Agriculture and Food Research Initiative Competitive Grants Program

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Sustainable Agricultural Systems

Fiscal Year (FY) 2018 Request for Applications (RFA)

LETTER OF INTENT DEADLINE: June 27, 2018
APPLICATION DEADLINE: October 10, 2018

ELIGIBILITY: See Part III, A of RFA

USDA
United States
Department of
Agriculture

National Institute
of Food and
Agriculture

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE; U.S. DEPARTMENT OF AGRICULTURE

AGRICULTURE AND FOOD RESEARCH INITIATIVE COMPETITIVE GRANTS PROGRAM

SUSTAINABLE AGRICULTURAL SYSTEMS

INITIAL ANNOUNCEMENT

CATALOG OF FEDERAL DOMESTIC ASSISTANCE: This program is listed in the Catalog of Federal Domestic Assistance under 10.310.

DATES FOR LETTERS OF INTENT AND APPLICATIONS: The Program Area Descriptions section in Part I, C, identifies the applicability of a Letter of Intent (LOI) and, if applicable, the deadline date for its submission. In these instances, it must be received by **5:00 p.m. Eastern Time** on the deadline date. Applications must be received by **5:00 p.m. Eastern Time** on the deadline date indicated in the Program Area Descriptions section in Part I, C. Applications received after this deadline will normally not be considered for funding (see Part IV, C). Comments regarding this request for applications (RFA) are requested within six months from the issuance of this notice. Comments received after that date will be considered to the extent practicable.

STAKEHOLDER INPUT: We at the National Institute of Food and Agriculture (NIFA) seek your comments about this request for applications (RFA). We will consider your comments when we develop the next RFA for the program, if applicable, and we'll use them to 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)). Submit your written comments by the deadline set forth in the DATES portion of this notice via email to Policy@nifa.usda.gov. (This email address is only for receiving comments regarding this RFA and *not* for requesting information or forms.) In your comments, please state that you are responding to this RFA.

Visit the NIFA website to access a factsheet on the Center of Excellence (COE) designation process, including COE criteria, and a list of programs offering COE opportunities in fiscal year (FY) 2018. You may also review a recording of COE outreach webinars and Frequently Asked Questions on the COE webpage. We will update COE webpages as appropriate.

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 2014 Farm Bill priority areas. NIFA received topics from eligible commodity boards through August 8, 2017, for incorporation into FY 2018 RFAs. Topics submitted by the commodity boards that aligned with NIFA priorities were chosen for inclusion in selected program areas of relevant AFRI RFA. 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. Details on general information and topic submission resources for inclusion in future AFRI RFAs can be found at: http://nifa.usda.gov/commodity-boards.

EXECUTIVE SUMMARY: The Agriculture and Food Research Initiative (AFRI) is a competitive grant program that provides funding for fundamental and applied research, education, and extension projects in food, agriculture, natural resources, and human sciences. Within AFRI, the long-term purpose of this new Sustainable Agricultural Systems (SAS) Request for Applications (RFA) is to help transform U.S. food and agricultural system to increase production in sustainable ways as we approach a world population of 10 billion by 2050, and doing so in the context of diminishing land and water resources, changing climate and increasing frequency of extreme weather events, threats of outbreaks of diseases and pests, and challenges to human health and well-being.

Solving these challenges will require a convergence of science and technology to optimize agricultural productivity; ensure safe, affordable, and nutritious supply of food; invigorate and realize the promise of the bioeconomy; and promote the development of a talented agricultural workforce. Recent advances in plant and animal biology, new technologies, Big Data, knowledge of infrastructure and markets, and holistic approaches offer unprecedented opportunities for meeting the demands of the growing population. Transformation of our nation's agricultural systems can ensure continued productivity growth, while conserving the natural resources and minimizing the environmental footprint of agriculture. It can also support the need for human capital to catalyze a secure global food system that meets the health and nutritional needs of people across rural and urban communities alike, both here in the U.S. and abroad.

For FY 2018, applications to the SAS RFA must focus on approaches that promote transformational changes in the U.S. food and agriculture system within the next 25 years. NIFA seeks creative and visionary applications that take a systems approach, and that will significantly improve the supply of abundant, affordable, safe, nutritious, and accessible food, while providing sustainable opportunities for expansion of the bioeconomy through novel animal, crop, and forest products and supporting technologies. These approaches must demonstrate current and future social, behavioral, economic, health, and environmental impacts. Additionally, the outcomes of the work being proposed must result in societal benefits, including promotion of rural prosperity and enhancement of quality of life for those involved in food and agricultural value chains from production to utilization and consumption.

The amount available for new grants in this FY 2018 SAS RFA is $80 million, for awards of up to $10-million each.

This RFA solicits Coordinated Agricultural Project Grants, and Strengthening Coordinated Agricultural Project Grants (Food and Agricultural Science Enhancement (FASE)), whereas project type solicited in this RFA is Integrated project. See Part I, C (Program Area Description) for grant and project types solicited, and Part II, C, for a description of each individual grant type and project type.

This notice identifies the objectives for AFRI SAS projects, deadline dates, funding information, eligibility criteria for projects and applicants, and application forms and associated instructions needed to apply for an AFRI SAS grant.

