

The following details Part V of all AFRI Request for Applications

May 1, 2019: Updated information for Education and Workforce Development programs. (pages 8-13)

PART V—APPLICATION REVIEW REQUIREMENTS

B. Evaluation Criteria

Projects supported under the AFRI program shall be designed, among other things, to accomplish one or more of the purposes of agriculture research, education, and extension, subject to the varying conditions and needs of States. Therefore, in carrying out its review, the peer review panel will take into account the following factors.

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. An application does not need to be equally meritorious in all criteria to be judged likely to have major impact on U.S. food and agriculture. Standard grant applications are evaluated primarily for scientific merit. Evaluation of project relevance is to determine if the project is relevant to U.S. agriculture and program priorities, whereas assessment of project team qualifications, adequacy of facilities and project management is to determine if the necessary qualifications, expertise and facilities are available to complete the project as proposed.

1. Research Project Applications

These evaluation criteria will be used for the review of all single-function Research Project applications.

- a. Scientific Merit of the Application for Research
 1. Novelty, innovation, uniqueness, and originality;
 2. Where model systems are used, ability to transfer knowledge gained from these systems to organisms of importance to U.S. agriculture;
 3. Conceptual adequacy of the research and suitability of the hypothesis, as applicable;
 4. Clarity and delineation of objectives;
 5. Adequacy of the description of the undertaking;
 6. Suitability and feasibility of methodology and data management plan;
 7. Demonstration of feasibility through preliminary data; and
 8. Probability of success of the project is appropriate given the level of scientific originality, and risk-reward balance.
- b. Qualifications of Project Personnel, Adequacy of Facilities, and Project Management
 1. Qualifications of applicant (individual or team) to conduct the proposed project, including performance record and potential for future

- accomplishments;
2. Demonstrated awareness of previous and alternative approaches to the problem identified in the application;
 3. Institutional experience and competence in subject area;
 4. Adequacy of available or obtainable support personnel, facilities, and instrumentation; and
 5. Planning and administration of the proposed project, including: time allocated for systematic attainment of objectives; and planned administration of the proposed project and its maintenance, partnerships, collaborative efforts, and the planned dissemination of information for multi-institutional projects over the duration of the project.
- c. Project Relevance
1. Documentation that the research is directed toward specific Program Area Priority identified in this RFA and is designed to accelerate progress toward the productivity and economic, environmental, and social sustainability of U.S. agriculture with respect to natural resources and the environment, human health and well-being, and rural communities.
 2. When international collaboration or activities are involved, the project leverages expertise, resources, and experience from beyond the United States to achieve greater impact, or brings foreign or international research efforts to address issues relevant to U.S. agriculture.
- d. Center of Excellence Status
1. All eligible applicants will be competitively peer reviewed (as described in Part V, A. and B. of this RFA), and ranked in accordance with the evaluation criteria. Those that rank highly meritorious and requested to be considered as a center of excellence will be further evaluated by the peer panel to determine whether they have met the standards to be centers of excellence (Part III D. and Part IV C.). In instances where they are found to be equally meritorious with the application of a non-center of excellence, based on peer review, selection for funding will be weighed in favor of applicants meeting the center of excellence criteria. NIFA will effectively use the center of excellence prioritization as a “tie breaker”. Applicants that rank highly meritorious but who did not request consideration as a center of excellence or who are not deemed to have met the centers of excellence standards may still receive funding.

In addition, the applicant’s Notice of Award will reflect that, for the particular grant program, the applicant meets all of the requirements of a center of excellence. Entities recognized as centers of excellence will maintain that distinction for the duration of their period of performance or as identified in the terms and conditions of that award.

2. **Education Project Applications**

These evaluation criteria will be used for the review of all single-function Education Project applications.

- a. Merit of the Application for Science Education
 1. Exhibit standards of high quality and educational excellence;
 2. Include goals with measurable objectives and an evaluation component;
 3. Data management plan is appropriate, clearly described, and feasible;
 4. Be replicable, consistent in quality and designed to be sustainable;
 5. Address science education goals identified by USDA and national science education organizations, such as the National Academy of Sciences and the National Science Foundation; and
 6. Increase the number of people who choose to enroll in courses and have careers supporting the science-based food and agriculture mission of USDA. Include under-represented groups as appropriate.

