Intent:	Not Required
Applicants Comments:	Within six months from the issuance of this notice (NIFA may not consider comments received after the sixth month)

Advancing Diversity, Equity, Inclusion, and Accessibility. NIFA recognizes research, education, and extension efforts will have the greatest impacts when equity is grounded in the programs. NIFA is committed to enhancing diversity, equity, inclusion, and accessibility of programs and encourages individuals, institutions, and organizations from underserved communities to apply to funding opportunities as lead, co-lead, or subaward recipient(s), and to engage as leaders in the peer panel review process to support the development of strong networks and collaborations. NIFA encourages applications that engage diverse communities and have broad impacts through research, education, extension, and integrated activities to address current and future challenges.

Stakeholder Input. The National Institute of Food and Agriculture (NIFA) seeks comments on all request for applications (RFAs) so it can deliver programs efficiently, effectively, with integrity, and with a focus on customer service. NIFA considers comments, to the extent possible when developing RFAs and use comments to help meet the requirements of [Section 103\(c\)\(2\) of the Agricultural Research, Extension, and Education Reform Act of 1998 \(7 U.S.C. 7613\(c\)\(2\)\)](#). Applicants may submit written comments to Policy@usda.gov (email is for comments only). Please use the following subject line: Response to the AFRI Education and Workforce Development RFA.

Centers of Excellence. Applicants are encouraged to visit the NIFA’s [Centers of Excellence \(COE\)](#) for information on COE designation process, including COE criteria, and a list of programs offering COE opportunities. A recording of COE outreach and COE implementation webinars are also available.

Commodity Board Co-Funding Topics. NIFA solicits proposed topics for [Agriculture and Food Research Initiative](#) (AFRI) RFAs from eligible state and national commodity boards on an ongoing basis. Topics must relate to the established AFRI six priority areas. Topics submitted by the commodity boards that align with NIFA priorities are chosen for inclusion in selected program areas of AFRI RFAs. Details on general information and topic submission resources for inclusion in future AFRI RFAs can be found at [NIFA's Commodity Board Provision website](#). None of the topics submitted by commodity boards were included in this RFA because the topics did not fit the subject matter of this RFA.

EXECUTIVE SUMMARY

This notice identifies the objectives for AFRI Education and Workforce Development (EWD) program projects, deadlines, funding information, eligibility criteria for projects and applicants, and application forms and associated instructions.

The Agriculture and Food Research Initiative (AFRI) is America's flagship competitive grants program that provides funding for fundamental and applied research, education, and extension projects in the food and agricultural sciences. In 2022, the National Institute of Food and Agriculture (NIFA) requests applications for the AFRI's Education and Workforce Development program areas to support:

1. professional development opportunities for K-14 educational professionals;
2. non-formal education that cultivates food and agricultural interest in youth;
3. workforce training at community, junior, and technical colleges;
4. training of undergraduate students in research and extension;
5. fellowships for predoctoral candidates and postdoctoral scholars; and
6. special workforce development topics

The anticipated amount available for new grants for the 2022 deadlines in this Education and Workforce Development RFA is \$68 million in AFRI funding. Additional projects submitted under this RFA will be considered should additional funding become available beyond the amount listed above.

This RFA is being released prior to the passage of appropriation acts for FY 2022 and FY 2023. Enactment of additional continuing resolutions or an appropriations act may affect the availability or level of funding for this program.

This RFA solicits Standard Grants and Food and Agricultural Science Enhancement (FASE) Grants, whereas project types solicited in this RFA are Research, Extension and Integrated Research, Education and/or Extension projects. Grant types and project types solicited vary by program area priority and not all grant types are solicited within each program area priority. See [Part I § C](#) (Program Area Descriptions) for grant and project types solicited by each specific program area priority, and [Part II § C](#) for a description of each individual grant type and project type.

Table 2: Program Area Priorities and Deadlines

The deadlines under this RFA are summarized as follows:

Program Area	2022 Review Cycle Deadlines¹
1. Professional Development for Agricultural Literacy (A7501)	September 1, 2022
2. Agricultural Workforce Training at Community Colleges (A7601)	September 15, 2022
3. Food and Agricultural Non-formal Education (A7801)	August 4, 2022
4. Research and Extension Experiences for Undergraduates (A7401)	August 18, 2022
5. Predoctoral Fellowships (A7101)	October 27, 2022
6. Postdoctoral Fellowships (A7201)	September 8, 2022
7. Special Workforce Development Topics	
7a. National Extension Clearinghouse for Industry and the Workforce (A7704)	October 13, 2022
7b. Youth Innovators Empowering Agriculture Across America (A7703)	June 30, 2022

¹ All applications must be received by 5 p.m. EST on the deadline date.

2022 UPDATES

1. This RFA covers the FY 2022 grant review cycle. For the FY 2022 review cycle, funding from FY 2022 and FY 2023 budgets will be used.
2. Removal of CEEY, ALE and OPCD priority areas

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PART I. FUNDING OPPORTUNITY DESCRIPTION

A. Legislative Authority

Section 2(b) of the Competitive, Special, and Facilities Research Grant Act (hereafter referred to as the Act) ([7 U.S.C. 3157](#)), as amended, authorizes the Agriculture and Food Research Initiative (AFRI), a competitive grant program to provide funding for fundamental and applied research, education, and extension to address food and agricultural sciences in the following six priority areas:

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.

To the maximum extent practicable, NIFA, in coordination with the Under Secretary for Research, Education, and Economics (REE), will make grants 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 (NAREEEAB) pursuant to the Competitive, Special, and Facilities Research Grant Act ([7 U.S.C. 3157](#)). The Secretary delegates the authority to the Under Secretary in [7 CFR 2.21](#), and the Under Secretary delegates that authority to NIFA.

B. Purpose and Priorities

The purpose of AFRI (listed in the Assistance Listings under number 10.310) is to support research, education, and extension projects that address key problems of local, regional, national, and global importance in sustaining conventional, organic, urban food, and agricultural and natural systems. These include farm and ranch production efficiency, profitability, and sustainability; bioenergy and bio-based products; forestry; aquaculture; rural communities and entrepreneurship; human nutrition; mitigating impacts of biotic and abiotic constraints on food production; food safety; mitigating food waste and food loss; physical and social sciences; rural human ecology; development of circular/regenerative economies, and genetic improvement of plant and animals. In addition, the economic sustainability of food systems is an overarching priority for the projects funded in response to this RFA; therefore, projects focusing on plant or animal species or commodities that are important to underserved communities, farmers, ranchers, or small- or medium-sized farms or ranches are also encouraged. Through this support, AFRI advances knowledge in both fundamental and applied sciences important to agriculture. It also allows AFRI to support education and extension activities that deliver science-based knowledge to end users, allowing them to make informed, practical decisions. This AFRI EWD RFA provides funding for research-only, education-only, extension-only, and/or integrated research, education, and/or extension projects addressing the six priorities identified in [Part I § A](#). Each program area priority within this RFA may offer all or some of these project types.

Food and agricultural systems face ever-growing constraints including growing populations; pressure on natural resources; challenges of climate variability and change; and complex demands of ensuring nutritional security and food safety in a global economy. Addressing these challenges requires research, education, extension, and integrated programs in concert with

science-based approaches that increase agricultural and natural resource sustainability. The term 'sustainable agriculture' ([7 U.S.C. 3103](#)) means a combined system of plant and animal production practices relevant to site-specific application that will achieve the following long-term goals:

1. Satisfy human food and fiber needs;
2. Enhance environmental quality and the natural resource base upon which the agricultural economy depends;
3. Make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls;
4. Sustain the economic viability of farm operations; and
5. Enhance the quality of life for farmers and society as a whole.

Extension Foundation (formerly eXtension). AFRI encourages (but does not require) projects that develop content suitable for delivery through [Extension Foundation](#).

Global Engagement. NIFA supports global engagement that advances U.S. agricultural goals. NIFA recognizes that collaboration with international partners may be necessary to attain the agency's goals for U.S. agriculture, promote global competence of our nation's future agricultural workforce, and promote safe and nutritious food security in a growing world. Therefore, although application to this RFA is limited to eligible U.S. institutions, applicants may collaborate with international partners, to include subcontracts to international partners or other institutions. Applications must clearly demonstrate benefits to the United States. Additional guidance on including international activities is provided on the [AFRI International Partnerships website](#).

Stakeholder Input

The [AFRI Stakeholder Feedback page](#) has information on AFRI-related stakeholder input.

Background

AFRI is NIFA's flagship competitive grants programs for food and agricultural sciences, and funding is offered through the Foundational and Applied Science, Sustainable Agricultural Systems, and Education and Workforce Development Requests for Applications for addressing critical societal issues.

NIFA supports research, education, and extension projects that address key problems of local, regional, national, and global importance. As such, AFRI encourages projects that enhance the food and agricultural sciences and their role in human diversity, equity and inclusion, agricultural practices that provide for adaptation to ecological perturbation and mitigate climate change, rural economic development and post-pandemic economic revitalization, nutritional security, open and competitive markets, and other topics responsive to current and emerging needs impacting the U.S. Agriculture.

The AFRI Education and Workforce Development RFA is aligned with the following [USDA Strategic Goals](#):

1. Strategic Goal 2: Maximize the Ability of American Agricultural Producers to Prosper by Feeding and Clothing the World;
2. Strategic Goal 3: Promote American Agricultural Products and Exports;

3. Strategic Goal 4: Facilitate Rural Prosperity and Economic Development;
4. Strategic Goal 5: Strengthen the Stewardship of Private Lands Through Technology and Research;
5. Strategic Goal 6: Ensure Productive and Sustainable Use of Our National Forest System Lands; and
6. Strategic Goal 7: Provide All Americans Access to a Safe, Nutritious, and Secure Food Supply

Additional requirements on expected performance goals, indicators and targets may be required as a condition of an award issued per this RFA.

C. Program Area Description

The AFRI EWD RFA addresses projected shortfalls of qualified graduates in the agricultural, food, and renewable natural resources sectors of the U.S. economy ([Employment Opportunities for College Graduates](#)). This RFA seeks applications for education and training grants that focus on further enhancing the distinct components of the pipeline for developing the workforce in the food and agricultural sciences. Thus, the AFRI EWD has four overarching goals:

1. Growing Agricultural Literacy and Workforce Development for the Future offers institutional grants to provide K-14 teachers and administrators with increased knowledge of the food and agricultural sciences and help them develop improved curricula to train the agricultural workforce for the future. See Program Area Description in [Part I § C.1](#) for “**Professional Development for Agricultural Literacy**” (Program Code A7501).
2. Training or Retraining of Agricultural Workers provides institutional training grants to develop a technology- and data-savvy workforce, ready for the field and industrial jobs. See Program Area Description in [Part I § C.2](#) for “**Agricultural Workforce Training Grants at Community Colleges**” (Program Code A7601).
3. Developing Pathways via grant mechanism that provide formal or non-formal education experiential learning for students to enter or gain skills applicable to the food and agriculture fields. This RFA seeks to support the development of non-formal education activities that cultivate interest and build public confidence in the safe and enhanced use of technology in food and agricultural sciences. See Program Area Description in [Part I § C.3](#) for “**Food and Agricultural Non-formal Education**” (Program Code A7801). This RFA also offers institutional grants that propose experiential learning for undergraduates in food, agriculture, or allied disciplines, and helps them learn the technical and leadership skills required for employment in the food and agricultural sectors or in graduate programs. See Program Area Description in [Part I § C.4](#) for “**Research and Extension Experiences for Undergraduates**” (Program Code A7401). In addition, this RFA may fund grants intended to catalyze innovative mechanisms that address critical challenges and opportunities and will rapidly propel workforce availability or adoption by end-users. See Program Area Description in [Part I § C.7](#) for “**Special Workforce Development Topics**” (Program Code A7703 and A7704)

4. Advancing Science supports graduate and post-graduate education in food and agriculture disciplines. See Program Area Description in [Part I § C.5](#) and [Part I § C.6](#) for “**Predocctoral Fellowships**” (Program Code A7101) and “**Postdoctoral Fellowships**” (Program Code A7201), respectively.