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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 2014 Farm Bill 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 USC 3157). The Secretary delegates the authority to the Under Secretary in 7 CFR 2.21 and the Under Secretary delegates it to NIFA.

B. Purpose and Priorities

The purpose of AFRI is to support research, education, and extension work by awarding grants to solve key problems of local, regional, national, and global importance in sustaining conventional, organic, and urban agricultural systems. These include farm efficiency, profitability and sustainability, ranching, bioenergy, 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, home economics and rural human ecology, biotechnology, and classical breeding. 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 RFA provides funding for integrated research, education, and extension projects, which includes Food and Agricultural Science Enhancement (FASE) grants.

Food and agricultural systems are under the constraints of a growing population, 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 require research, education, extension, and integrated programs in concert with agroecological 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 having a site-specific application that will, over the long-term, achieve the following 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. AFRI encourages projects addressing enhancement of sustainability of agricultural systems.

NIFA supports global engagement that advances U.S. agricultural goals. To attain the agency's goals for U.S. agriculture, global competence of our nation's agricultural workforce, and safe and nutritious food security in a growing world, NIFA recognizes that collaboration with international partners through AFRI can contribute to advances in U.S. agriculture. In an increasingly interconnected world, these U.S. advances may have global importance. Thus, applications in response to this RFA may include collaborations with international partners, but may only be submitted by eligible U.S. institutions. Such applications may include subcontracts to international partners or other institutions and must clearly demonstrate benefits to the U.S. Additional guidance on including international activities is provided on the AFRI International Partnerships website.

Stakeholder Input
For information on stakeholder input related to AFRI program, visit
https://nifa.usda.gov/resource/afri-stakeholder-feedback.

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 (RFA) for addressing critical societal issues.

This AFRI RFA aligns with Strategic Goals 2, 3, 4, 5, 6, and 7 of the USDA Strategic Goals.

This AFRI RFA aligns with the USDA Research, Education, and Economics (REE) Action Plan. Program Areas in this AFRI RFA draws from specific actionable items defined in the REE Action Plan including: Goals 1, Sustainable Intensification of Agricultural Production; 2, Responding to Climate and Energy Needs; 3, Sustainable Use of Natural Resources; 5, Food Safety; and 7, Rural Prosperity/Rural-Urban Interdependence. NIFA may also solicit additional applications for the usage of AFRI funds through other announcements, including supplemental AFRI RFAs or RFAs issued in conjunction with other Federal agencies. Such announcements will be made public in the same manner as this announcement. Other sources of NIFA funding for work relevant to this RFA can be found at www.nifa.usda.gov/afri.

This AFRI RFA is also aligned with the NIFA Strategic plan, and specifically addresses Strategic Goal 1: Science-Catalyze exemplary and relevant research, education, and extension programs (Subgoals 1.1, 1.2, 1.3, 1.4, 1.6, and 1.7).

C. Program Area Description

Total Program Funds – $80 million

In FY 2018, applications are solicited under the following Program Area.

Sustainable Agricultural Systems
Program Area Code – A9201
Proposed Budget Requests
- Coordinated Agricultural Projects must not exceed **$10 million total per project (including indirect costs) for project periods of up to five years**. This program area priority anticipates making approximately eight new awards.
- Food and Agricultural Science Enhancement (FASE) grants must adhere to the guidelines outlined beginning in Part II, C. 2.
- Requests exceeding the budgetary guidelines will not be reviewed.

Requested Project Type – Integrated Projects only (must include Research, Education, and Extension components within a project)
Requested Grant Type – Coordinated Agricultural Project and FASE (Strengthening Coordinated Agricultural Project) Grants only
Letter of Intent Deadline – June 27, 2018 (5:00 p.m., Eastern Time)
Program Area e-mail Address for Submission of Letter of Intent – AFRI-SAS@nifa.usda.gov
Application Deadline – October 10, 2018 (5:00 p.m., Eastern Time)
Program Area Contact – Dr. Rachel Melnick; Dr. Mervalin Morant; Dr. Mathieu Ngouajio; Dr. Robbin Shoemaker; and Dr. Steven Smith (202-401-6602 or AFRI-SAS@nifa.usda.gov)

Program Area Priority –
The purpose of the SAS Program Area is to promote the sustainable supply of abundant, affordable, safe, nutritious, and accessible food and other agricultural products, while enhancing economic opportunities and improving the long-term health and well-being of all Americans. This RFA solicits applications for projects focused on increasing agricultural productivity; optimizing water and nitrogen use efficiency; protecting yield losses from stresses, diseases, and pests; reducing food-borne diseases; and advancing development of biobased fuels, chemicals, and coproducts. This RFA is soliciting creative and visionary project applications that use transdisciplinary teams and integrated research, education, and extension activities to promote convergence of science and technology to solve present and future food and agricultural production system challenges.

Successful projects will consider what has contributed to present successes of U.S. food and agriculture systems, and challenges to continued and future success. Agricultural systems are inclusive of value chains from production to consumption for food or other products from farms, ranches, and managed forests across the rural-urban continuum from conventional open-fields to controlled production in built environments. Consideration must be given for how new strategies or other technical interventions may alter many factors involved in the conduct of the system. Applicants must demonstrate changes that are crucial to ensuring the food and agricultural supply and viability of the entire value chain. This includes profitability, natural resources

quality, food safety and quality, and the health and well-being of people and communities. Additionally, the systems must help develop and execute approaches to reducing the ecological footprint including, but not limited to, water and nutrient use, greenhouse gases, and energy use.