- b. Qualifications of Project Personnel, Adequacy of Facilities, and Project Management
 1. Roles of key personnel are clearly defined;
 2. Key personnel have sufficient expertise to complete the proposed project, and where appropriate, partnerships with other disciplines (*e.g.*, social science or economics) and institutions are established;
 3. Evidence of institutional capacity and competence in the proposed area of work is provided;
 4. Support personnel, facilities, and instrumentation are sufficient;
 5. A clear plan is articulated for project management, including time allocated for attainment of objectives and delivery of products, maintenance of partnerships and collaborations, a strategy for recruiting students where appropriate, and a strategy to enhance communication, data sharing, and reporting among members of the project team; and
 6. The budget clearly allocates sufficient resources to carry out a set of education activities that will lead to desired outcomes.

- c. Project Relevance
 1. The project addresses a stated Program Area Priority;
 2. Project plan fully addresses the problem or issue identified;
 3. The proposed work addresses identified stakeholder needs;
 4. Stakeholder involvement in project development, implementation, and evaluation is demonstrated, where appropriate;
 5. Plan and methods for evaluating success of project activities and documenting potential impact against measurable short and mid-term outcomes are suitable and feasible;
 6. Science-based knowledge gained, curricula and related products developed will sustain education functions beyond the life of the project; and
 7. The resulting curricula or products share information and recommendations based on knowledge and conclusions from a broad range of research initiatives.

- c. Center of Excellence Status
 1. All eligible applicants will be competitively peer reviewed (as described in Part V, A. and B. of this RFA), and ranked in accordance with the evaluation criteria. Those that rank highly meritorious and requested to be considered as a center of

excellence will be further evaluated by the peer panel to determine whether they have met the standards to be centers of excellence (Part III D. and Part IV C.). In instances where they are found to be equally meritorious with the application of a non-center of excellence, based on peer review, selection for funding will be weighed in favor of applicants meeting the center of excellence criteria. NIFA will effectively use the center of excellence prioritization as a “tie breaker”. Applicants that rank highly meritorious but who did not request consideration as a center of excellence or who are not deemed to have met the centers of excellence standards may still receive funding.

In addition, the applicant’s Notice of Award will reflect that, for the particular grant program, the applicant meets all of the requirements of a center of excellence. Entities recognized as centers of excellence will maintain that distinction for the duration of their period of performance or as identified in the terms and conditions of that award.

3. **Extension Project Applications**

These evaluation criteria will be used for the review of all single-function Extension Project applications.

- a. Merit of the Application for Science Extension
 1. Project objectives and outcomes are clearly described, adequate, and appropriate;
 2. Proposed approach, procedures, or methodologies and data management plan are appropriate, clearly described, and feasible;
 3. Proposed extension leads to measurable, documented changes in learning, actions, or conditions in an identified audience or stakeholder group.

- b. Qualifications of Project Personnel, Adequacy of Facilities, and Project Management
 1. Roles of key personnel are clearly defined;
 2. Key personnel have sufficient expertise to complete the proposed project, and where appropriate, partnerships with other disciplines (*e.g.*, social science or economics) and institutions are established;
 3. Evidence of institutional capacity and competence in the proposed area of work is provided;
 4. Support personnel, facilities, and equipment/instrumentation are sufficient;
 5. A clear plan is articulated for project management, including time allocated for attainment of objectives and delivery of products, maintenance of partnerships with stakeholders and collaborations, and a strategy to enhance communication, data sharing concerning outcomes including changes in learning, actions or conditions, and reporting among members of the project team.