Total EWD Program Funds – Approximately \$68 million-Additional projects submitted under this RFA will be considered should additional funding become available beyond the amount listed above.

Key Information Applicable to all EWD Program Areas:

1. All applications must adhere to the requirements in [Part IV](#).
2. All applications to the AFRI EWD program areas must be aligned with at least one of the six AFRI Farm Bill priorities ([Part I § A](#)) and must address the stated Program Area Priorities described subsequently.
3. All AFRI EWD projects are required to provide opportunities for development of leadership skills, which are necessary for preparing project participants for agriculture-related careers in the private sector, government, and academia. Projects must demonstrably incorporate a leadership development component through competencies such as critical thinking, problem-solving, teamwork, communication skills, and training in ethics and professionalism.
4. The AFRI EWD program areas anticipate funding projects with measurable outcomes/objectives. These may include but are not limited to: 1) number and duration of students and participants that are supported directly or undertaking internships, externships, certifications, and other experiential learning opportunities; 2) number of K-14 teachers, educational professionals, and/or students who indirectly benefit from the projects 3) number of international experiences; 4) number of publications, patents, and workshops; 5) quality of developed curricula materials, or academic programs; 6) success of recruitment and retention programs, especially for underrepresented groups; 7) quality of collaborations developed among institutions; 8) measurable changes in student learning or engagement; and 9) measurable changes in the number of graduates, especially underrepresented individuals, in food and agricultural science disciplines.
5. Applications from, and collaborations with, minority-serving institutions, small to mid-sized institutions, and/or institutions in Established Program to Stimulate Competitive Research (EPSCoR) states are encouraged to apply to these program areas. Applications that include collaborations with international partners are also welcome. For information on NIFA international partnerships that may be of interest to applicants, see the [AFRI International Partnerships website](#).
6. Indigenous traditional ecological knowledge is considered an acceptable topic of research, education or extension for projects funded by this RFA, in pursuit of the priorities, goals, and objectives of each program priority area.

Applications are solicited in the following seven Program Area Priorities:

1. Professional Development for Agricultural Literacy (PDAL)
2. Agricultural Workforce Training at Community Colleges (AWT)
3. Food and Agricultural Non-Formal Education (FANE)
4. Research and Extension Experiences for Undergraduates (REEU)
5. Predoctoral Fellowships
6. Postdoctoral Fellowships
7. Special Workforce Development Topics

1. Professional Development for Agricultural Literacy (PDAL)

Table 3: Professional Development for Agricultural Literacy (PDAL) Key Information

Title	Description
Program Code:	A7501
Program Code Name:	Professional Development for Agricultural Literacy (PDAL)
CFDA Number	10.310
Project Type(s):	Education, Extension, or Integrated Projects <u>only</u>
Grant Type(s):	a. Standard Grants and FASE (Strengthening Standard) Grants <u>only</u> b. See Part II § C.2 for requirements specific to FASE Grant applications.
Application Deadline	2022: Thursday, September 1, 2022 (5:00 p.m. Eastern Time)
Grant Duration:	36-48 months
Maximum Award Amount(s):	a. Including indirect costs: \$500,000 b. A minimum of 50% of project direct costs requested must be for participant support c. Each review cycle may award up to two grants per lead institution.
Program Area Priority Contact(s):	Dr. Carlos Ortiz, (202) 445-5594 or carlos.ortiz@usda.gov

Program Area Priority:

The PDAL program area seeks to increase the number of K-14 educational professionals trained in the food and agricultural sciences. Participants (teachers, post-baccalaureate pre-service teachers, counselors, administrators) are expected to develop and apply skills necessary for integrating food and agricultural science concepts in their classes; explore the opportunities available in food and agricultural science career paths; and/or forge mentorships with professional and business leaders, and faculty at four-year institutions.

Education, Extension, or Integrated Projects must:

- a. Promote faculty expertise and encourage widespread implementation of educational innovation at K-14 levels in the food and agricultural sciences. This includes topics that contain elements of the human sciences (e.g., disciplines that address issues challenging individuals, youth, families, and communities).
- b. Provide immersive learning experiences (hands-on research, experiential learning training, etc.) and curriculum development and teaching training for K-14 education

professionals (teachers, counselors, administrators, etc.) and post-baccalaureate pre-service teachers to create and replicate best practices to improve student success outcomes within the food and agricultural sciences.

- c. Non-exhaustive examples of projects include:
- 1) Developing self-sustaining models for professional development that better prepare education professionals to provide outstanding teaching, guidance, institutional structures, etc., that enhance student outcomes in the food and agricultural sciences.
 - 2) Changing instructional approaches to effectively identify skill gaps and address conceptual areas particularly challenging to students.
 - 3) Integrating innovations in science and pedagogy into existing professional development programs (e.g., through hands-on research and extension experiences with partner institutions and laboratories).
 - 4) Exploring self-sustaining web-based approaches for professional development for education professionals.
 - 5) Develop improved curricula to train or retrain agricultural workforce for the future.
 - 6) Other methods to fill the existing gap of professional development in advanced food and agricultural sciences for education professionals at the K-14 education level.

Program Area Priority Additional Information:

- a. Requests exceeding budgetary guidelines will not be reviewed. Unless otherwise stated, grants are not renewable.
- b. See [Part IV § C](#) for the **REQUIRED** Project Summary and Project Narrative format. Proposals that do not comply with these instructions may be excluded from review and consideration of funding.
- c. Projects that target elementary and middle school education are encouraged.
- d. A minimum of 50% of project direct costs for PDAL projects must be for participant support, including items such as participant stipends, cost of subsistence (housing, meals) for immersive experiences, reasonable travel, classroom materials and teaching kits, and laboratory use fees.
- e. Projects are encouraged to integrate participant social-emotional skill development activities and training for effective in-person and/or virtual teaching.
- f. Projects that involve participation from industry and nonprofit organizations through collaborating mentors and/or that connect education professionals, particularly those from schools with limited resources, to existing USDA and Federal resources (e.g., USDA Agricultural Research Service, Forest Service, Federal laboratories, open data resources) to enhance student outcomes in the food and agricultural sciences are encouraged.
- g. As applicable, if the majority of project activities are taking place off-site, off-campus indirect cost rates should be charged.
- h. If organized by the program, the Project Director (PD) will be required to attend one NIFA AFRI EWD PD meeting during the performance period of the award. Reasonable travel expenses must be included as part of the project budget. While budgets should account for this travel, NIFA may consider virtual, or hybrid meetings based on local and national pandemic conditions.
- i. This program area accepts new and resubmitted applications only. Renewal applications are not accepted in this program area.
- j. Reasonable costs for evaluation and hiring of evaluation professionals may be included.

2. Agricultural Workforce Training at Community Colleges (AWT)

Table 4: Agricultural Workforce Training at Community Colleges Key Information

Title	Description
Program Code:	A7601
Program Code Name:	Agricultural Workforce Training Grants
CFDA Number	10.310
Project Type(s):	Education Projects a. Education Projects <u>only</u> for Standard Grants and Strengthening Standard Grants
Grant Type(s):	a. Standard Grants, and FASE (Strengthening Standard) Grants <u>only</u> b. See Part II § C.2 for requirements specific to FASE Grant applications.
Application Deadline	2022: Thursday, September 15, 2022 (5:00 p.m. Eastern Time)
Grant Duration:	a. 12-24 months for Design Projects Standard Grants and Strengthening Standard Grants b. 36-48 months for Implementation Projects Standard Grants and Strengthening Standard Grants
Maximum Award Amount(s):	a. Including indirect costs: \$250,000 for Design Project Standard Grants and Strengthening Standard Grants b. Including indirect costs: \$650,000 for Implementation Project Standard Grants and Strengthening Standard Grants c. Each review cycle may award up to two grants, in any project type combination, per lead institution
Program Area Priority Contact(s):	Dr. Carlos Ortiz, (202) 445-5594 or carlos.ortiz@usda.gov

Program Area Priority:

The AWT program area seeks to develop a workforce ready for the field as well as industry jobs in the food and agricultural sector. Through the development of new workforce training programs, or the expansion, improvement, or renewal of existing workforce training programs at community, junior, and technical colleges/institutes, this program will expand job-based, experiential learning opportunities, acquisition of industry-accepted credentials and occupational competencies for students to enable a work-ready labor force for the 21st century. Proposals aimed towards developing baccalaureate or graduate degree programs or pathways towards these degrees are not supported under this program area priority.

Design Projects must address the following:

- a. Be developed and carried out by community/junior/technical colleges or institutes with active partnership of employers or other community partners.
- b. Design and develop new workforce training programs or stackable-credential frameworks in the food and agricultural sciences at community, junior, and technical colleges or /institutes aimed at developing a workforce ready for field and industrial jobs.
- c. Programs or frameworks may link high school and community college education to enable participants to gain credentials to join, rejoin or advance in the workforce.

- d. Type and relevance of the industry-accepted credential the workforce training program will provide to target participants.
- e. Type and relevance of experiential learning opportunities that will allow participants to gain on-the-job training, and exposure to work environments
- f. Timeline and plan for the develop program or credential to be recognized by cognizant institutions.
- g. Applications must articulate benefits accrued from formal planning activities and provide evidence of a high likelihood that quality future applications will be submitted.

Implementation Projects must address the following:

- a. Expand and improve existing workforce training programs in the food and agricultural sciences at community, junior, and technical colleges/institutes to develop a workforce ready for field and industrial jobs.
- b. Be developed by or in active partnership with community/junior/technical colleges/institutes and their industry partners. All applications to this program area must demonstrate committed and active partnership with and relevance to industry.
- c. Type and relevance of industry-accepted credential the workforce training program will provide to target participants.
- d. Provide students the skills and tools necessary to secure industry-accepted credentials to join the workforce upon participation completion.
- e. AWT implementation projects must allocate a reasonable portion of the funds to student support, including items such as participant stipends, course enrollment, hands-on training, laboratory use fees, credential testing fees, and other costs that will allow the participant to attain the credential they are being trained for.
- f. Applicants need not have applied or received a Design Project grant to be eligible for an Implementation Project grant.
- g. Non-exhaustive examples of projects include:
 - 1. Industry-based training programs/apprenticeships allowing students to earn while they learn;
 - 2. Job-based, experiential learning opportunities that allow students more time working in job simulation or ‘on-the-job’ training environments;
 - 3. Refreshing existing workforce development curriculum or development of stackable credential frameworks to meet the needs of 21st century agricultural industry
 - 4. Opportunities for students to utilize appropriate cutting-edge technology and advanced data skills in their learning experiences

Program Area Priority Additional Information:

- a. Requests exceeding budgetary guidelines will not be reviewed. Unless otherwise stated, grants are not renewable.
- b. See [Part IV § C](#) for the **REQUIRED** Project Summary and Project Narrative format. Proposals that do not comply with these instructions may be excluded from review and consideration of funding.
- c. Funds requested may include but are not limited to support for participant stipends and travel; costs of course enrollment; provider personnel salaries; software; and curricula.
- d. Curriculum for workforce training developed, expanded, or improved under this program

area must lead participants to earn a technical certificate, stackable credential, 2-year associates or technical degree or other industry accepted credential. (Certificates, training or coursework for/part of baccalaureate or post-graduate degrees or training **ARE NOT** supported under this program area priority).

- e. Projects that involve partnerships with local government, economic development organizations, and workforce-focused nonprofit organizations are encouraged.
- f. Workforce training includes, and is not limited to, the creation of new curriculum and instructional delivery systems, pilot testing/implementation of curriculum and delivery methods, development of assessment tools, and evaluation.
- g. Applications that target high-unemployment geographic areas or underrepresented groups are encouraged.
- h. Applications should include the substantial mentoring of program participants.
- i. Self-sustaining projects that will continue after grants funds expire are encouraged.
- j. As applicable, if the majority of project activities are taking place off-site, off-campus indirect cost rates should be charged.
- k. If organized by the program, the Project Director (PD) will be required to attend one NIFA AFRI EWD PD meeting during the performance period of the award. Reasonable travel expenses must be included as part of the project budget. While budgets should account for this travel, NIFA may consider virtual, or hybrid meetings based on local and national pandemic conditions.
- l. This program area accepts new and resubmitted applications only. Renewal applications are not accepted in this program area.
- m. Reasonable costs for evaluation and hiring of evaluation professionals may be included.