Projects must include demonstrable efforts that enhance the education and training of the next generation of farmers, workers, and scientists who are equipped to use new skills, technology, training, and experiences to find solutions to global food and agricultural challenges. Extension and other engagement must advance public acceptance of transformative discoveries. These outcomes must produce significant behavioral changes that lead to sustainable production and consumption practices, and improve the health and well-being of the public.

Projects must propose performance metrics that measure progress during the grant period toward the 25-year goals described below. These metrics must demonstrate how the proposed system and its components contribute to productivity and profitability, reduced ecological footprint, natural resources quality, food safety and quality, nutritional security, human health and well-being, a skilled workforce, and safe jobs.

Applications must address one or more of the following 25-year goals:

- Increase growth of agricultural total factor productivity (TFP) from the current 1.5 percent to 2 percent per year and agricultural production by 2 percent annually. TFP is a measure of productivity performance that takes into account a broad set of inputs used in agricultural production that can be influenced by changes across systems. TFP compares all land, labor, capital, and material resources used in the sector's total output. Interventions are sought that will sustain growth in the rate of production that result in continued increases in TFP.

- Improve water and nitrogen and phosphorus nutrient use efficiency by 50 percent. Crop and livestock (including hydroponic, aquaculture, and integrated aquaponic systems), and managed forest production can be improved by use of non-traditional water sources; greater resource scavenging by roots; improving the absorption and utilization of nutrients; new or improved breeds or varieties; manipulating microbiomes; irrigation management; or recycling and reuse and conservation of water and nutrients. Development or improvement of models, decision support tools, data systems, technology innovations, and system reconfigurations at and across relevant scales can lead to new efficiencies.

- Reduce losses due to environmental stresses, insects and other invertebrate pests, weeds, or diseases by 20 percent in crops and animals used for food, fiber, or bioproducts production. Protecting yields and other supply chain components from biotic and abiotic stress losses can increase food and economic security. Comprehensive strategies are needed for dealing with the effects of climate and extreme weather events, pathogens, pests, and parasites on agricultural production, food quality, nutritional security, and food safety. These strategies can extend to positive impacts on the health of farmers, agricultural workers, consumers, and others who could be affected by changes to food and agricultural systems.

- Produce 50 billion gallons of biofuels and 50 billion pounds of biobased chemicals and bioproducts in the next 25 years. The development of sustainable biomass feedstock supply chains that complement existing agriculture production systems can improve overall system profitability and productivity. Strategies must address social, behavioral, and economic barriers to adoption; enhance existing food, feed, and fiber production systems; and create beneficial ecosystem services, such as improved water availability and quality, nutrient use reduction, or wildlife and pollinator habitat enhancements. Proposals must also describe how these systems can be used to expand the bioeconomy, rural prosperity, and creation of jobs.

- Reduce food-borne illnesses to 8.5 cases per 100,000 people in the U.S. population per year. To achieve this goal, targeted approaches are needed to prevent foodborne illness incidence, while increasing the availability and accessibility of safe and nutritious food for people of all ages and all income levels. Changes to food and agricultural systems can impact the incidence of foodborne illness, nutrient composition of foods, diet quality, and nutritional security that can greatly impact overall quality of life and human health and well-being. Targeted approaches for improving food safety should include investigations of the survival, growth, and spread of foodborne pests, microbes and their genes, as well as the development of antimicrobial resistant pathogens in food environments across the food chain.

Descriptions and examples of goals given above are meant to be guidance for project development, rather than being prescriptive. The project teams are expected to define the scope of their systems, system components, and detailed metrics that are directed at achieving one or more of the five goals in this RFA.

Program Area Additional Information:
- All applications must adhere to the requirements beginning in Part IV.
  - A Management Plan (see Part IV, C., 3. f. "Field 12. Other Attachments" for additional information) **must** include project governance, a stakeholder advisory board, involvement of an external evaluator, and progress reporting. The plan must clearly articulate with an organizational chart how the project will be governed. A well-thought strategy must be communicated to enhance coordination, collaboration, communication, and data sharing and reporting among members of the project team and stakeholder groups. The management plan must include an advisory group of principal stakeholders, partners, and professionals to assess and evaluate the quality, expected measurable outcomes, and potential impacts for the proposed research, education and extension. An external evaluator must be employed, with a specified amount of funding set aside for evaluation support. Success of meeting objectives must be demonstrated through proposed project metrics. Reporting requirements will include a description of key achievements including the publicly available and compatible technologies, information, and data products.
  - A Data Management Plan (see Part IV, C., 3. f. "Field 12. Other Attachments" for additional information) must include making data publicly available or compatible with other open databases and sources. A reasonable budget allocation for data

management is allowed as direct cost. Each Project Director (PD) must attend an inaugural project directors meeting in Washington, DC, to share and coordinate their data management strategies with PDs from other funded projects to increase the value of the collective data through compatibility and sharing with regard to privacy, security and ethics.