- c. Project Relevance

The project addresses a stated Program Area Priority;

 1. The proposed work addresses identified stakeholder needs;

2. Stakeholder involvement in project development, implementation, and evaluation is demonstrated, where appropriate;
 3. Plan and methods for evaluating success of project activities and documenting potential impact against measurable short and mid-term outcomes are suitable and feasible;
 4. Curricula and related products such as materials developed for eXtension communities of practice will sustain informal education or extension functions beyond the life of the project; and
 5. Extension activities and the resulting curricula or products share information and recommendations based on knowledge and conclusions from a broad range of research initiatives.
- d. Center of Excellence Status
1. All eligible applicants will be competitively peer reviewed (as described in Part V, A. and B. of this RFA), and ranked in accordance with the evaluation criteria. Those that rank highly meritorious and requested to be considered as a center of excellence will be further evaluated by the peer panel to determine whether they have met the standards to be centers of excellence (Part III D. and Part IV C.). In instances where they are found to be equally meritorious with the application of a non-center of excellence, based on peer review, selection for funding will be weighed in favor of applicants meeting the center of excellence criteria. NIFA will effectively use the center of excellence prioritization as a “tie breaker”. Applicants that rank highly meritorious but who did not request consideration as a center of excellence or who are not deemed to have met the centers of excellence standards may still receive funding.

In addition, the applicant’s Notice of Award will reflect that, for the particular grant program, the applicant meets all of the requirements of a center of excellence. Entities recognized as centers of excellence will maintain that distinction for the duration of their period of performance or as identified in the terms and conditions of that award.

4. Integrated Project Applications

These evaluation criteria will be used for the review of all multi-function Integrated Project applications.

- a. Merit of the Application for Science Research, Education, and/or Extension
 1. Project objectives and outcomes are clearly described, adequate, and appropriate. All project components (i.e., research, education, extension) – at least two are required – are reflected in one or more project objectives;
 2. Proposed approach, procedures, or methodologies are innovative, original, clearly described, suitable, and feasible;
 3. Data management plan is appropriate, clearly described, and feasible;
 4. Expected results or outcomes are clearly stated, measurable, and achievable within the allotted time frame;

5. Proposed research fills knowledge gaps that are critical to the development of practices and programs to address the stated problem or issue;
 6. Proposed extension leads to measurable, documented changes in learning, actions, or conditions in an identified audience or stakeholder group; and
 7. Proposed education (teaching) has an impact upon and advances the quality of food and agricultural sciences by strengthening institutional capacities and curricula to meet clearly delineated needs and train the next generation of scientists and educators.
- b. Qualifications of Project Personnel, Adequacy of Facilities, and Project Management
1. Roles of key personnel are clearly defined;
 2. Key personnel have sufficient expertise to complete the proposed project, and where appropriate, partnerships with other disciplines (e.g., social science or economics) and institutions are established;
 3. Evidence of institutional capacity and competence in the proposed area of work is provided;
 4. Support personnel, facilities, and instrumentation are sufficient;
 5. A clear plan is articulated for project management, including time allocated for attainment of objectives and delivery of products, maintenance of partnerships and collaborations, and a strategy to enhance communication, data sharing, and reporting among members of the project team; and
 6. The budget clearly allocates sufficient resources to carry out a set of research, education (teaching), and/or extension activities that will lead to desired outcomes, with no more than two-thirds of the budget focused on a single project component. Supporting funds for Community of Practice core functions and project-specific activities are included for partnerships with eXtension.
- c. Project Relevance
1. Documentation that the project is directed toward specific Program Area Priority identified in this RFA and is designed to accelerate progress toward the productivity and economic, environmental, and social sustainability of U.S. agriculture with respect to natural resources and the environment, human health and well-being, and communities;
 2. Project components (research, education, and/or extension) – at least two are required – are fully integrated and necessary to address the problem or issue;
 3. The proposed work addresses identified stakeholder needs;
 4. Stakeholder involvement in project development, implementation, and evaluation is demonstrated, where appropriate;
 5. Plan and methods for evaluating success of project activities and documenting potential impact against measurable short and mid-term outcomes are suitable and feasible;
 6. For extension or education (teaching) activities, curricula and related products will sustain education or extension functions beyond the life of the project; and