3. Food and Agricultural Non-Formal Education (FANE)

Table 5: Food and Agricultural Non-Formal Education Key Information

Title	Description
Program Code:	A7801
Program Code Name:	Food and Agricultural Non-Formal Education
CFDA Number	10.310
Project Type(s):	Extension, Education, or Integrated Projects <u>only</u>
Grant Type(s):	a. Standard and FASE (Strengthening Standard) Grants <u>only</u> b. See Part II § C.2 for requirements specific to FASE Grant applications.
Application Deadline	2022: Thursday, August 4, 2022 (5:00 p.m. Eastern Time)
Grant Duration:	36-48 months
Maximum Award Amount(s):	a. Including indirect costs: \$750,000 b. Funds requested may include but are not limited to support of participant stipends and travel; provider personnel salaries; software; and curricula.
Program Area Priority Contact(s):	a. Dr. Jeff Sallee, (816) 814-4746 or jeffrey.sallee@usda.gov

Program Area Priority:

Major advances in agricultural productivity and rural prosperity in the past have resulted from transformative technologies such as breeding tools and strategies, mechanization, and prudent use of agrochemicals. There are several emerging technologies that hold a similar promise. This program area priority will support content development and activities for non-formal education to foster development of technology-savvy youth. Projects must develop activities that cultivate interest and competencies in STEM and in food and agricultural sciences supported by the six Farm Bill Priority areas of AFRI. Data science, including artificial intelligence, automation, and robotics as well as gene editing, and biotechnology will be supported in this program area priority.

Food and Agricultural Non-formal Education (FANE) applications must address the following:

- a. Develop content and activities to enhance youth's understanding of gene editing, biotechnology, data science, artificial intelligence, robotics, automation, and other technologies that enhance the food and agricultural enterprise and prepares them to help meet the needs of the future workforce through enhanced non-formal education modules.
- b. Develop outreach materials that clearly communicate the demonstrated benefits of agricultural technologies and biotechnology.
- c. Should complement and build upon programs that have successfully demonstrated positive youth development strategies and outcomes (i.e., 4-H programming, Agriculture in the Classroom, FDA's Agricultural Biotechnology Education and Outreach Initiative, etc.).
- d. Involve youth in the design, execution, and evaluation of activities that lead to the development of consumer-friendly content that builds public confidence in the safe use of biotechnology in agriculture and the food system.

Program Area Priority Additional Information:

- a. Requests exceeding budgetary guidelines will not be reviewed. Unless otherwise stated, grants are not renewable.
- b. See [Part IV § C](#) for the **REQUIRED** Project Summary and Project Narrative format. Proposals that do not comply with these instructions will be excluded from review and consideration of funding.
- c. Projects that enhance access and interest in innovative agricultural technology (i.e., data science and artificial intelligence, robotics and automation, and gene editing and biotechnology) education for communities underrepresented in STEM education and utilize a whole-child approach to promote learning about biotechnology in food and agriculture are encouraged.
- d. Projects that promote team, active learning, and resiliency skills are encouraged.
- e. Projects must institute an ongoing and innovative system to evaluate participant learning and outcome quality.
- f. Projects that involve participation from industry and nonprofit organizations through collaborating mentors and/or that connect education professionals, particularly those from low-resource schools to existing USDA and Federal resources (e.g., USDA Agricultural Research Service, Forest Service, Federal laboratories, open data resources) to enhance student outcomes in the food and agricultural sciences are encouraged.
- g. As applicable, if the majority of project activities are taking place off-site, off-campus

indirect cost rates should be charged.

- h. If organized by the program, the Project Director (PD) will be required to attend one NIFA AFRI PD meeting during the performance period of the award. Reasonable travel expenses must be included as part of the project budget. While budgets should account for this travel, NIFA may consider virtual, or hybrid meetings based on local and national pandemic conditions.
- i. This program area accepts new applications only. Renewal applications are not accepted.
- j. Reasonable costs for evaluation and hiring of evaluation professionals may be included.

4. Research and Extension Experiences for Undergraduates (REEU)

Table 6: Research and Extension Experiences for Undergraduates (REEU) Key Information

Title	Description
Program Code:	A7401
Program Code Name:	Research and Extension Experiences for Undergraduates (REEU)
CFDA Number	10.310
Project Type(s):	Integrated Projects
Grant Type(s):	a. Standard Grants and FASE (Strengthening Standard) Grants <u>only</u> b. See Part II § C.2 for requirements specific to FASE Grant applications.
Application Deadline	2022: Thursday, August 18, 2022 (5:00 p.m. Eastern Time)
Grant Duration:	a. 48 or 60 months for Research and Extension Experiences for Undergraduates (REEU) projects b. 60 months for Education Coordinated Network for Research and Extension Experiences for Undergraduates (REEU-ECN)
Maximum Award Amount(s):	a. Including indirect costs: \$600,000 for 48-month REEU projects ; \$750,000 for 60-month REEU projects 1) Project costs for REEU projects must be predominantly for student support, including items such as participant stipends, housing, meals, travel, and laboratory use fees. Costs in budget categories outside Participant Support must be modest and reasonable (and may include justified support for the coordination of the program). 2) Tuition for course credit and promotional items ARE NOT allowable costs in this program. 3) Each review cycle may award up to two REEU projects per lead institution. b. Including indirect costs: \$750,000 for all REEU-ECN projects 1) Project costs for REEU-ECN projects must be reasonable and commensurate with the coordinating activities of national scope outlined below.
Program Area Priority Contact(s):	Dr. Ray Ali, (816) 926-1453 or nifa-education@usda.gov

Program Area Priority:

The REEU program area promotes research and extension learning experiences for undergraduates such that upon graduation they may enter the agricultural workforce with exceptional skills. This initiative allows colleges and universities to provide opportunities for undergraduate students, including those from underrepresented and economically disadvantaged groups, minority-serving institutions, community colleges, and universities.

Projects must provide undergraduate students with experiential learning opportunities that include significant research and/or extension components in the food and agricultural sciences.

Also, of interest are the projects that provide experiences in innovative agricultural technologies, including Data Science and Artificial Intelligence, Robotics and Automation, and Gene Editing.

Non-exhaustive examples of experiential projects include:

- a. Research and extension apprenticeships, internships, or similar participatory learning within the six AFRI Farm Bill priority areas.
- b. Practicums in agricultural laboratories, farms, or Cooperative Extension Programs.
- c. Externships in the private or public sector.
- d. Study abroad focused on global food security issues to develop global competency skills.

In addition to the priorities listed above, **Education Coordinated Network for Research and Extension Experiences for Undergraduates (REEU-ECN)** applications are solicited to develop a network of REEU projects and personnel that will foster national-level coordination of opportunities for students and to enhance collaboration among projects. The REEU program will award a single grant to an institution to maintain the education-coordinated network.

Coordination education network proposals must include the acronym “REEU-ECN” in the title. REEU-ECN will only award up to one single grant.

REEU-ECN applications must address the following:

- a. Provide a clearinghouse for REEU project outputs, data, and documents;
- b. Create and maintain any number of collaboration spaces for REEU project directors and other key personnel to interact and share information, including but not limited to a listserv;
- c. Be responsible for organizing the REEU PD meeting in collaboration with NIFA Program Leadership every 18-24 months;
- d. Create and maintain a portable public facing website, to include information on all funded REEU programs and links to the program websites.

Program Area Priority Additional Information:

- a. Requests exceeding budgetary guidelines will not be reviewed. Unless otherwise stated, grants are not renewable.
- b. See [Part IV § C](#) for the **REQUIRED** Project Summary and Project Narrative format. Proposals that do not comply with these instructions may be excluded from review and consideration of funding.
- c. Projects must provide opportunities to include hands-on experiences for undergraduate students at colleges and universities, especially those from underrepresented and

economically disadvantaged groups, veterans, first generation college students, students at minority-serving institutions and community colleges.

- d. At least 50% of the undergraduate fellows must come from outside the host institution or organization, particularly from small institutions where opportunities are not easily available for these experiences.
- e. Participating students could also build their skills necessary for graduate studies; explore the opportunities available in academia, business, government, and other career paths; and forge mentorships with professional and business leaders and faculty.
- f. Applications that involve new collaborations or enhance existing partnerships with community colleges, minority-serving institutions, and other institutions where limited research and extension opportunities in mission-relevant STEM fields are encouraged.
- g. Applications that involve industry participation (e.g., through collaborating mentors) and/or that target a food and agricultural science industry where there is a documented shortage of talent or lack of adequate skills preparation for the needs of the industry are encouraged.
- h. Projects that will catalyze and result in the implementation of a self-sustaining model for increased/enhanced experiential learning for a diverse undergraduate student population at the host and partner institutions are encouraged.
- i. Projects should develop a plan for tracking students, beyond their participation in the program that demonstrates the impacts of the program on career choices and post-graduation employment and/or enrollment in higher education.
- j. If organized by the program or the coordination network, the PD will be required to attend one NIFA AFRI EWD PD meeting during the performance period of the award. Reasonable travel expenses must be included as part of the project budget. While budgets should account for this travel, NIFA may consider virtual, or hybrid meetings based on local and national pandemic conditions.
- k. Awarded projects are required to maintain a website, linked to a central REEU webpage to be hosted by the REEU Coordinated Education Network, which describes the program, eligibility for student participation, and application guidelines.
- l. This program area accepts new and resubmitted applications. Renewal applications are disallowed.
- m. Previously awarded REEU projects that wish to continue their program, should reapply as a new application, and include a progress report detailed in [*Part IV § C*](#). These applications will be competed with new and resubmitted applications.
- n. Reasonable costs for evaluation and hiring of evaluation professionals may be included.

5. Predoctoral Fellowships

Table 7: Predoctoral Fellowships Key Information

Title	Description
Program Code:	A7101
Program Code Name:	Predoctoral Fellowships
CFDA Number	10.310
Project Type(s):	Research, Education, Extension, or Integrated Projects
Grant Type(s):	a. Predoctoral Fellowship (FASE) Grants <u>only</u> a. See Part II § C.2 for requirements specific to FASE Grant applications.
Application Deadline	2022: Thursday, October 27, 2022 (5:00 p.m. Eastern Time)
Grant Duration:	Up to 36 months
Maximum Award Amount(s):	a. Including institutional allowance: \$180,000 <u>total per project</u> and are limited to a total of \$60,000 per year for the following: 1) Up to \$35,000 <u>per year stipend</u> 2) Up to \$22,000 <u>per year</u> tuition, fees, fringe benefits, supplies, travel, workshops, and publications 3) Up to \$3,000 <u>per year</u> institutional allowance, in lieu of indirect costs which are not permitted on Predoctoral Fellowship Grants 4) With the exception of the stipend, awarded funds in other budget categories may be carried over from one year to other years. The stipend is capped at \$35,000 per year and cannot be carried over from year one to the next.
Program Area Priority Contact(s):	Dr. Ray Ali, (816) 926-1453 or nifafellows@usda.gov

Program Area Priority:

The Predoctoral Fellowships program areas help to develop new scientists and professionals to enter research, education, and/or extension fields within the food and agricultural sciences within the private sector, government, or academia. The aim of these fellowships is to cultivate future leaders who can solve emerging agricultural challenges of the 21st century. NIFA is particularly interested in supporting fellows that address (1) sustainable agricultural intensification; (2) agricultural climate adaptation; (3) food and nutrition translation; (4) value-added innovation; and (5) agricultural science policy leadership.