- o A Logic Model (see Part IV, C., 3. f. "Field 12. Other Attachments" for additional information) must include elements detailing the activities, outputs, and outcomes of the proposed project. The logic model planning process is a tool that should be used to develop a project before writing the application. This information may be provided as a narrative or formatted into a logic model chart.
- Applications from and collaborations with small to mid-sized institutions, Minority Serving Institutions, and/or institutions within the Established Program to Stimulate Competitive Research (EPSCoR) states are encouraged. Applications that include collaboration with international partners are also encouraged. For information on NIFA partnerships that may be of interest to applicants, see: https://nifa.usda.gov/resource/afri-international-partnerships.
- Letter of Intent (LOI) format is defined in Part IV, A. LOIs must also include: (1) a descriptive title; (2) description of the goal(s) addressed by the project, including short, medium, and long-term objectives; (3) description of the scope of systems and justification of components under investigation; (4) clear descriptions and justification of the methods for the integrated and transdisciplinary approach to be used to achieve the desired goal(s); and (5) description of the benefits to the food and agricultural system.
- Projects must provide clear description of how transdisciplinary approaches will be deployed to achieve the goals of the project as defined in Part VIII, D. Proposals must demonstrate linkages between the biophysical, social, behavioral, and economic sciences necessary to address the complex challenges in developing sustainable agricultural systems.
- For this Program Area, successful projects will integrate all three functions of the agricultural knowledge systems (i.e., Research, Education and Extension) within a project focused around a problem or challenge. Each application should be planned, developed, and written in a manner that reflects the input and expertise of the entire integrated project team. Each integrated activity should be represented by one or more objectives within the application, with no more than two-thirds of a project's budget being allocated to any single activity.
- Extension components must include the following:
  - o A high degree of engagement among researchers, extension or other engagement personnel, and relevant stakeholders, from inception through implementation of the project;
  - o Approaches that consider human dimensions affecting decision making (e.g., assess individual, stakeholder group, or community needs; develop strategies that incentivize changes in practices to manage lands, crops and/or systems; adoption of new technologies and other interventions based on knowledge of user preferences);
  - o Innovative approaches to disseminate significant project results and/or best management practices.
- Educational components must significantly utilize the following kinds of instruments: curriculum development, novel experiential learning opportunities, promote development

of leadership skills (critical thinking and problem solving, communication, working in transdisciplinary and multi-institutional teams, and other such skills), online educational resources, citizen science, apps, educational games, or other educational activities and materials. Investigators are strongly encouraged to engage a diverse population of students in these activities, including socially disadvantaged and non-traditional students, and can include positive youth development programs such as 4-H.

- Applicants must clearly identify the systems addressed in their projects and provide justification for why that particular system, its scope, and components were selected. Where possible, each application must describe the prioritization process used to determine which systems and components to investigate as related to the food and agricultural production practices, supply chain components, consumption end uses, and its impacts on people.
- Applicants must describe a meaningful approach for blending research, education, and extension expertise and other extension and implementation approaches throughout the project to address principal objectives.
- Applicants must provide evidence that the project is aligned with AFRI priorities outlined in the Farm Bill listed in this RFA.
- Applicants should describe expected solutions or improvements and how these will be assessed and measured in their project.
- Applicants must address the potential costs of a proposed solution in their project and describe how it can be scaled to be used in the short-and long-term based on technical, economic, and social feasibility.
- Applicants must explain how the project will strengthen agricultural and food-production systems and how results will be adopted or applied at a local, regional, or national level.
- During the proposal review process, the diversity of kinds of agricultural systems and 25-year goals included may be taken into consideration when making final awards.
- Applicants are encouraged to consult the definitions and examples of the food and agricultural systems in: National Academy of Sciences report on "A Framework for Assessing Effects of the Food System," and the National Research Council food system definition. For additional resources on AFRI, including SAS, see NIFA webpage.

PART II—AWARD INFORMATION

A. Available Funding

The anticipated appropriated amount available to support the AFRI program in FY 2018 is $400 million, of which $80 million will be available to support the Program Area in this AFRI RFA.

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 FY 2018 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 and Equipment Grants).

Of the $80 million available to support the Program Area in this RFA, no less than 11.25% will be made available for Strengthening Coordinated Agricultural Project Grants under the FASE program. No other FASE grant types are available under the program area in this RFA.

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. Note that the continuation grants are not available for the program area in this RFA. There is no commitment by NIFA to fund any particular application or to make a specific number of awards.

The Automated Standard Applications for Payment System (ASAP), operated by the Department of Treasury's Bureau of the Fiscal Service, is the designated payment system for awards resulting from this RFA. For more information see
https://www.fiscal.treasury.gov/fsservices/gov/pmt/asap/asap_home.htm.

B. Types of Applications

AFRI Program has the following three types of requests: (1) New Application; (2) Renewal Application; or (3) Resubmitted Application. Only "New Applications" may be submitted to this RFA in this fiscal year.

    (1) New application. This is a project application that has not been previously submitted to NIFA. We will review all new applications to ensure they meet administrative requirements and all applications will be competitively evaluated by a review panel using criteria and selection processes described in Part V—Application Review Requirements.