7. For extension or education (teaching) activities, the resulting curricula or products share information and recommendations based on knowledge and conclusions from a broad range of research initiatives.
 8. When research involves international collaboration or activities, the project leverages expertise, resources and experience from beyond the United States to achieve greater impact, or brings foreign or international research programs to address issues relevant to U.S. agriculture;
 9. When extension or education involves international collaboration or activities, the project leverages expertise, resources and experience from beyond the United States to achieve educational objectives for global competency and leadership by U.S. graduates, and/or extension objectives for agricultural production, market opportunities, and innovation.
- d. Center of Excellence Status
1. All eligible applicants will be competitively peer reviewed (as described in Part V, A. and B. of this RFA), and ranked in accordance with the evaluation criteria. Those that rank highly meritorious and requested to be considered as a center of excellence will be further evaluated by the peer panel to determine whether they have met the standards to be centers of excellence (Part III D. and Part IV C.). In instances where they are found to be equally meritorious with the application of a non-center of excellence, based on peer review, selection for funding will be weighed in favor of applicants meeting the center of excellence criteria. NIFA will effectively use the center of excellence prioritization as a “tie breaker”. Applicants that rank highly meritorious but who did not request consideration as a center of excellence or who are not deemed to have met the centers of excellence standards may still receive funding.

In addition, the applicant’s Notice of Award will reflect that, for the particular grant program, the applicant meets all of the requirements of a center of excellence. Entities recognized as centers of excellence will maintain that distinction for the duration of their period of performance or as identified in the terms and conditions of that award.

5. Conference Grant Applications

- a. Relevance of the proposed conference to agriculture and food systems in the U.S. and appropriateness of the conference in fostering domestic or international scientific exchange;
- b. Qualifications of the organizing committee and appropriateness of invited speakers to topic areas being covered; and
- c. Uniqueness, timeliness of the conference, and appropriateness of budget requests.

6. Exploratory Research Applications

- a. The scientific merit of the proposed activity;
- b. Data management plan is appropriate, clearly described, and feasible;
- c. Appropriateness of the grant for developing proof of concept of new and untested ideas including high risk research;

- d. The applicant's previous experience and background along with the proposed activities; and
- e. Relevance of the project to sustainable U.S. agriculture, the environment, human health and well-being, rural communities, and U.S. global preeminence in agriculture.

7. New Investigator Grant Applications

Refer to the review criteria listed above for the applicable Project Type (Research or Integrated) to which you are applying.

8. Sabbatical Grant, Equipment Grant, and Seed Grant Applications

- a. The merit of the proposed activities or equipment as a means of enhancing the capabilities and competitiveness of the applicant and/or institution;
- b. For sabbatical and seed grant applications, data management plan is appropriate, clearly described, and feasible;
- c. The applicant's previous experience and background along with the appropriateness of the proposed activities or equipment for the goals proposed; and
- d. Relevance of the project to long-range improvements in and sustainability of U.S. agriculture, the environment, human health and well-being, and rural communities.

9. Predoctoral and Postdoctoral Fellowship Applications

- a. Merit of the Application for Science Research, Education, and/or Extension
 - 1. Novelty, multidisciplinary innovation, uniqueness, originality, and advancing current knowledge;
 - 2. Conceptual adequacy of the research, education, and/or extension, as applicable;
 - 3. Project objectives and outcomes are clearly described and measurable, adequate, and appropriate;
 - 4. Proposed approach, procedures, or methodologies and data management plan are appropriate, clearly described, and feasible;
 - 5. The predoctoral or postdoctoral fellow has documented achievement of high educational quality and excellence (e.g., GPA, list of scholarly activities, honors, professional society membership, etc.)
 - 6. Appropriate educational opportunities and curriculum plan for proposed area of study.
 - 7. Novelty and innovation in the training and career development plans supports the career trajectory of the Fellows and provides sufficient time to obtain teaching credentials or competencies.
- b. Qualifications of Project Personnel, Adequacy of Facilities, and Project Management
 - 1. Roles of the Fellow(s), mentor(s), and other key personnel are clearly defined;
 - 2. Assessment of predoctoral or postdoctoral applicants': critical thinking and analytical skills based on organization and details provided in the application; ability to develop into a leader in the food and agricultural sciences; level of

maturity of thought, alignment between career goals and objectives and appropriate activities and opportunities presented to achieve those goals; documented achievement of high educational quality and excellence (e.g., GPA, program of study, publications, presentations, awards); appropriate educational opportunities, mentoring, and curriculum plan for proposed area of study;