Research, education, extension and integrated research, education and/or extension projects must address all of the following:

- a. Objectives that are aligned with one or more of the six AFRI priority areas (as described in **Part I, A**);
- b. Well-developed academic experiences and global competencies;
- c. Productive and interactive mentoring plans;
- d. Appropriate and applicable training/career development activities; and
- e. Substantive evaluation plans (see [Part IV § C](#) for additional information).

Eligible Predoctoral Fellows – The individual predoctoral Project Director (PD) must be a citizen, national, or permanent resident of the United States and, as per CFR 3430.303, have advanced to candidacy, as per institutional requirements, by:

- a. Fiscal Year 2022 competition: October 27, 2022

Documentation from the graduate advisor or the institution must be provided by the application deadline. The intent of the NIFA Predoctoral Fellowship Program is to support current doctoral students who are at the stage of conducting dissertation research, ultimately leading to completion of the dissertation and respective terminal degree. Predoctoral students, inclusive of those with baccalaureate or master's degrees, who meet the above criteria, may apply.

Program Area Priority Additional Information:

- a. Requests exceeding budgetary guidelines will not be reviewed. Unless otherwise stated, grants are not renewable.
- b. See [Part IV § C](#) for the **REQUIRED** Project Summary and Project Narrative format. Proposals that do not comply with these instructions may be excluded from review and consideration of funding.
- c. Applicants from underrepresented groups are encouraged to apply.
- d. The predoctoral candidate must be the sole PD listed on the Key Personnel form of the application. The mentor should not be listed as a Co-PD. Select “Graduate Student” for the Predoctoral Fellowship applicant and “Other (Specify)” for the corresponding scientific mentor(s). We highly recommend that applications be submitted through the mentor's institution with the mentor institution listed as the applicant.
- e. At the time of the award and release of funds from NIFA to sponsoring institution, Fellows are required to carry out their projects on a full-time basis (i.e., 100% effort), as specified by the sponsoring institution in accordance with its own policies.
- f. The applicant must identify the functional focus of the fellowship (Research, Education, Extension, or Integrated) leading to a doctoral degree.
- g. The selection of disciplines to address an issue is to be determined by the prospective applicant in consultation with appropriate mentors.
- h. Evidence of scholastic achievement should be demonstrated through current doctoral transcript, program of study, and/or other academic successes.
- i. This priority area encourages multidisciplinary, transdisciplinary, and applied approaches that involve industry participation and/or international experiences (e.g., through collaborating mentors) as appropriate.
- j. Fellows are expected to build the professional skills necessary for career agility; explore opportunities available in academia, industry, government, and other career paths; and forge mentorships with professional and business leaders and faculty. As part of the Fellows’ professional development, attendance at scientific or professional meetings and experiences in industry or at field locations aimed at the development of skills in the applied sciences are encouraged.
- k. If organized by the program, the PD will be required to attend one NIFA AFRI EWD PD meeting during the performance period of the award. Reasonable travel expenses must be included as part of the project budget. While budgets should account for this travel, NIFA may consider virtual, or hybrid meetings based on local and national pandemic conditions.
- l. This program area only accepts new and resubmitted applications. Renewal applications

are disallowed.

- m. Consistent with the program goal of fostering career independence, NIFA Predoctoral and Postdoctoral Fellowships can be converted to Standard Grants under certain circumstances (e.g., if the Fellow obtains a faculty position). One condition is that the Fellow substantively completes at least 50% of the fellowship performance period (e.g., 12 months for a 24-month award, 18 months for a 36-month award). Note that actual performance may occur prior to the official award start date and must be validated by the AR. The conversion process includes the following:
1. A letter (PDF) from the Project Director indicating objectives completed, funds remaining, timeline involved, etc. Said letter must be signed by the AOR.
 2. A letter (PDF) from the mentor attesting to the fellowship accomplishments that might be considered towards substantive fellowship performance (i.e., commencement date of actual performance, time spent on career development and planning/training, mentoring, project planning, etc.).
 3. Email both letters to the National Program Leader (Program Point of Contact on the Award Face Sheet). If initially agreed upon by the National Program Leader, additional institutional administrative processes need to take place (e.g., relinquishment, submission of an application, revised budget, etc.). Said processes must be executed within the performance period of the original award. NIFA reserves the right to approve or deny the conversion request. Note: Predoctoral Fellowships cannot be converted into Postdoctoral Fellowships.

6. Postdoctoral Fellowships

Table 8: Postdoctoral Fellowships Key Information

Title	Description
Program Code:	A7201
Program Code Name:	Postdoctoral Fellowships
CFDA Number	10.310
Project Type(s):	Research, Education, Extension, or Integrated Projects
Grant Type(s):	a. Postdoctoral Fellowship (FASE) Grants <u>only</u> b. See Part II § C.2 for requirements specific to FASE Grant applications.
Application Deadline	2022: Thursday, September 8, 2022 (5:00 p.m. Eastern Time)
Grant Duration:	Up to 24 months
Maximum Award Amount(s):	a. Including institutional allowance: \$225,000 1) Funds must be requested primarily for salary or stipend and be properly justified 2) Other expenditures (e.g., fringe benefits, supplies, travel, workshops, and publications) may not exceed \$60,000 <u>per year</u> and must be itemized and properly justified 3) Up to \$3,000 <u>per year</u> institutional allowance, in lieu of indirect costs which are not permitted on Postdoctoral Fellowship Grants
Program Area	Dr. Ray Ali, (816) 926-1453 or nifafellows@usda.gov

Priority Contact(s):	
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Program Area Priority:

The Postdoctoral Fellowships program areas help to develop new scientists and professionals to enter research, education, and/or extension fields within the food and agricultural sciences within the private sector, government, or academia. The aim of these fellowships is to cultivate future leaders who can solve emerging agricultural challenges of the 21st century. NIFA is particularly interested in supporting fellows that address (1) sustainable agricultural intensification; (2) agricultural climate adaptation; (3) food and nutrition translation; (4) value-added innovation; and (5) agricultural science policy leadership.

Research, education, extension and integrated research, education and/or extension projects must address all of the following:

- a. Objectives that are aligned with one or more of the six AFRI priority areas;
- b. Well-developed academic experiences and global competencies;
- c. Productive and interactive mentoring;
- d. Appropriate and applicable training/career development activities; and
- e. Substantive evaluation plans.

Eligible Postdoctoral Fellows – As per 7 CFR 3430.303, all doctoral degree requirements must be satisfied by:

- a. Fiscal Year 2022 competition: no earlier than January 1, 2019, and no later than June 8, 2023.

Documentation from the graduate advisor, graduate committee, or the institution must be provided by the application deadline. The postdoctoral project director (PD) must be a citizen, national, or permanent resident of the United States.

Program Area Priority Additional Information:

- a. Requests exceeding budgetary guidelines will not be reviewed. Unless otherwise stated, grants are not renewable.
- b. See [Part IV § C](#) for the **REQUIRED** Project Summary and Project Narrative format. Proposals that do not comply with these instructions may be excluded from review and consideration of funding.
- c. The postdoctoral scholar must be the sole PD listed on the Key Personnel form of the application. The mentor should not be listed as a Co-PD. Select “Post-Doctoral” for the Postdoctoral Fellowship applicant. Select “Other (Specify)” for the corresponding scientific mentor(s). Enter “Mentor” for corresponding scientific mentor(s) in the Other Project Role Category Field.
- d. At the time of the award and release of funds from NIFA to sponsoring institution, Fellows are required to carry out their projects on a full-time basis (i.e., 100% effort), as specified by the sponsoring institution in accordance with its own policies.
- e. Note that the Program Area Priority Additional Information identified for Predoctoral Fellowships also applies to Postdoctoral Fellowships.
- f. Although a proposed project may fit in the context of the mentor's existing scientific area, the Postdoctoral Fellowship Grant should initiate an independent scientific program, rather than serve as an extension of ongoing projects in the mentor's laboratory.

- g. The **postdoctoral applicant**, in their Project Summary/Abstract, should indicate the Priority Area name, Program Area name, and Program Area Priority Code from the AFRI Foundational and Applied Science (FAS) request for applications that most closely topically matches the proposed postdoctoral project plan. **Postdoctoral proposals** will be reviewed within a respective AFRI FAS Program Area. A table of the AFRI FAS Priority and Program Areas, along with Priority Codes and other information, can be found at [AFRI Foundational and Applied Science \(FAS\) Request for Applications](#).
- h. All postdoctoral proposals must follow the AFRI EWD guidance, including Part IV, C. instructions and due date. Note that postdoctoral proposals must indicate program code A7201 in the SF-424 (application package). Do not use a FAS program code in the SF-424, or the application is at risk of not receiving a review.
- i. This priority area encourages multidisciplinary, transdisciplinary, and applied approaches that involve industry participation and/or international experiences (e.g., through collaborating mentors) as appropriate.
- j. If organized, the PD will be required to attend one NIFA AFRI EWD PD meeting during the performance period of the award. The PD is also required to attend a PD meeting of the Foundational and Applied Science program area priority or the Sustainable Agricultural Systems program with which the project is most closely aligned during the performance period of the award. Reasonable travel expenses must be included as part of the project budget. While budgets should account for this travel, NIFA may consider virtual, or hybrid meetings based on local and national pandemic conditions.
- k. This program area accepts new and resubmitted applications only. Renewal applications are not accepted in this program area

7. Special Workforce Development Topics

Background

Food and agricultural systems face ever-growing constraints and complex demands for ensuring the availability of a skilled workforce. This program area seeks to address critical challenges and opportunities that education and/or extension can address by making available or improving the training and skills of our nation's current or future workforce. Investments made through this priority area are intended to catalyze innovative mechanism that will propel the workforce availability. Funded projects are expected to produce results that lead to practices, tools, and training programs and opportunities that are rapidly adopted by end-users. Projects are expected to have a well-developed sustainability plan that ensures project activities continue after the expiration of grant funds.

Three Special Workforce Development Topics are being offered in this competition cycle:

- 7a. National Extension Clearinghouse for Industry and the Workforce (NECIW)
- 7b. Youth Innovators Empowering Agriculture Across America (YEA)

7a. National Extension Clearinghouse for Industry and the Workforce (NECIW)

Table 9: National Extension Clearinghouse for Industry and the Workforce Key Information

Title	Description
Program Code:	A7704
Program Code Name:	National Extension Clearinghouse for Industry and the Workforce a. Proposals to this priority area must include the acronym “NECIW” as prefix of the proposal’s title.
CFDA Number	10.310
Project Type(s):	Extension Projects <u>only</u> for Coordinated Agricultural Project Grants
Grant Type(s):	a. Standard Grants, and FASE (Strengthening Standard) Grants <u>only</u> b. See Part II § C.2 for requirements specific FASE Grant applications.
Application Deadline	2022: Thursday, October 13th, 2022 (5:00 p.m. Eastern Time)
Grant Duration:	60 months for Coordinated Agricultural Project Grants
Maximum Award Amount(s):	a. Including indirect costs: \$10,000,000 for a Coordinated Agricultural Project Grant; this program area priority anticipates making up to one CAP award for FY 2022
Program Area Priority Contact(s):	Dr. Carlos Ortiz, (202) 445-5594 or carlos.ortiz@usda.gov

Program Area Priority:

Agricultural production and processing rely on an efficient and well-trained workforce. The readiness of this workforce may benefit from, and in many cases require, both informal training experiences, and formal worker certifications. The Special Workforce Development Topics program area priority is seeking applications for one National Extension Clearinghouse for Industry and the Workforce (NECIW) Coordinated Agricultural Project (CAP) Grant that will develop and deliver a national framework and clearinghouse for non-formal education workforce training opportunities for jobs within and supportive of the food and agricultural sector. The goal of this project is to connect similar regional efforts, identify gaps in the workforce ecosystem, and provide adaptive, science-based proven solutions to address local and regional workforce issues, including accessible training methodologies (i.e., experiential, skills-based learning opportunities and others), materials, instructors, and other solutions that result in participant’s upskilling, credentialing, and readiness to successfully join or rejoin the workforce. NIFA anticipates making a one-time investment of up to one NECIW award for FY 2022. The NECIW CAP Extension project must:

- a. Use a workforce/industry needs-informed strategic plan to develop a national framework for non-formal workforce training that is supportive of the broad food and agricultural supply chain. The framework must support learners to train, retrain, or transition to current and emerging job opportunities in their communities.
- b. Design, develop, and maintain a clearinghouse of framework resources for the various industry accepted certifications and career pathways as well as outcomes (i.e., participant enrollment, credentials provided, and others) and impacts supported by this project.
- c. Connect and coordinate similar efforts, share resources in different parts of the country

and across different agricultural sectors, and be responsive to local, regional and/or national employment needs and opportunities.