(2) Renewal application. This is a project application that requests additional funding for a project beyond the period that was approved in an original or amended award. Applications for renewed funding must contain the same information as required for new applications; they also must contain a Progress Report (see Project Narrative, Part IV). We must receive the renewal applications by the relevant due dates. We will evaluate renewal applications in competition with other pending applications in the program area priority to which they are assigned, and will be reviewed according to the same evaluation criteria (Part V, B) as new applications. If you are submitting renewal application, enter the NIFA-assigned award number of the previously-funded application in the Federal Identifier (Field 4.a. of the SF 424 (R&R) form).

(3) Resubmitted application. This is an application that was submitted previously to NIFA but not funded. Project Directors (PDs) must respond to the previous review panel summary (see Response to Previous Review, Part IV, C). We must receive resubmitted applications by the relevant due dates. We will evaluate resubmitted applications in competition with other pending applications in the appropriate program priority area to which they are assigned, and review them according to the same evaluation criteria (Part V, B) as new applications. A renewal application that was submitted previously but not funded and is being resubmitted is also considered as Resubmitted application; however, PDs must include a Progress Report (see 2 above) and a Response to Previous Review. If you are resubmitting an application, enter the NIFA-assigned proposal number of the previously-submitted application in the Federal Identifier (Field 4.a. of the SF 424 (R&R) form).

C. Project Types and Grant Types

1. **Project Types**. Applicants must propose the AFRI project type specified within the relevant program area description in Part I, C, of this RFA. Only project type specifically solicited under the Program Area or Program Area Priority described in Part I, C. of this RFA will be considered for review. A detailed description of the project types available across AFRI is located on the [NIFA website](#).

2. **Grant Types.** Applicants must select the appropriate AFRI grant type specified within the relevant program area description in Part I, C. of this RFA. Only grant types specifically solicited under the program area or program area priority described in Part I, C, of this RFA will be considered for review. A detailed description of the grant types available across AFRI is located on the [NIFA website](#).

D. Responsible and Ethical Conduct of Research

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 of 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 shall, upon request, make available to NIFA the policies, procedures, and documentation to support the conduct of the training. See http://nifa.usda.gov/responsible-and-ethical-conduct-research for more information.

PART III—ELIGIBILITY INFORMATION

A. Eligible Applicants

Applications may only be submitted by eligible entities. Eligibility is linked to the project type as specified below. Note that this RFA lists the general eligibility requirements for AFRI but only integrated and applicable FASE grants are relevant for this RFA.

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 https://nifa.usda.gov/hispanic-serving-agricultural-colleges-and-universities-hsacu).

   For item a) under Integrated Projects, the terms "college" and "university" mean an educational institution in any state which i) 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; ii) is legally authorized within such state to provide a program of education beyond secondary education; iii) provides an educational program for which a bachelor's degree or any other higher degree is awarded; iv) is a public or other nonprofit institution; and v) 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 the FASE program, only Strengthening Coordinated Agricultural Project Grants are solicited in this RFA.

Applicants must respond to the Program Area priorities and deadlines found in Part I, C. of this RFA. 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).

B. Request for Determination of Status

1. Minority–Serving Institution

If an institution can be considered a minority-serving institution and wishes to be considered for a Strengthening Grant (see Part II, C. 2), but does not serve one or more of the groups identified as a minority (see definition Part VIII, D), the applicant must submit documentation supporting the request. This documentation (see below) must be submitted as part of the requestor's Letter of Intent (if required) and the full application package (Part IV, C) and we must receive it by the applicable program area or program area priority deadline. The Secretary of Agriculture or designated individual will determine whether the group or groups identified are eligible as a minority group for the purpose of receiving a Strengthening Grant under the FASE program (for Strengthening Grants information, refer to https://nifa.usda.gov/sites/default/files/resource/AFRI-Grant-Types.pdf).

Documentation must be included in the order specified below:
      a.   A description of each minority group being served;
      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

Table 1 is a listing of institutions that are not eligible for any strengthening funds except those institutions located in an Established Program to Stimulate Competitive Research (EPSCoR) States (see Part II, C. 2.). If an ineligible institution consists of multiple campuses that are not listed, those individual campuses may request an exemption by providing information on their independent administration or independent accreditation. If an exemption is approved, then the campus is eligible for strengthening funds. To request an exemption, the documentation (see below) must be submitted as part of the Letter of Intent (if required) and the full application package (Part IV, C). The documentation will be used to, for example, verify the campus is administratively independent of the listed institution.

A letter, signed by the Authorized Representative (AR), must be included documenting to support the institution is:
      a.   independent of the main campus, either through accreditation or administration and
      b.   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.

C. Cost Sharing or Matching

If an applied **Research** (see Part VIII, D) **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 based on submitted document (see Part IV, C., 6), for a grant if we determine that:

> a. The results of the project, while of particular benefit to a specific agricultural commodity, are likely to be applicable to agricultural commodities generally; or
>
> b. 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.

Note that only integrated projects are solicited in this RFA.

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, following Part VIII, for eligibility); 2) the equipment to be acquired costs not 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., 6) must include a letter signed by the institution's AR addressing the noted criteria.
Note that Equipment Grants are not solicited in this RFA.

