

Agriculture and Food Research Initiative Competitive Grants Program

NIFA Fellowships Grant Program

FY 2012 Request for Applications

Letter of Intent Deadline: November 8, 2011

Application Deadline: January 19, 2012



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
NIFA FELLOWSHIPS GRANT PROGRAM**

INITIAL ANNOUNCEMENT

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

DATES: Applications must be submitted via Grants.gov by **5:00 p.m. Eastern Time (ET) on January 19, 2012**. Applications received after the deadline will normally not be considered for funding. Comments regarding this request for applications (RFA) are requested within six months from the issuance of this notice. Comments received after this date will be considered to the extent practicable.

STAKEHOLDER INPUT: The National Institute of Food and Agriculture (NIFA) is requesting comments regarding this RFA from any interested party. These comments will be considered in the development of the next RFA for the program, if applicable, and will be used 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)). This section requires the Secretary to solicit and consider input on a current RFA from persons who conduct or use agricultural research, education, and extension for use in formulating future RFAs for competitive programs. Written stakeholder comments directed toward this RFA should be submitted in accordance with the deadline set forth in the DATES portion of this notice.

Written stakeholder comments should be submitted by mail to: Policy and Oversight Division; Office of Grants and Financial Management; National Institute of Food and Agriculture; USDA; STOP 2299; 1400 Independence Avenue, SW; Washington, DC 20250-2299; or via e-mail to: RFP-OGFM@nifa.usda.gov. (This e-mail address is intended only for receiving comments regarding this RFA and not for requesting information or forms.) In your comments, please state that you are responding to the Agriculture and Food Research Initiative NIFA Fellowships Grant Program RFA.

EXECUTIVE SUMMARY: The Department of Agriculture established the Agriculture and Food Research Initiative (AFRI) under which the Secretary of Agriculture may make competitive grants for fundamental and applied research, extension, and education to address food and agricultural sciences (as defined under section 1404 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA) (7 U.S.C. 3103)), as amended, in six priority areas. The six priority areas include: 1) plant health and production and plant products; 2) animal health and production and animal products; 3) food safety, nutrition, and health; 4) renewable energy, natural resources, and environment; 5) agriculture systems and technology; and 6) agriculture economics and rural communities.

In fiscal year (FY) 2012, it is anticipated that approximately \$264 million will be available to support the AFRI program. Of this amount, no less than 30 percent will be made available to fund integrated research, education, and extension projects. In FY 2012, it is anticipated that approximately \$12 million will be available to support the NIFA Fellowships Grant Program within AFRI to provide fellowships to outstanding pre- and postdoctoral students in the agricultural sciences. The AFRI NIFA Fellowships Grant Program is focused on developing technical and functional competence for predoctoral students and the research independence and teaching credentials of postdoctoral scientists in the agriculture, forestry, and food sciences that are within NIFA's challenge and foundational program areas through well-developed and highly interactive mentoring and training activities.

This notice identifies the objectives for the AFRI NIFA Fellowships Grant Program, the eligibility criteria for projects and applicants, and the application forms and associated instructions needed to apply for the AFRI NIFA Fellowships Grant Program.

PLEASE READ

Important Information about the Agriculture and Food Research Initiative

PLEASE READ

AFRI RFAs: In FY 2012, NIFA will issue seven RFAs for the AFRI Program:

- (1) Foundational Program addressing the six AFRI priority areas;
- (2) Challenge Areas:
 - 1) Agricultural Science for Climate Variability and Change;
 - 2) Childhood Obesity Prevention;
 - 3) Food Safety;
 - 4) Food Security; and
 - 5) Sustainable Bioenergy.
- (3) NIFA Fellowships Grant Program soliciting Pre- and Postdoctoral Fellowship Grant applications

Applications for AFRI funds may also be solicited through other announcements including supplemental AFRI RFAs or in conjunction with multi-agency programs

All **AFRI program information**, including the anticipated release date of the Challenge Area RFAs and the NIFA Fellowships Grant Program RFA, is available on the NIFA Web site at: www.nifa.usda.gov/afri.

FY 2012 NIFA Fellowships Grant Program: All Pre- and Postdoctoral Fellowship Grants will be solicited via a separate NIFA Fellowships Grant Program RFA. AFRI invites applications from doctoral candidates and individuals who will soon receive or have recently received their doctoral degree for a Pre- or Postdoctoral Fellowship Grant, as appropriate, for research, education, extension, or integrated activities (see Part II, D (page 11) for more specific information). The AFRI program anticipates awarding approximately \$12 million in Pre- and Postdoctoral Fellowship Grants.

Award Instrument: All Pre- and Postdoctoral Fellowship Grants will be separate and individual awards. Multiple awards will not be made from a single application. Fellowship Grants will be made as standard awards under this RFA. A standard award is an award instrument by which the Department agrees to support a specified level of effort for a predetermined project period without the announced intention of providing additional support at a future date.

Award Duration: All Pre- and Postdoctoral Fellowship Grants have award duration of up to two years.

Letters of Intent: In FY 2012, a Letter of Intent is required for submission of an application to the NIFA Fellowships Grant Program. A letter is required for **both Pre- and Postdoctoral Grant applications**. Refer to Part IV, A (page 14) for instructions on the preparation of a Letter of Intent.

Annual Investigator Meetings: If a Pre- or Postdoctoral Fellowship Grant application is funded, beginning in the first year of funding, the Project Director (Fellow) will be required to attend annual investigator meetings in Washington, DC. Reasonable travel expenses should be included as part of the project budget.

Logic Model Requirements: Logic Models are not required for the NIFA Fellowships Grant Program.