- d. Develop, expand, validate, and/or improve existing workforce training programs that provide marketable work skills and stackable credentials that are responsive to participant, local, and regional workforce, and industry needs. Training programs must be responsive to participant language and access needs to enhance English language learner integration in the workforce as needed.
- e. Create synergy, address barriers to participant job retention, and connect trained workers with local high-quality career services to catalyze relationships with agricultural businesses/industries.
- f. Have a well-developed self-sustainability plan that ensures project activities continue after grant funds expire.

Program Area Priority Additional Information:

- a. Requests exceeding budgetary guidelines will not be reviewed. This program area accepts new applications only. Unless otherwise stated, grants are not renewable.
- b. See [Part IV § C](#) for the **REQUIRED** Project Summary and Project Narrative format. Proposals that do not comply with these instructions may be excluded from review and consideration of funding.
- c. Proposals to this priority area must include the acronym “NECIW:” as prefix in the title.
- d. Funds under this CAP are not intended to support competitive subawards or activities normally funded by existing NIFA capacity programs.
- e. CAP projects may allocate a portion of the funds to participant support, including items such as participant stipends, course enrollment, training, and laboratory use fees.
- f. Curriculum for workforce training developed, expanded, or improved under this program area must lead participants to earn industry accepted certifications. (Certificates, training or coursework for/part of baccalaureate or post-graduate degrees or training **ARE NOT** supported under this program area priority).
- g. Projects that involve partnerships with local government, economic development organizations, and workforce-focused nonprofit organizations are encouraged.
- h. Workforce training includes, but is not limited to, the creation of new curriculum and instructional delivery systems, pilot testing/implementation of curriculum and delivery methods, hands-on learning, development of assessment tools, and evaluation.
- i. Applications that target high-unemployment geographic areas or underserved groups are encouraged.
- j. As applicable, if the majority of project activities are taking place off-site, off-campus indirect cost rates should be charged.
- k. If organized by the program, the Project Director (PD) will be required to attend one NIFA AFRI EWD PD meeting during the performance period of the award. Reasonable travel expenses must be included as part of the project budget. While budgets should account for this travel, NIFA may consider virtual, or hybrid meetings based on local and national pandemic conditions.
- l. Reasonable costs for evaluation and hiring of evaluation professionals may be included

7b. Youth Innovators Empowering Agriculture Across America (YEA)

Table 10: Youth Innovators Empowering Agriculture Across America (YEA) Key Information

Title	Description
Program Code:	A7703
Program Code Name:	Special Topics: Youth Innovators Empowering Agriculture Across America (YEA) a. Proposals to this priority area must include the acronym “YEA” in the beginning of the proposal’s title.
CFDA Number	10.310
Project Type(s):	Fully Integrated Projects only (must include Research, Education, and Extension components within project)
Grant Type(s):	a. Standard Grants, and FASE (Strengthening Standard) Grants <u>only</u> b. See Part II § C.2 for requirements specific to FASE Grant applications.
Application Deadline	2022: Thursday June 30, 2022 (5:00 p.m. Eastern Time)
Grant Duration:	60 months for Standard Grants, Strengthening Standard Grants
Maximum Award Amount(s):	a. Including indirect costs: \$7,850,000 per YEA project. b. Including indirect costs: \$5,000,000 for a YEA Coordination Network (YEA-CN); YEA anticipates making up to one YEA-CN award. c. Project costs for YEA projects must be reasonable and commensurate with the activities outlined below including but not limited to providing personnel salaries; youth stipends and travel; adult volunteer travel and support; program planning and supplies; technology; facilitator and staff training and travel; and evaluation.
Program Area Priority Contact(s):	a. Dr. Maurice Smith, (816) 518-1754 or maurice.smith2@usda.gov

Program Area Priority:

The YEA program seeks projects supporting one or more of the six AFRI Farm Bill priorities, as well as one or more of the USDA priorities of: (1) addressing climate change via climate smart agriculture and forestry; (2) advancing racial justice, equity, and opportunity; (3) creating more and better market opportunities; (4) tackling food and nutrition insecurity or (5) promoting workforce development.

NIFA is seeking applications demonstrating regional partnerships and collaborations that correspond to the Cooperative Extension Service’s geographic and institutional regions. Outcome of the YEA program will be a reimagined and enhanced system of Positive Youth Development (PYD) outreach.

Each YEA project will consist of all three functions of the agricultural knowledge system (i.e., research, education, and extension) and will conduct original PYD research that will be applied to the project and incorporated into PYD systems, such as 4-H. YEA projects will also enhance existing curriculum or develop new curriculum that will be used by teams of youth and adults to

explore USDA priorities. These materials will be used to help train youth mentors that can train other youth, thus widely spreading research-based information on topics such as climate change, food insecurity, economic development, and entrepreneurship.

YEA projects will share accurate information, current solutions, and career opportunities across our Nation's youth population. An integral piece of YEA projects will include opportunities for youth to participate in civic engagement programs, partner with adult volunteers from industry and academic institutions, and motivate adults to volunteer for PYD programs to help youth change the future. Finally, projects will inspire the next generation of food and agriculture professionals at many levels who will continue to address these priorities into the future. The YEA program will catalyze substantial growth and enhancements in LGU youth development programs. YEA proposals must include the acronym "YEA:" as prefix in the title.

YEA projects are expected to address all of the following:

- a. Each of the four primary Center of Excellence (COE) criteria described in Part III D.
- b. Develop, organize, and execute culturally relevant experiential learning projects that promote one or more of the USDA priority areas.
- c. Conduct research on PYD topics related to the USDA priority areas. Research could include, but is not limited to, increasing participation of diverse youth in LGU youth development programs, impacts of utilizing peer and near peer youth development training, continued research of youth and adult partnership techniques, and helping youth discover and enter the agriculture and STEM career pipeline. PYD research topics should be broad and varied with the goal of demonstrably increasing PYD expertise across the LGU system.
- d. Create a YEA regional diverse youth leadership advisory team to provide youth voice, academic and career opportunities, and input into YEA project and YEA Coordination Network (CN) developmental planning.
- e. Create mentor-mentee type connections. Consider collegiate youth serving clubs and chapters, small businesses, or other volunteers with an agricultural, natural resources, environmental, food safety and nutrition, or youth development focus.
- f. Engage youth through opportunities to understand agricultural careers and introducing new technologies used in the workforce through hands-on experiences.
- g. Develop YEA regional hybrid (in-person and virtual options) training programs on existing or newly developed curricula and practices through train the trainer experiences for staff, volunteers, and youth. Conduct formative and summative evaluation of YEA project activities.
- h. Enhance access and participation among underrepresented youth and communities.

In addition to the requirements listed above, **YEA Coordination Network (YEA-CN)** applications are solicited to develop a network of YEA projects and personnel that will foster national-level coordination of opportunities for youth and enhance collaboration among YEA projects. The YEA program will award a single grant to an institution to maintain the coordinated network. **Coordination network proposals must include the acronym "YEA-CN" in the title. YEA CN may award up to one single grant.**

YEA-CN applications must address the following:

- a. Each of the four primary Center of Excellence (COE) criteria described in Part III D.
- b. Form a YEA national steering committee representative of youth and adults from each of the YEA regional projects and facilitate national planning meetings.
- c. Ensure coordination among regional YEA projects, including research, extension, and education activities, and leverage available resources to support these activities.
- d. Provide a clearinghouse for YEA project curricula, relevant research, culturally relevant marketing and other resources, data, outputs and inputs, and other evidence-based practices.
- e. Create and maintain any number of collaboration spaces for YEA project directors and other key personnel to interact and share information, including but not limited to a listserv.
- f. Create and maintain a portable public facing website, to include information on all funded YEA projects.
- g. Collaboration with other youth-serving partners for joint initiatives aimed at building the capacity and educational and workforce pipelines for young people in underserved communities.
- h. Conduct an evaluation of YEA national outcomes, including an online reporting system for Extension staff, volunteers, and youth.
- i. Plan hybrid (both in-person and/or virtual options) national-level professional development events to disseminate project developments, outcomes, and impacts.
- j. Develop a complete, thorough, YEA-CN sustainable plan to ensure the YEA program is continued after the duration of the grant.

Program Area Priority Additional Information:

- a. All applications must adhere to the requirements in Part IV of this RFA.
- b. Requests exceeding budgetary guidelines will not be reviewed. Unless otherwise stated, grants are not renewable.
- c. See [Part IV § C](#) for the **REQUIRED** Project Summary and Project Narrative format. Proposals that do not comply with these instructions will be excluded from review and consideration of funding.
- d. Applications from and collaborations with minority-serving institutions, small to mid-sized institutions, and/or institutions within the EPSCoR states are welcome in this program area priority.
- e. During the proposal review and award process, distribution of projects among Cooperative Extension geographic and institutional regions, plus distribution among program priority goals may be taken into consideration when making final award recommendations.
- f. Projects that incorporate research-proven and traditional indigenous ecological knowledge are encouraged. Material and outreach in indigenous languages are also encouraged.
- g. As applicable, if most project activities are taking place off-site, off-campus indirect cost rates should be charged.
- h. New partnerships between governments, agencies, small businesses, and youth organizations are welcome.
- i. Projects that promote and emphasize leadership, interpersonal and team skills, active

learning, resiliency, and workforce development are welcome. Projects are welcome to incorporate virtual learning options, youth voice opportunities, and justice, equity, diversity, inclusion, and access trainings in project activities.

- j. If organized by the program, the Project Director (PD) will be required to attend one PD meeting during the performance period of the award. Reasonable travel expenses must be included as part of the project budget. While budgets should account for this travel, NIFA may consider virtual, or hybrid meetings based on local and national pandemic conditions.
- k. Reasonable costs for evaluation and hiring of evaluation professionals may be included.

PART II. AWARD INFORMATION

A. Available Funding

The anticipated amount available for the AFRI Education and Workforce Development RFA in FY 2022 is approximately \$68,000,000. Additional projects submitted under this RFA will be considered should additional funding become available beyond the amount listed above.

For FY 2022, funding from FY 2022 and FY 2023 appropriations will be used. The anticipated amount available to support the AFRI program is approximately \$435 million for FY 2022 and \$435 million for FY 2023.

This RFA is being released prior to the passage of an appropriations act for FY 2023. Enactment of additional continuing resolutions or an appropriations act may affect the availability or level of funding for this program in FY 2023.

Of the total amount available to make awards for the AFRI program, no less than 30 percent will be made available to fund integrated research, education, and extension projects. Of the AFRI funds allocated to research activities, no less than 60 percent will be directed toward grants for fundamental (or basic) research and 40 percent toward grants for applied research. Of the AFRI funds allocated to fundamental research, not less than 30 percent will be directed toward research by multidisciplinary teams. It is expected that no less than 15 percent of the funds will be made available for Food and Agricultural Science Enhancement (FASE) Grants, and no more than two percent of the funds available for fundamental research will be made available for Equipment Grants (see [Part II § C](#) for information about FASE Grants including Equipment Grants).

Of the approximately \$68 million total available from FY 2022 and FY 2023 to support the program areas in this RFA, no less than 11.25% will be made available for Strengthening grant types under the FASE program.

The funds will be awarded through a grant for performance periods of up to five years. NIFA may choose to issue a grant on a continuation basis. A continuation award is an award instrument by which NIFA agrees to support a specified level of effort for a predetermined period of time with a statement of intention to provide additional support at a future date, provided that performance has been satisfactory, appropriations are available for this purpose, and continued support would be in the best interest of the federal government and the public. USDA is not committed to fund any particular application or to make a specific number of awards.