D. Center of Excellence

Pursuant to Section 7214 of the Agricultural Act of 2014 (Pub. L. 113-79), 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 designation 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 Foundational and Applied Science, and Sustainable Agricultural Systems RFAs. If applicable, Part IV, C., of the RFA contains additional requirements for COE consideration.

PART IV—APPLICATION AND SUBMISSION INFORMATION

A. Letter of Intent

If a Program Area or Program Area Priority within this RFA requires a Letter of Intent (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 Priorities. For detailed guidance on LOI submission, see LOI Instructions.

B. Electronic Application Package

Only electronic applications may be submitted via Grants.gov to NIFA in response to this RFA. We urge you to submit early to the Grants.gov system. For information about the pre-award phase of the grant lifecycle see http://www.grants.gov/web/grants/learn-grants/grants-101/pre-award-phase.html.

New Users of Grants.gov
Prior to preparing an application, we recommend that the Project Director/Principal Investigator (PD/PI) first contact an AR to determine if the organization is prepared to submit electronic applications through Grants.gov. If not (e.g., the institution/organization is new to the electronic grant application process through Grants.gov), then the one-time registration process must be completed **PRIOR** to submitting an application. It can take as long as two weeks to complete the registration process so it is critical to begin as soon as possible. In such situations, the AR should go to **"Register," in the top right corner of the Grants.gov web page (or go to** http://www.grants.gov/web/grants/register.html**), for information on registering the institution/organization with Grants.gov.** Part II, 1 of the NIFA Grants.gov Application Guide contains detailed information regarding the registration process. Refer to item 2, below, to locate the "NIFA Grants.gov Application Guide."

Steps to Obtain Application Package Materials
To receive application materials:
1. You must download and install a version of Adobe Reader compatible with Grants.gov to access, complete, and submit applications. For basic system requirements and download instructions, see http://www.grants.gov/web/grants/applicants/adobe-software-compatibility.html. Grants.gov has a test package that will help you determine whether your current version of Adobe Reader is compatible.

2. To obtain the application package from Grants.gov, go to http://www.grants.gov/web/grants/applicants/download-application-package.html and enter the funding opportunity number

   Funding Opportunity Number: USDA-NIFA-AFRI-006553]

   Click "Search". On the displayed page, click the corresponding link to continue. A Grant Application Package is tied to a particular funding opportunity. You may submit an

application ONLY to the particular funding opportunity to which the Grant Application Package is associated.

Contained within the application package is the "NIFA Grants.gov Application Guide." This guide contains an introduction and general Grants.gov instructions, information about how to use a Grant Application Package in Grants.gov, and instructions on how to complete the application forms.

If you require assistance to access the application package (e.g., downloading or navigating Adobe forms) **or submitting the application,** refer to resources available on the Grants.gov website (https://www.grants.gov/web/grants/applicants.html). Grants.gov assistance is also available at:

Grants.gov customer support (https://www.grants.gov/web/grants/support.html) 800-518-4726 Toll-Free or 606-545-5035
Business Hours: 24 hours a day, 7 days a week. Closed on Federal holidays
Email: support@grants.gov
Grants.gov iPortal (see https://grants-portal.psc.gov/Welcome.aspx?pt=Grants): Top 10 requested help topics (FAQs), Searchable knowledge base, self-service ticketing and ticket status, and live web chat (available 7:00a.m. – 9:00p.m. Eastern Time).
Have the following information available when contacting Grants.gov:
- Funding Opportunity Number (FON)
- Name of agency you are applying to
- Specific area of concern

C. Content and Form of Application Submission

See the details on the NIFA website.

D. Submission Dates and Times

1. **Letter of Intent**
   The Letter of intent if applicable, must be received at NIFA by **5:00 p.m. Eastern Time** on the dates indicated in the Program Area Descriptions beginning in Part I, C and in the format specified in Part IV, A. The LOI (if applicable) is a prerequisite for the submission of a full application.

2. **Full Application**
   Applications must be received by Grants.gov by **5:00 p.m. Eastern Time on the dates indicated in the Program Area Descriptions beginning in Part I, C**. Applications received after this deadline will normally <u>not</u> be considered for funding.

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:
- Project Summary/Abstract
- Project Narrative
- Bibliography & References Cited
- Logic Model for Integrated Program
- Management Plan for Integrated Program
- Data Management Plan
- Facilities & Other Resources
- Curriculum Vitae
- Conflict of Interest Lists
- Current and pending support
- Budget
- Budget Justification
- Felony and Tax Certification Form

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.**

Instructions for submitting an application are included in Part IV, Section 1.5 of the NIFA Grants.gov Application Guide.

If you have trouble submitting an application to Grants.gov, you should FIRST contact the Grants.gov Help Desk to resolve any problems. Keep a record of any such correspondence. See Part IV, B for Grants.gov contact information.

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 Agency Contact identified in Part VII of the RFA 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.**

E. Funding Restrictions

Section 713 of the Consolidated Appropriations Act, 2018 (H.R. 1625) limits indirect costs to 30 percent of the total Federal funds provided (or 42.857 percent of total direct costs) under each award. When preparing budgets, you should limit your request for the recovery of indirect costs to the lesser of your institution's official negotiated indirect cost rate or the equivalent of 30 percent of total Federal funds awarded. See Part V section 7.9 of the NIFA Grants.gov Application Guide for further indirect cost information.