3. Fellow(s), along with mentor(s) and other key personnel, have sufficient preparation/expertise to ensure successful completion of the proposed project, and where appropriate, partnerships with other relevant disciplines and institutions are established;
4. Evidence provided that the proposed work is original and developed by the applicant in consultation with other key personnel;
5. Evidence that the identified institution has capacity and competence in the proposed area of work and support personnel, facilities, and instrumentation are sufficient;
6. A clear plan is articulated for project management, including time allocated for attainment of objectives, responsibilities for deliverables, and delivery of products;
7. Appropriate mentor engagement and training in research, education, and/or extension is described.

c. Project Relevance

1. Documentation that the proposed research, education, and/or extension activity is directed toward specific Program Area Priorities identified in this RFA;
2. Plan and methods for evaluating success of project activities and documenting potential impact against measurable short and mid-term outcomes are suitable and feasible;
3. Science-based knowledge, skills, and capabilities gained are related to the NIFA foundational programs and challenge areas and will enhance and sustain human capital beyond the life of the project; and
4. Potential of the proposed project and training in serving as a good foundation for the applicant predoctoral or postdoctoral fellow to complete PhD degrees or provide the requisite, individualized and mentored experiences that will develop his/her research skills that help them become independent and productive scientists.

10. Research and Extension Experiential Learning for Undergraduates Applications

- a. Scientific Merit of the Application for Research, Education, and/or Extension
 1. Novelty, multidisciplinary innovation, uniqueness, originality, and advancing current knowledge/practice in student learning;
 2. Project objectives and outcomes are clearly described and measurable, adequate, and appropriate;
 3. Proposed approach, procedures, or methodologies and data management plan are appropriate, clearly described, and feasible;
 4. The following elements must be described: institutional long-range goals, identification of a problem or opportunity to be addressed, justification for the

project, innovation, advancing educational equity, student recruitment plan, multidisciplinary and/or problem-based focus, and potential for adoption by other institutions/organizations.

- b. Qualifications of Project Personnel, Adequacy of Facilities, and Project Management
 - 1. Roles of key personnel and mentors are clearly defined;
 - 2. Key personnel, have sufficient preparation/expertise to ensure successful completion of the proposed project, and where appropriate, Partnerships with other organizations, industry, and institutions are established with letters of support;
 - 3. Evidence provided that the proposed work is original and developed by the applicant in consultation with other key personnel;
 - 4. Evidence that the identified institution has capacity and competence in the proposed area of work and support personnel, facilities, and instrumentation are sufficient;
 - 5. A clear plan is articulated for project management, including time allocated for attainment of objectives, responsibilities for deliverables, and delivery of products;

- c. Project Relevance
 - 1. Documentation that the proposed research, education, and/or extension activity is directed toward specific Program Area Priorities identified in this RFA;
 - 2. Plan and methods for evaluating success of project activities and documenting potential impact against measurable short and mid-term outcomes are suitable and feasible;
 - 3. Project will enhance and sustain human capital beyond the life of the grant;
 - 4. Any perceived pitfalls and alternative strategies or approaches are addressed.

11. Education Coordinated Network for Research and Extension Experiences for Undergraduates (REEU-ECN) Applications

- a. Merit of the proposal to develop and sustain a national community of practice for REEU
 - 1. Proposal has a clear plan to support enhance the broader REEU program;
 - 2. Network objectives and goals are clearly described, measurable, and relevant;
 - 3. Mandatory elements of the Network including the digital clearinghouse, public facing website for REEU programs, listserv, and PD meeting plans are described;
 - 4. Other proposed elements increase the Network's value for Project Directors and potential student participants.