The [Automated Standard Application for Payments](#), operated by the Department of Treasury, Bureau of Fiscal Service, is the designated payment system for awards resulting from this RFA.

B. Application Restrictions

NIFA will evaluate applications using the criteria described in [Part V](#). Application for FY 2022 is limited to the following application types:

1. *New application*: New applications will be evaluated using the criteria described in [Part V](#) and are subject to the due dates herein (see [Appendix III](#) for definition).
2. *Resubmitted application*: Resubmitted applications must include the respond to the previous review panel summary and are subject to the same criteria and due dates herein. Resubmitted applicants must enter the NIFA-assigned proposal number of the previously

submitted application in the *Federal Field (Field 4)* on the application form (see [Appendix III](#) for definition).

C. Project and Grant Types

The following describes the types of *projects* or *grants* that are eligible for funding:

1. **Project Types.** Applicants must propose one of the AFRI project types specified within the relevant program area descriptions in Part I § C. Only project types specifically solicited under each program area or program area priority described in Part I § C will be considered for review. A detailed description of the project types (Research, Education, Extension, and Integrated Research, Education and/or Extension) available across all AFRI RFAs is in the “AFRI Project Types” PDF in the attachments list on the AFRI RFA Resources page.
2. **Grant Types.** Applicants must select the appropriate AFRI grant type specified within the relevant Program Area Descriptions in Part I § C. Only grant types specifically solicited under each program area or program area priority described in Part I § C will be considered for review. A detailed description of the grant types (Standard Grants, Coordinated Agricultural Projects, Conference Grants, Collaborative Grants, and FASE Grants) available across all AFRI RFAs is in the “AFRI Grant Types” PDF in the attachments list on the AFRI RFA Resources page.

D. Ethical Conduct of Funded Projects

In accordance with sections [2, 3, and 8 of 2 CFR Part 422](#), institutions that conduct USDA-funded extramural research must foster an atmosphere conducive to research integrity, bear primary responsibility for prevention and detection of research misconduct, and maintain and effectively communicate and train their staff regarding policies and procedures. In the event an application to NIFA results in an award, the Authorized Representative (AR) assures, through acceptance of the award that the institution will comply with the above requirements. Award recipients must, upon request, make available to NIFA the policies, procedures, and documentation to support the conduct of the training. See [Responsible and Ethical Conduct of Research](#) for further information.

PART III. ELIGIBILITY INFORMATION

A. Eligibility Requirements

Applicants for AFRI must meet all the requirements discussed in this RFA. Failure to meet the eligibility criteria by the application deadline may result in exclusion from consideration or, preclude NIFA from making an award. For those new to Federal financial assistance, NIFA's [Grants Overview](#) provides highly recommended information about grants and other resources to help understand the Federal awards process.

Eligibility is linked to the project type as specified below.

1. Research, Education or Extension Projects

Eligible applicants for single-function Research, Education or Extension Projects include:

- a) State Agricultural Experiment Station;
- b) colleges and universities (including junior colleges offering associate degrees or higher);
- c) university research foundations;
- d) other research institutions and organizations;
- e) Federal agencies;
- f) national laboratories;
- g) private organizations or corporations;
- h) individuals who are U.S. citizens, nationals, or permanent residents; and
- i) any group consisting of two or more entities identified in a) through h).

Eligible institutions do not include foreign and international organizations.

2. Integrated Projects

Eligible applicants for Integrated Projects include:

- a) colleges and universities;
- b) 1994 Land-Grant Institutions; and
- c) Hispanic-serving agricultural colleges and universities (see [NIFA's Hispanic-Serving Agricultural Colleges and Universities page](#)).

For item a) under Integrated Projects, the terms "college" and "university" mean an educational institution in any state which

- a) admits as regular students only persons having a certificate of graduation from a school providing secondary education, or the recognized equivalent of such a certificate;
- b) is legally authorized within such state to provide a program of education beyond secondary education;
- c) provides an educational program for which a bachelor's degree or any other higher degree is awarded;
- d) is a public or other nonprofit institution; and
- e) is accredited by a nationally recognized accrediting agency or association.

A research foundation maintained by a college or university is eligible to receive an award under this program.

3. Food and Agricultural Science Enhancement Grants

[Part II § C.2](#) contains the eligibility details for Food and Agricultural Science Enhancement (FASE) Grants. Note that under FASE program, New Investigator, Strengthening Standard, Strengthening Conference, Seed, Equipment and Sabbatical Grants are solicited in this RFA.

Applicants must respond to the program area priorities and deadlines found in [Part I § C](#). Grant recipients may subcontract to organizations not eligible to apply provided such organizations are necessary for the conduct of the project. Failure to meet an eligibility criterion by the application deadline may result in the application being excluded from consideration or, even though an application may be reviewed, will preclude NIFA from making an award (see [Part III § B](#)).

Duplicate or Multiple Submissions – duplicate or multiple submissions are not allowed. NIFA will disqualify both applications if an applicant submits duplicate or multiple submissions. For additional information please reach out to the NIFA contact listed in this RFA.

For those new to Federal financial assistance, NIFA’s [Grants Overview](#) provides highly recommended information about grants and other resources to help understand the Federal awards process.

B. Request for Determination of Status

1. Minority-Serving Institution

If an institution is applying for a Strengthening Grant (see [Part II § C.2](#)) and wants the Secretary to consider a group, beyond one included in the minority definition (see [Appendix III](#)), then documentation (see below) must be submitted as part of the requestor’s LOI (if required) and the full application package ([Part IV § C](#)) by the applicable program area or program area priority deadline. The Secretary of Agriculture (or designated individual) will use the information in the documentation to determine whether the group or groups identified are qualified as a minority group for the purpose of receiving a Strengthening Grant under the FASE program (for Strengthening Grants information, refer to the “AFRI Grant Types” PDF in the attachments list on the [AFRI RFA Resources page](#)).

Documentation for the request for determination as a minority-serving institution must include the following and be provided in the order specified below:

- a. A description of each minority group being submitted for determination;
- b. Data or studies supporting this group’s designation as a minority group; and
- c. Data indicating that enrollment of the minority group(s) exceeds 50 percent of the total enrollment at the academic institution, including graduate and undergraduate and full-and part-time students.

2. Multi-Campus Institution

All institutions grouped under one main campus as listed in Table 1 following [Appendix III](#), unless located in an Established Program to Stimulate Competitive Research (EPSCoR) state (listed in [Part II § C.2](#)), are excluded from eligibility for all strengthening funds. However, if any campus within a multi-campus listing can provide information demonstrating that it is administratively independent or has an independent accreditation, then the institution may petition for an exemption to this rule and request eligibility for strengthening funds. The LOI (if required) and the application must include a letter

indicating how the institution is independent of the main campus, either through accreditation or administration, how the institution is eligible as a small and mid-sized or minority-serving institution due to enrollment, and total federal funds received for science and engineering research and development. The letter must be signed by the Authorized Representative (AR).

C. Cost Sharing or Matching

Match Required – Applicants **MUST** provide matching contributions on a dollar-for-dollar basis for all Federal funds awarded under AFRI for equipment or applied research grants unless a waiver applies. Matching funds requirements for AFRI programs included in this RFA may be found at 7 U.S.C. 3157 (b)(9) (A-C). If an **applied Research** (see [Appendix III](#)) or **Integrated Project with an applied research component**, is commodity-specific and not of national scope, the grant recipient is required to match the USDA funds awarded on a dollar-for-dollar basis from non-federal sources with cash and/or in-kind contributions. NIFA may waive the matching funds requirement for a grant if one of the following applies:

1. The results of the project, while of particular benefit to a specific agricultural commodity, are likely to be applicable to agricultural commodities generally; or
2. The project involves a minor commodity, the project deals with scientifically important research, and the grant recipient is unable to satisfy the matching funds requirement.

For Equipment Grants. The amount of Federal funds provided may not exceed 50 percent of the cost of the equipment acquired using funds from the grant, or \$50,000, whichever is less. Grantees are required to match 100 percent of Federal funds awarded from non-Federal sources. NIFA may waive all or part of the matching requirement if all three of the following criteria are met:

1. application is from a college, university, or research foundation maintained by a college or university that ranks in the lowest one third of such colleges, universities, and research foundations on the basis of Federal research funds received (see “Table 2 Least Successful Institutions” in the attachments list on the [AFRI RFA Resources page](#));
2. the equipment to be acquired costs no more than \$25,000; and
3. the equipment has multiple uses within a single research project or is usable in more than one research project. To be considered for this waiver, the budget justification (see [Part IV § C](#)) must include a letter signed by the institution’s AR addressing the noted criteria.

D. Center of Excellence

Pursuant to Section 7214 of the Agricultural Act of 2014 (Pub. L. 113-79), 7 U.S.C. § 5926, NIFA will recognize and provide priority in the receipt of funding to applications from “centers of excellence” that carry out research, extension, and education activities that relate to the food and agricultural sciences. NIFA held listening sessions in July 2014 and accepted written comments from stakeholders to inform NIFA’s implementation of the Center of Excellence (COE) provision. Information from the webinars and a summary of the input are available on NIFA’s website at <http://nifa.usda.gov/centers-excellence>.

A COE is composed of one or more of the following entities that provide financial or in-kind support to the COE.

- (1) State agricultural experiment stations;
- (2) Colleges and universities;

- (3) University research foundations;
- (4) Other research institutions and organizations;
- (5) Federal agencies;
- (6) National laboratories;
- (7) Private organizations, foundations, or corporations;
- (8) Individuals; or
- (9) any group consisting of two or more of the entities described in (1) through (8).

COE recognition and priority is available only for the **standard grant and the Coordinated Agricultural Project (CAP) grant** applications submitted to the program areas or program area priorities in the Education and Workforce Development, Foundational and Applied Science, and Sustainable Agricultural Systems RFAs. If applicable, [Part IV § C](#), of the RFA contains additional requirements for COE consideration.

Center of Excellence Criteria

In addition to meeting the other requirements detailed in [Part IV § C](#), of this Request for Application (RFA), eligible applicants who wish to be recognized as centers of excellence must provide a brief justification statement at the end of their Project Narratives and within the page limits provided for Project Narratives, describing how they meet the standards of a center of excellence, based on the following criteria:

- (A) The ability of the center of excellence to ensure coordination and cost effectiveness by reducing unnecessarily duplicative efforts regarding research, teaching, and extension in the implementation of the proposed research and/or extension activity outlined in this application;
- (B) In addition to any applicable matching requirements, the ability of the center of excellence to leverage available resources by using public-private partnerships among agricultural industry groups, institutions of higher education, and the Federal Government in the implementation of the proposed research and/or extension activity outlined in this application. Resources leveraged should be commensurate with the size of the award;
- (C) The planned scope and capability of the center of excellence to implement teaching initiatives to increase awareness and effectively disseminate solutions to target audiences through extension activities in the implementation of the proposed research and/or extension activity outlined in this application; and
- (D) The ability or capacity of the center of excellence to increase the economic returns to rural communities by identifying, attracting, and directing funds to high-priority agricultural issues in support of and as a result of the implementation of the proposed research and/or extension activity outlined in this application.

Additionally, where practicable (not required), center of excellence applicants should describe proposed efforts to improve teaching capacity and infrastructure at colleges and universities (including land-grant colleges and universities, cooperating forestry schools, certified Non-Land Grant Colleges of Agriculture (NLGCA) (list of certified NLGCA is available at http://www.nifa.usda.gov/funding/pdfs/nlgca_colleges.pdf), and schools of veterinary medicine).

PART IV. APPLICATION AND SUBMISSION

A. Letter of Intent

If a program area or program area priority within this RFA requires a LOI (LOI), then a LOI is a prerequisite for submission of an application. Refer to the Program Area Descriptions beginning in [Part I § C](#) for LOI deadlines for a specific program area or program area priority. For detailed guidance on LOI submission, see “AFRI Letter of Intent Instructions” in the attachments list on the [AFRI RFA Resources page](#).