You may not use grant funds awarded under this authority to renovate or refurbish research, education, or extension space; purchase or install fixed equipment in such place; or the plan, repair, rehabilitate, acquire, or construction of buildings or facilities.

F. Other Submission Requirements

You should follow the submission requirements noted in Part IV, Section 1.5 in the document entitled "NIFA Grants.gov Application Guide."

For information about the **status of a submitted application**, see Part III, Section 6 of the NIFA Grants.gov Application Guide.

<u>Multiple submissions</u>
In accordance with Part III, Section 5 of NIFA Grants.gov Application Guide, duplicate, essentially duplicate or predominantly overlapping applications submitted to one or more program areas within the AFRI (including FASE Grants) in any one fiscal year will not be reviewed. In addition, applicants may not submit to AFRI an application that is considered duplicate, essentially duplicate, or predominantly overlapping with an application submitted to another NIFA program in the same fiscal year.

PART V—APPLICATION REVIEW REQUIREMENTS

A. General

We evaluate each application in a two-part process. First, we screen each application to ensure that it meets the administrative requirements as set forth in this RFA. Second, a scientific peer-review process will be used to technically evaluate applications that meet the administrative requirements using a review panel.

Scientific Peer Review Process:
Reviewers will be selected for the review panel based upon their training and experience in relevant scientific, extension, or education fields, taking into account the following factors:
- 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;
- the need to include experts from various areas of specialization within relevant scientific, education, or extension fields;
- the need to include other experts (e.g., producers, range or forest managers/operators, and consumers) who can assess relevance of the applications to targeted audiences and to program needs;
- 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;
- the need to maintain a balanced composition with regard to minority and female representation and an equitable age distribution; and
- 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 been completed its deliberations, the responsible program staff will recommend that your project has either been approved for support from currently available funds or been 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 AFRI project for funding.

We will send copies of reviews, *not* including the identity of reviewers, and a summary (if applicable) of the review panel comments to the PD after the review process has been completed.

B. Evaluation Criteria

Detailed evaluation criteria for each project types, grant types, exploratory projects and center of excellence are outlined at AFRI–Evaluation Criteria. We will use the appropriate evaluation criteria to review applications submitted in response to this RFA.

C. Conflicts of Interest and Confidentiality

During the peer evaluation process, we take extreme care to prevent any actual or perceived conflicts of interest that may impact review or evaluation. See http://www.nifa.usda.gov/business/competitive_peer_review.html for further information about conflicts of interest and confidentiality as related to the peer review process.

D. Organizational Management Information

Specific management information relating to an applicant shall be submitted one-time, with updates on an as-needed basis. This requirement is part of the responsibility determined prior to the award of a grant identified under this RFA, if such information has not been provided previously under this or another NIFA program. We will provide you copies of forms recommended for use in fulfilling these requirements as part of the pre-award process. Although an applicant may be eligible based on its status as one of these entities, 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 involved or a determination that an applicant is not responsible based on submitted organizational management information).

E. Application Disposition

An application may be withdrawn at any time before a final funding decision is made regarding the application. Each application that is not selected for funding, including those that are withdrawn, will be retained by the agency for a period of three years.

PART VI—AWARD ADMINISTRATION

A. General

Within the limit of funds available for such purpose, the NIFA awarding official shall make grants to those responsible, 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 shall 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 does not need to 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 at 7 CFR part 3430, subparts A through E.

B. Award Notice

The award document will provide pertinent instructions and information including, at a minimum, the information described in 2 CFR 200.210.

See http://www.nifa.usda.gov/business/awards/awardterms.html to view current NIFA award terms and conditions.

C. Administrative and National Policy Requirements

Several Federal statutes and regulations apply to grant applications considered for review and to project grants awarded under this program. These may include, but are not limited to, the ones listed on the NIFA web page – http://nifa.usda.gov/federal-regulations.

NIFA Federal Assistance Policy Guide—a compendium of basic NIFA policies and procedures that apply to all NIFA awards, unless there are statutory, regulatory, or award-specific requirements to the contrary—is available at http://nifa.usda.gov/policy-guide.

D. Responsible and Ethical Conduct of Research

Refer to Part II, D for more information.

E. Expected Program Outputs and Reporting Requirements

The output and reporting requirements are included in the award terms and conditions (see http://www.nifa.usda.gov/business/awards/awardterms.html for information about NIFA award terms). If there are any program or award-specific award terms, they will be identified in the award.

PART VII—AGENCY CONTACTS

For general questions related to the AFRI Programs, applicants and other interested parties are encouraged to contact:

AFRI Program Office:
Dr. Parag Chitnis, Deputy Director, Institute of Food Production and Sustainability
Dr. Denise Eblen, Deputy Director, Institute of Food Safety and Nutrition
Dr. Muquarrab Qureshi, Deputy Director, Institute of Youth, Family, and Community
Dr. Louis Tupas, Deputy Director, Institute of Bioenergy, Climate, and Environment
        Telephone: (202) 401-5022
        Fax: (202) 401-6488
        E-mail: AFRI@nifa.usda.gov