- b. Qualifications of Project Personnel, Adequacy of Facilities, and Project Management
 - 1. Roles of key personnel are clearly defined;

2. Key personnel, have sufficient preparation/expertise to ensure successful completion of the proposed project, and where appropriate, Partnerships with other organizations, industry, and institutions are established with letters of support;
3. Evidence provided that the proposed work is original and developed by the applicant in consultation with other key personnel;
4. Evidence that the identified institution has capacity and competence in the proposed area of work and support personnel, facilities, and instrumentation are sufficient;
5. A clear plan is articulated for project management, including time allocated for attainment of objectives, responsibilities for deliverables, and delivery of products;
6. A clear plan is articulated for the evaluation and assessment of program objectives and goals.

12. Professional Development for Agricultural Literacy PDAL (formerly PD-STEP) Applications

- a. Pedagogical Merit of the Application
 1. Novelty, multidisciplinary innovation, uniqueness, originality, and advancing current knowledge/practice in K-14 FANH education;
 2. Project objectives and outcomes are clearly described and measurable, adequate, and appropriate;
 3. Proposed approach, procedures, or methodologies and data management plan are appropriate, clearly described, and feasible;
 4. The following elements must be described: institutional long-range goals, identification of a problem or opportunity to be addressed, justification for the project, innovation, advancing educational equity, multidisciplinary and/or problem-based focus, and potential for adoption by other institutions/organizations.
- b. Qualifications of Project Personnel, Adequacy of Facilities, and Project Management
 1. Roles of key personnel and mentors (if applicable) are clearly defined;
 2. Key personnel, have sufficient preparation/expertise to ensure successful completion of the proposed project, and where appropriate, partnerships with other organizations, industry, and institutions are established with letter of support;
 3. Evidence provided that the proposed work is original and developed by the applicant in consultation with other key personnel;
 4. Evidence that the identified institution has capacity and competence in the proposed area of work and support personnel, facilities, and instrumentation are sufficient;
 5. A clear plan is articulated for project management, including time allocated for attainment of objectives, responsibilities for deliverables, and delivery of products;
 6. Appropriate participant engagement and training in research, education, and/or extension is described.

- c. Project Relevance
 - 1. Documentation that the proposed research, education, and/or extension activity is directed toward specific Program Area Priorities identified in this RFA;
 - 2. Methods for evaluating success of project activities and documenting potential impact against measurable short and mid-term outcomes are suitable and feasible;
 - 3. Project will enhance and sustain human capital beyond the life of the grant.
 - 4. Any perceived pitfalls and alternative strategies or approaches are addressed..

13. Agricultural Workforce Training Grants Applications

- a. Pedagogical Merit of the Application
 - 1. Novelty, multidisciplinary innovation, uniqueness, originality, in providing quality workforce training in the food, agricultural, natural resources, and human (FANH) sciences.
 - 2. Project objectives and outcomes are clearly described and measurable, adequate, and appropriate;
 - 3. Proposed approach, procedures, or methodologies and data management plan are appropriate, clearly described, and feasible;
 - 4. The following elements must be described: institutional long-range goals, identification of a problem or opportunity to be addressed, justification for the project, innovation, advancing educational equity, multidisciplinary and/or problem-based focus, and potential for adoption by other institutions/organizations.
- b. Qualifications of Project Personnel, Adequacy of Facilities, and Project Management
 - 1. Roles of key personnel and mentors (if applicable) are clearly defined;
 - 2. Key personnel, have sufficient preparation/expertise to ensure successful completion of the proposed project, and where appropriate, partnerships with other organizations, industry, and institutions are established with letter of support;
 - 3. Evidence provided that the proposed work is original and developed by the applicant in consultation with other key personnel;
 - 4. Evidence that the identified institution has capacity and competence in the proposed area of work and support personnel, facilities, and instrumentation are sufficient;
 - 5. A clear plan is articulated for project management, including time allocated for attainment of objectives, responsibilities for deliverables, and delivery of products;
 - 6. Appropriate participant engagement and training in research, education, and/or extension is described.
- c. Project Relevance

1. Documentation that the proposed research, education, and/or extension activity is directed toward specific Program Area Priorities identified in this RFA;
2. Methods for evaluating success of project activities and documenting potential impact against measurable short and mid-term outcomes are suitable and feasible;
3. Project will enhance and sustain human capital beyond the life of the grant.
4. Any perceived pitfalls and alternative strategies or approaches are addressed.