B. Method of Application

Applicants must apply to this RFA electronically; no other method or response is accepted. The electronic application for this RFA and additional resources are available on [Grants.gov](#) and [Grants 101](#). **Table 9** provides instructions on how to obtain an electronic application. **Part III** of the NIFA Grants Application Guide contains detailed information regarding the [Grants.gov](#) registration process. The NIFA Grants Application Guide is contained in the specific funding opportunity package, or a sample of the guide can be found [here](#). When applying for a NIFA award, it is important to reference the version of the guide that is included in the specific funding opportunity application package.

Table 11: Steps to Obtain Application Materials

Steps	Action
Step One: Register	<i>New Users</i> to Grants.gov must register early with Grants.gov prior to submitting an application (Register Here).
Step Two: Download Adobe	Download and Install Adobe Reader (see Adobe Software Compatibility for basic system requirements).
Step Three: Find Application	Using this funding opportunity number USDA-NIFA-AFRI-009041 search for application here: Opportunity Package .
Step Four: Assess Readiness	Contact an AR prior to starting an application to assess the organization’s readiness to submit an electronic application.

Table 12: Help and Resources

Grants.gov Support	NIFA Support
Grants.gov Online Support Telephone support: 800-518-4726 Toll-Free or 606-545-5035 Email support: support@grants.gov Self-service customer-based support: Grants.gov iPortalgrantapplicationquestions@usda.gov Key Information: Customer service business Hours 24/7, except federal holidays .	Email: grantapplicationquestions@usda.gov Key Information: Business hours: Monday thru Friday, 7a.m. – 5p.m. ET, except federal holidays

C. Content and Form of the Application

The application guide is part of the corresponding application package for this RFA. The RFA overrides the application guide if there is a discrepancy between the two documents. NIFA will accept subsequent submissions to an application until the application deadline. However, applicants that do not meet the application requirements, to include partial applications, risk being excluded from NIFA’s review. NIFA will assign a proposal number to all applications that meet the requirements of this RFA. Applicants must refer to the proposal number when corresponding with NIFA. **Table 11** outlines other key instructions for applicants.

Table 13: Key Application Instructions

Instruction	References (All references are to the Application Guide)
Attachments must be in a portable document format (PDF) format.	Part IV
Check the manifest of submitted files to verify attachments are in the correct format.	Part IV
Conduct an administrative review of the application before submission.	Part IV
Follow the submission instructions.	Part V
Provide an accurate email address, where designated, on the SF-424 R&R.	Part V
Contact the Grants.gov helpdesk for technical support and keep a record of the correspondence.	N/A
Contact NIFA if applicant does not receive correspondence from NIFA regarding an application within 30 days of the application deadline.	N/A

AFRI Specific Application Instructions. Application and submission information including page limits and narrative font sizes for AFRI Education and Workforce Development RFA applications are available in the “FY 2022 Education and Workforce Development RFA Additional Information for Part IV, C” PDF in the attachments list on the [AFRI RFA Resources page](#).

We recommend that you conduct an administrative review of the application before submission of it via Grants.gov to ensure that it complies with all preparation instructions. An application checklist is included in Part VII of the NIFA Grants.gov Application Guide to assist with this review.

You should check the application for completeness. The application should be checked for the following required items, which must include:

1. Project Summary/Abstract
2. Project Narrative
3. Bibliography & References Cited
4. Logic Model for Integrated Projects (if applicable)
5. Management Plan for Integrated Projects (if applicable)
6. Data Management Plan
7. Facilities & Other Resources
8. Curriculum Vitae
9. Conflict of Interest Lists
10. Current and Pending Support
11. Budget
12. Budget Justification
13. Felony and Tax Certification Form (if applicable)

This is not an exhaustive list of required items; it only serves to highlight items that may be overlooked. **Failure to include any of the three critical required documents of Project Summary/Abstract, Project Narrative, or Bibliography & References Cited sections as PDF attachment will result in the application not being reviewed or considered for funding by NIFA.**

We send email correspondence to the AR regarding the status of submitted applications. We strongly encourage you to provide accurate email addresses, where designated, on the SF-424 R&R Application for Federal Assistance.

If the AR has not received correspondence **from NIFA** regarding a submitted application within 30 days of the established deadline, contact the Program Contact identified in [Part I § C](#) and request the proposal number assigned to the application. **Failure to do so may result in the application not being considered for funding by the peer review panel. Once the application has been assigned a proposal number, you should cite this number on all future correspondence.**

D. Funding Restrictions

Indirect Cost (IDC) not to exceed 30 percent of Total Federal Funds Awarded (TFFA) of the recipient. Section 1462(a) and (c) of the [National Agricultural Research, Extension, and Teaching Policy Act of 1977 \(NARETPA\)](#) limits IDC for the overall award to 30 percent of Total Federal Funds Awarded (TFFA) under a research, education, or extension grant. The maximum IDC rate allowed under the award is determined by calculating the amount of IDC using:

1. the sum of an institution's negotiated indirect cost rate and the indirect cost rate charged by sub-awardees, if any; or
2. 30 percent of TFFA.

The maximum allowable IDC rate under the award, including the IDC charged by the sub-awardee(s), if any, is the lesser of the two rates.

If the result of number one is the lesser of the two rates, the grant recipient is allowed to charge the negotiated IDC rate on the prime award and the sub-award(s), if any. Any sub-awards would be subject to the sub-awardee's negotiated IDC rate. The sub-awardee may charge its negotiated IDC rate on its portion of the award, provided the sum of the IDC rate charged under the award by the prime awardee and the sub-awardee(s) does not exceed 30 percent of the TFFA.

If the result of number two is the lesser of the two rates, then the maximum IDC rate allowed for the overall award, including any sub-award(s), is limited to 30 percent of the TFFA. That is, the IDC of the prime awardee plus the sum of the IDC charged by the sub-awardee(s), if any, may not exceed 30 percent of the TFFA.

In the event of an award, the prime awardee is responsible for ensuring the maximum indirect cost allowed for the award is not exceeded when combining IDC for the Federal portion (i.e., prime and sub-awardee(s)) and any applicable cost-sharing (see [7 CFR 3430.52\(b\)](#)). Amounts exceeding the maximum allowable IDC are considered unallowable. See sections [408](#) and [410](#) of [2 CFR 200](#).

Successful applicants must not use grant funds awarded under the authority of this RFA to renovate or refurbish research, education, or extension space; purchase or install fixed equipment in such space; or to plan, repair, rehabilitate, acquire, or construct buildings or facilities.

PART V. APPLICATION REVIEW REQUIREMENTS

A. NIFA's Evaluation Process

NIFA evaluates each application in a two-part process. First, we screen each application to ensure that it meets the administrative requirements set forth in this RFA. All administrative requirements must be met in order for the application to proceed to the next level of review. Second, a scientific peer-review process will be used to technically evaluate applications that have met the administrative requirements using a review panel (see [NIFA Peer Review Process](#)).

Scientific Peer Review Process:

NIFA selects reviewers for the review panel based upon their training and experience in relevant scientific, extension, or education fields, taking into account the following factors:

1. the level of relevant formal scientific, technical education, or extension experience of the individual, as well as the extent to which an individual is engaged in relevant research, education, or extension activities.
2. the need to include experts from various areas of specialization within relevant scientific, education, or extension fields.
3. the need to include other experts (e.g., producers, range or forest managers/operators, researchers, public health practitioners, educators, consumers, and commercial reviews) who can assess relevance of the applications to targeted audiences and to program needs.
4. the need to include experts from a variety of organizational types (e.g., colleges, universities, industry, state and Federal agencies, and private profit and non-profit organizations) and geographic locations.
5. the need to maintain a balanced composition with regard to minority and female representation and an equitable age distribution; and
6. the need to include reviewers who can judge the effective usefulness of each application to producers and the general public.

After each peer review panel has completed its deliberations, the responsible program staff of NIFA will recommend that your project is either approved for support from currently available funds or declined due to insufficient funds or unfavorable review.

NIFA reserves the right to negotiate with the PD/PI and/or the submitting organization or institution regarding project revisions (e.g., reductions in the scope of work, funding level, period, or method of support) prior to recommending any project for funding.

After the review process has been completed, NIFA sends copies of reviews, *not* including the identity of reviewers, and a summary (if applicable) of the review panel comments to the PD.

Conflicts of interest. NIFA takes extreme care to prevent any actual or perceived conflicts of interest that may influence the review or evaluation (see [NIFA Peer Review Process for Competitive Grant Applications](#)).

B. Evaluation Criteria

NIFA will use the following criteria to evaluate this RFA:

A reviewer's written evaluation entails two levels of assessment. First, the reviewer summarizes how well the application addressed each evaluation criterion. After the application has been assessed for strengths and weaknesses of each criterion, the reviewer then evaluates the overall likelihood that the project will have significant outcome and impact. The written reviews are used to begin panel discussions with other reviewers serving on the peer review panel. Through these discussions, peer review panelists come to consensus on the final ranking of the applications. A complete description of NIFA's peer review process can be found on the [NIFA Peer Review Process for Competitive Grant Applications page](#).

Detailed evaluation criteria for each project type, grant type, and centers of excellence are found in the "AFRI Review Criteria" PDF in the attachments list on the [AFRI RFA Resources page](#). We will use the appropriate evaluation criteria to review applications submitted in response to this RFA.

C. Centers of Excellence

In addition to evaluating applicants using the criterion listed in [Part V § B](#), NIFA will use the COE standards described in this RFA to evaluate applicants that rank highly meritorious and requested to be recognized as a COE. In instances where applicants are found to be equally meritorious with the application of a non-COE applicant, NIFA will prioritize the COE applicant meeting the COE criteria. NIFA will effectively use the COE prioritization as a "tie breaker." Applicants that rank highly meritorious but who did not request consideration as a COE or who are not deemed to have met the COE standards may still receive funding.

Applicants that meet the COE requirements will have the COE designation in their notice of award. Entities recognized as COE will maintain that distinction for the duration of their period of performance or as identified in the terms and conditions of that award.

D. Organizational Management Information

Applicants must submit specific management information relating to an applicant prior to an award and update the information as needed. Applicants may only have to update their information if they had previously provided the information under this or another NIFA program. NIFA provides the requisite forms during the pre-award process. Although an applicant may be eligible for award under this program, there are factors that may exclude an applicant from receiving federal financial and nonfinancial assistance and benefits under this program (e.g., debarment or suspension of an individual, or a determination that an applicant is not responsible).

E. Application Disposition

Applicants may withdraw at any time before NIFA makes a final funding decision. NIFA will retain all applications, including withdrawn applications and unfunded applications.

PART VI. AWARD ADMINISTRATION

A. General

Within the limit of funds authorized, the NIFA awarding official will make grants to responsible and eligible applicants whose applications are judged most meritorious under the procedures set forth in this RFA. The date specified by the NIFA awarding official as the effective date of the grant must be no later than September 30 of the federal fiscal year in which the project is approved for support and funds are appropriated for such purpose, unless otherwise permitted by law. The project need not be initiated on the grant effective date, but as soon thereafter as practical so that project goals may be attained within the funded project period. All funds granted by NIFA under this RFA may be used only for the purpose for which they are granted in accordance with the approved application and budget, regulations, terms and conditions of the award, applicable federal cost principles, USDA assistance regulations, and [NIFA General Awards Administration Provisions, 7 CFR Part 3430, subparts A through E](#).

Award Notice. The award document will provide pertinent instructions and information as described in [2 CFR 200.211](#) (see [NIFA's Terms and Conditions](#)).

B. Administrative and National Policy Requirements

Several federal statutes and regulations apply to grant applications and the projects outlined in this RFA (some are listed here: [Federal Regulations](#)). Unless specifically noted by statute or award-specific requirements, [NIFA Policy Guide](#) applies to all NIFA awards.