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

Program Area	Program Area Contact
Sustainable Agricultural Systems	Rachel Melnick (202) 401-6602 or AFRI-SAS@nifa.usda.gov Mervalin Morant (202) 401-6602 or AFRI-SAS@nifa.usda.gov Mathieu Ngouajio (202) 401-6602 or AFRI-SAS@nifa.usda.gov Robbin Shoemaker (202) 720-6602 or AFRI-SAS@nifa.usda.gov Steven Smith (202) 401-6602 or AFRI-SAS@nifa.usda.gov

Administrative/Business Contacts:
        Rochelle McCrea
        Title: Team Leader, Team I
        Unit: Branch II
        Location: 2160 Waterfront Centre
        Full Address and Directions
        Phone: (202) 401-2880
        Fax: (202) 401- 6271
        Email: rmccrea@nifa.usda.gov

        Sondra Watkins
        Title: Team Leader, Team I
        Unit: Branch I
        Location: 2170 Waterfront Centre
        Full Address and Directions
        Phone: (202) 401- 4249
        Fax: (202)-401-3237
        Email: swatkins@nifa.usda.gov

PART VIII—OTHER INFORMATION

A. Use of Funds; Changes

1. 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.

2. 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:
  (i)   Change in the scope or the objective of the project or program (even if there is no associated budget revision requiring prior written approval).
  (ii)   Change in a key person specified in the application or the Federal award.
  (iii) The disengagement from the project for more than three months, or a 25 percent reduction in time devoted to the project, by the approved project director or principal investigator.
  (iv)   The inclusion, unless waived by the Federal awarding agency, of costs that require prior approval in accordance with 2 CFR 200 Subpart E—Cost Principles of this part 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 Part 31, "Contract Cost Principles and Procedures," as applicable.
  (v)   The transfer of funds budgeted for participant support costs as defined in §200.75 Participant support costs to other categories of expense.
  (vi)   Unless described in the application and funded in the approved Federal awards, the subawarding, transferring or contracting out of any work under a Federal award, including fixed amount subawards as described in §200.332 Fixed amount subawards. This provision does not apply to the acquisition of supplies, material, equipment, or general support services.
  (vii) Changes in the approved cost-sharing or matching provided by the non-Federal entity.
  (viii) The need arises for additional Federal funds to complete the project.

The awardee will be subject to the terms and conditions identified in the award. See http://www.nifa.usda.gov/business/awards/awardterms.html for information about NIFA award terms.

B. Confidential Aspects of Applications and Awards

When an application results in an award, it becomes a part of the record of NIFA transactions, available to the public upon specific request. Information that the Secretary of Agriculture determines to be of a confidential, privileged, or proprietary nature will be held in confidence to the extent permitted by law. Therefore, any information that the applicant wishes to have considered as confidential, privileged, or proprietary should be clearly marked within the application. We will retain for three years a copy of an application that does not result in an

award. Such an application will be released only with the consent of the applicant or to the extent required by law. An application may be withdrawn at any time prior to the final action thereon.

C. Regulatory Information

This program is not subject to the provisions of the 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.

D. Definitions

Please refer to [7 CFR 3430, Competitive and Noncompetitive Non-formula Financial Assistance Programs--General Award Administrative Provisions](#), for applicable definitions for this NIFA grant program.

For the purpose of this program, the following additional definitions are applicable:

Applied Research means 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.

Food and Agricultural Science Enhancement (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 Pre- and Postdoctoral Fellowships, New Investigator grants, and Strengthening grants.

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 will be provided in the RFA.

Minority-serving institution means an accredited academic institution whose enrollment of a single minority or a combination of minorities exceeds fifty percent 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 *Higher Education Directory*, published by Higher Education Publications, Inc., 6400 Arlington Boulevard, Suite 648, Falls Church, Virginia 22042 (703-532-2300).

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's initiative, or in response to a written request with supporting explanation.

Multidisciplinary project means 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.

Small and mid-sized institutions are academic institutions with a current total enrollment of 17,500 or less including graduate and undergraduate and 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).

Strengthening Grants mean 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.

Transdisciplinary Team is composed of investigators from multiple disciplines that cross boundaries using holistic approaches to address complex challenges that cannot be solved using single-disciplinary approaches. .

USDA EPSCoR States (Established Program to Stimulate Competitive Research, formerly Experimental Program to Stimulate Competitive Research) means 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 at https://nifa.usda.gov/sites/default/files/resource/AFRI-Grant-Types.pdf.

E. Materials Available on the Internet
AFRI program information will be made available on the NIFA website at www.nifa.usda.gov/funding/afri/afri.html. The following are among the materials available on the NIFA website:
1. Stakeholder Input
2. Requests for Applications
3. AFRI Abstracts of Funded Projects
4. AFRI Annual Synopsis
5. Frequently Asked Questions
6. Interagency Programs

TABLE 1. Most Successful Universities and Colleges
Any institution listed in Table 1 is not eligible for Strengthening Grants from the FASE program unless they are located in an EPSCoR state.

TABLE 2. Lowest One Third of Universities and Colleges Receiving Federal Funds
The lowest one third of universities and colleges receiving Federal funds used to determine eligibility for possible waiver of matching funds requirement for Equipment Grants.

FIGURE 1. Flow Chart for Strengthening Grant Eligibility
The flow chart will help to determine your eligibility to apply for strengthening grants.