PART VII. OTHER INFORMATION

A. Use of Funds and Changes in Budget

Delegation of fiscal responsibility. Unless the terms and conditions of the award state otherwise, awardees may not in whole or in part delegate or transfer to another person, institution, or organization the responsibility for use or expenditure of award funds.

Changes in Budget or Project Plans. In accordance with [2 CFR 200.308](#), awardees must request prior approval from NIFA for the following program or budget-related reasons (the awardee is subject to the terms and conditions identified in the award):

1. Change in the scope or the objective of the project or program without prior written approval (even if there is no associated budget revision requiring).
2. Change in a key person specified in the application or the federal award.
3. Disengagement from the project for more than three months, or a 25 percent reduction in time devoted to the project.
4. Inclusion of costs that require prior approval in accordance with [2 CFR 200 Subpart E \(Cost Principles\)](#), or [45 CFR Part 75 Appendix IX, \(Principles for Determining Costs Applicable to Research and Development under Awards and Contracts with Hospitals\)](#), or [48 CFR](#), unless waived by the federal awarding agency,
5. [48 CFR Part 31, Contract Cost Principles and Procedures](#);
6. Transfer of funds budgeted for participant support costs to other categories of expense ([2 CFR 200.456 Participant support costs](#));
7. Sub-awarding, transferring or contracting out of any work under a federal award, including fixed amount sub-awards (see [2 CFR 200.333, Fixed Amount Sub-awards](#)), unless described in the application and funded in the approved federal awards. This provision does not apply to the acquisition of supplies, material, equipment, or general support services.
8. Changes in the approved cost-sharing or matching provided by the non-federal entity; and
9. The need for additional federal funds to complete the project.

B. Confidential Aspects of Applications and Awards

When an application results in an award, it becomes a part of NIFA transaction records, which are available to the public. Information that the Secretary of Agriculture determines to be confidential, privileged, or proprietary in nature will be held in confidence to the extent permitted by law. Therefore, applicants should clearly mark any information within the application they wish to have considered as confidential, privileged, or proprietary. NIFA will retain a copy of an application that does not result in an award for three years. Such an application will be released only with the consent of the applicant or to the extent required by law. An applicant may withdraw at any time prior to the final action thereon.

C. Regulatory Information

This program is not subject to the provisions of Executive Order 12372, which requires intergovernmental consultation with state and local officials. Under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), the collection of information requirements contained in this notice have been approved under OMB Document No. 0524-0039.

APPENDIX I: AGENCY CONTACT

AFRI Program Office:

Dr. Parag Chitnis, Associate Director, National Institute of Food and Agriculture
 Dr. Debora Hamernik, Deputy Director, Institute of Food Production and Sustainability
 Dr. Suzanne Stluka, Deputy Director, Institute of Food Safety and Nutrition
 Dr. Venugopal Kalavacharla, Deputy Director, Institute of Youth, Family, and Community
 Dr. Kevin Kephart, Deputy Director, Institute of Bioenergy, Climate, and Environment
 Telephone: (816) 926-1604
 E-mail: AFRI@usda.gov

Specific questions pertaining to technical matters may be directed to the appropriate Program Area Contacts:

Program Area Contacts

Program Area	Program Area Contacts
Professional Development for Agricultural Literacy (PDAL) Grants	Dr. Carlos Ortiz, (202) 445-5594 or carlos.ortiz@usda.gov
Agricultural Workforce Training (AWT) Grants	Dr. Carlos Ortiz, (202) 445-5594 or carlos.ortiz@usda.gov
Food and Agricultural Non-formal Education (FANE)	Dr. Jeff Sallee, (816) 814-4746 or jeffrey.sallee@usda.gov
Research and Extension Experiences for Undergraduates (REEU)	Dr. Ray Ali, (816) 926-1453 or nifa-education@usda.gov
Predoctoral Fellowships	Dr. Ray Ali, (816) 926-1453 or nifafellows@usda.gov
Postdoctoral Fellowships	Dr. Ray Ali, (816) 926-1453 or nifafellows@usda.gov
National Extension Clearinghouse for Industry and the Workforce	Dr. Carlos Ortiz, (202) 445-5594 or carlos.ortiz@usda.gov
Youth Innovators Empowering Agriculture Across America	Dr. Maurice Smith, (816) 518-1754 or maurice.smith2@usda.gov

For administrative questions related to

1. Grants.gov, see [Part IV](#)
2. Other RFA or application questions, please email grantapplicationquestions@usda.gov
3. Awards under this RFA, please email awards@usda.gov

U.S. Postal Mailing Address:

National Institute of Food and Agriculture
 U.S. Department of Agriculture
 P.O. Box 419205, MS 10000
 Kansas City, MO 64141-6205

Courier/Package Delivery Address:
National Institute of Food and Agriculture
United States Department of Agriculture
2312 East Bannister Road, MS 10000
Kansas City, MO 64141-3061

APPENDIX II: GLOSSARY OF TERMS

Name	Acronyms
Agriculture and Food Research Initiative	AFRI
Authorized Representative	AR
Agricultural Research, Extension, and Education Reform Act of 1998	AREERA
Coordinated Agricultural Project	CAP
Catalog of Federal Domestic Assistance	CFDA
Centers of Excellence	COE
Data Management Plan	DMP
Education and Workforce Development	EWD
Established Program to Stimulate Competitive Research	EPSCoR
Food and Agricultural Science Enhancement	FASE
Indirect costs	IDC
National Institute of Food and Agriculture	NIFA
Request for Application	RFA
Research, Education, and Economics	REE
United States Department of Agriculture	USDA

APPENDIX III: DEFINITIONS

Refer to [7 CFR 3430 Competitive and Noncompetitive Non-formula Federal Assistance Programs – General Award Administrative Provisions](#) for additional definitions.

Terms	Definitions
Applied Research	Research that includes expansion of the findings of fundamental research to uncover practical ways in which new knowledge can be advanced to benefit individuals and society.
Continuation Award	An award instrument by which NIFA agrees to support a specified level of effort for a predetermined period of time with a statement of intention to provide additional support at a future date, provided that performance has been satisfactory, appropriations are available for this purpose, and continued support would be in the best interest of the federal government and the public.
Education Activity	Education activity or teaching activity means formal classroom instruction, laboratory instruction, and practicum experience in the food and agricultural sciences and other related matters such as faculty development, student recruitment and services, curriculum development, instructional materials and equipment, and innovative teaching methodologies.
Established Program to Stimulate Competitive Research	EPSCoR is a list of eligible states that are eligible for USDA EPSCoR funding which is determined every year by NIFA. This list includes states having a funding level no higher than the 38th percentile of all States based on a 3-year rolling average of AFRI funding levels, excluding FASE Strengthening funds granted to EPSCoR States and small-midsized and minority-serving degree-granting institutions. The current list is included in the “AFRI Grant Types” PDF in the attachments list on the AFRI RFA Resources page .
Extension Activity	Extension activity means an act or process that delivers science-based knowledge and informal educational programs to people, enabling them to make practical decisions.
Food and Agricultural Science Enhancement Grants	FASE Grants mean funding awarded to eligible applicants to strengthen science capabilities of Project Directors, to help institutions develop competitive scientific programs, and to attract new scientists into careers in high-priority areas of National need in agriculture, food, and environmental sciences. FASE awards may apply to any of the three agricultural knowledge components (i.e., research, education, and extension). FASE awards include

Terms	Definitions
	Pre- and Postdoctoral Fellowships, New Investigator grants, and Strengthening grants.
Limited Institutional Success	Limited institutional success means institutions that are not among the most successful universities and colleges for receiving Federal funds for science and engineering research. A list of successful institutions is provided in the “Table 2 Least Successful Institutions” PDF in the attachments list on the AFRI RFA Resources page .
Matching	The process through which a grant recipient match awarded USDA funds with cash and in-kind contributions on a dollar-for-dollar basis. The matching funds must derive from non-Federal sources.
Minority	Minority means Alaskan Native, American Indian, Asian-American, African-American, Hispanic American, Native Hawaiian, or Pacific Islander. The Secretary will determine on a case-by-case basis whether additional groups qualify under this definition, either at the Secretary of Agriculture’s initiative, or in response to a written request with supporting explanation.
Minority-Serving Institution	Minority-Serving Institution means an accredited academic institution whose enrollment of a single minority or a combination of minorities exceeds 50% of the total enrollment, including graduate and undergraduate and full- and part-time students. An institution in this instance is an organization that is independently accredited as determined by reference to the current version of the <i>Higher Education Directory</i> , published by Higher Education Publications, Inc., 6400 Arlington Boulevard, Suite 648, Falls Church, Virginia 22042 (703-532-2300).
Multidisciplinary Project	A project on which investigators from two or more disciplines collaborate to address a common problem. These collaborations, where appropriate, may integrate the biological, physical, chemical, or social sciences.
New Application	An application not previously submitted to a program.
Renewal Application	A project application that seeks additional funding for a project beyond the period that was approved in an original or amended award.
Resubmitted Application	A project application that was previously submitted to a program, but the application was not funded.
Resubmitted Renewal Application	A project application that requests additional funding for a project beyond the period that was approved in the original award. This is an application that had previously been submitted for renewal to but not funded.
Small and Mid-Sized Institutions	Academic institutions with a current total enrollment of 17,500 or less including graduate and undergraduate and

Terms	Definitions
	<p>full- and part-time students. An institution, in this instance, is an organization that possesses a significant degree of autonomy. Significant degree of autonomy is defined by being independently accredited as determined by reference to the current version of the Higher Education Directory, published by Higher Education Publications, Inc., 6400 Arlington Boulevard, Suite 648, Falls Church, Virginia 22042 (703-532-2300).</p>
<p>Strengthening Grants</p>	<p>Funds awarded to institutions eligible for FASE Grants to enhance institutional capacity, with the goal of leading to future funding in the project area, as well as strengthening the competitiveness of the investigator’s research, education, and/or extension activities. Strengthening grants consist of Standard, Coordinated Agricultural Project, and Conference Grant types as well as Seed Grants, Equipment Grants, and Sabbatical Grants.</p>
<p>Transdisciplinary Team</p>	<p>A team composed of investigators from multiple disciplines that cross boundaries using holistic approaches to address complex challenges that cannot be solved using single-disciplinary approaches.</p>
<p>USDA Established Program to Stimulate Competitive Research States</p>	<p>EPSCoR States mean States which have been less successful in receiving funding from AFRI, having a funding level no higher than the 38th percentile of all States based on a 3-year average of AFRI funding levels, excluding FASE Strengthening funds granted to state agricultural experiment stations and degree-granting institutions in EPSCoR States and small, mid-sized, and minority-serving degree-granting institutions. The most recent list of USDA EPSCoR States is provided in the “AFRI Grant Types” PDF in the attachments list on the AFRI RFA Resources page.</p>

APPENDIX IV: OTHER AFRI RESOURCES

AFRI program information is available on the [NIFA AFRI website](#). The following are among the materials available:

1. [Stakeholder Input](#)
2. [Requests for Applications](#)
3. [AFRI Abstracts of Funded Projects Listed by State](#)
4. [AFRI Annual Review](#)
5. [Frequently Asked Questions](#)
6. [Interagency Programs](#)
7. [AFRI RFA Resources](#)
 - a. ***Most Successful Universities and Colleges.*** Any institution listed on this list, Most Successful Universities and Colleges Receiving Federal Funds, is not eligible for Strengthening Grants from the FASE program unless they are located in an EPSCoR state. See “Table 1 Most Successful Institutions” in the attachments list.
 - b. ***Lowest One Third of Universities and Colleges Receiving Federal Funds.*** The lowest one third of universities and colleges receiving Federal funds is used to determine eligibility for possible waiver of matching funds requirement for Equipment Grants (see “Table 2 Least Successful Institutions” in the attachments list).
 - c. ***Flow Chart for Strengthening Grant Eligibility.*** The Flow Chart for Strengthening Grant Eligibility will help to determine your eligibility to apply for strengthening grants (see “FASE Strengthening Grant Eligibility Flow Chart” in the attachments list).
8. [AFRI Deadlines](#)