Indirect Cost Limitations: Indirect costs are not allowed on NIFA Pre- and Postdoctoral Fellowship Grants. An institutional allowance, in lieu of indirect costs, not to exceed \$2,400 per year, may be requested within the maximum award limit.

International Activity: If international activities (e.g. partnerships, exchanges, travel, etc) are proposed, then applicants shall describe indicators that will be used to assess those activities. Appropriate indicators include but are not limited to those posted at the U.S. Government's Feed the Future Food Security initiative website (<http://www.feedthefuture.gov/monitoringevaluation.html>).

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PART I – FUNDING OPPORTUNITY DESCRIPTION

A. Legislative Authority and Background

Section 7406 of the Food, Conservation, and Energy Act of 2008 (FCEA) (Pub. L. 110-246) amends section 2(b) of the Competitive, Special, and Facilities Research Grant Act (7 U.S.C. 450i(b)) to authorize the Secretary of Agriculture to establish the Agriculture and Food Research Initiative (AFRI); a competitive grant program to provide funding for fundamental and applied research, extension, and education to address food and agricultural sciences. Grants shall be awarded to address priorities in United States agriculture in the following areas:

1. Plant health and production and plant products;
2. Animal health and production and animal products;
3. Food safety, nutrition, and health;
4. Renewable energy, natural resources, and environment;
5. Agriculture systems and technology; and
6. Agriculture economics and rural communities.

To the maximum extent practicable, the National Institute of Food and Agriculture (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 section 2(b)(10) of the Competitive, Special, and Facilities Research Grant Act (7 U.S.C. 450i(b)(10)), as amended. The authority to carry out this program has been delegated to NIFA through the Under Secretary for REE.

B. Purpose and Priorities

The purpose of AFRI is to support research, education, and extension work by awarding grants that address key problems of national, regional, and multi-state importance in sustaining all components of agriculture, including farm efficiency and profitability, ranching, renewable energy, forestry (both urban and agroforestry), aquaculture, rural communities and entrepreneurship, human nutrition, food safety, biotechnology, and conventional 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 people, allowing them to make informed practical decisions, and develop the next generation workforce for agriculture, forestry, and food sciences. This AFRI RFA is announcing anticipated funding opportunities for fundamental Research, applied Research, Education, Extension, and Integrated Research, Education, and/or Extension Projects.

Supporting the many components of agriculture under the constraints of a growing population, pressure on natural resources, and the challenges of climate variability and change, requires research, education, extension, and integrated programs that increase agricultural and natural resource sustainability. The term "sustainable agriculture" (NARETPA, 7 U.S.C. 3103) means an integrated 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 agriculture 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.

The National Research Council Committee on Twenty-First Century Systems Agriculture recently updated and simplified this definition as a four-part goal: satisfy human food, feed, and fiber needs and contribute to biofuel needs; enhance environmental quality and the resource base; sustain the economic viability of agriculture; and enhance the quality of life for farmers, farm workers, and society as a whole. The Committee states that progress toward these goals will require robust systems which adapt to and continue to function in the face of stresses, are productive, use resources efficiently, and balance all four goals across all scales of farms and enterprises. They further state that if the U.S. is to maintain adequate resources to meet food, feed, fiber, and biofuel needs, progress toward meeting the four goals must be accelerated. This acceleration must be based on research that determines ways to reduce tradeoffs and enhance synergies among the four goals while managing risks associated with their pursuit. The Committee's 2010 report, *Toward Sustainable Agricultural Systems in the 21st Century*, provides a review of the contributions of farming practices and systems and fields of science that elaborates on these general goals with respect to many of the specific priorities within AFRI programs.

AFRI is intended to promote advances in U.S. agriculture and forestry. Agriculture, however, is increasingly worldwide in scope and reach. To attain AFRI's goals for U.S. agriculture, applicants to Foundational or Challenge Area RFAs may include international partnerships or engagement in proposals as appropriate. Applicants are asked to keep in mind that while international activities supported by AFRI may contribute to Food Security as described in the U.S. Government's Feed the Future Food Security initiative (www.feedthefuture.gov), any international activity proposed under AFRI such as partnerships, exchanges, training, trips, etc., must first and foremost support AFRI's domestic program goals. Applicants must clearly describe and demonstrate how international activities proposed in applications submitted to AFRI will contribute to and support advances in American agriculture.

If international activities (*e.g.*, partnerships, exchanges, travel, etc.) are proposed, then applicants shall describe indicators that will be used to assess those activities. Appropriate indicators include but are not limited to those posted at the U.S. Government's Feed the Future Food Security initiative Web site (<http://www.feedthefuture.gov/monitoringevaluation.html>).

NIFA may also solicit applications for AFRI funds through other announcements, including supplemental AFRI RFAs or RFAs issued in conjunction with other agencies. Such announcements will be made public in the same manner as this announcement.

The programs described herein were developed within the context of the authorized purposes of USDA research, extension, and education. In addition, AFRI obtains input from Congress, the NAREEEAB, as well as many university, scientific, and agricultural committees and organizations. NIFA developed a stakeholder's Web page

(www.nifa.usda.gov/nea/stakeholder.html) to document stakeholder input that is considered when developing and updating Program Area Descriptions and Priorities each year.

Background

AFRI is one of NIFA's major programs through which to address critical societal issues such as those laid out in the *New Biology for the 21st Century: Ensuring the United States Leads the Coming Revolution* report. USDA leadership has integrated the six AFRI priority areas (outlined in Part I, A (page 1)) with the four challenges and the approach laid out in the "New Biology for the 21st Century Report" to identify five primary challenge areas around which to structure the AFRI program and begin to focus the Department's investment in enabling an integrated approach to biological research, education, and extension. USDA science will support the following challenges:

- a. Agricultural Science for Climate Variability and Change;
- b. Childhood Obesity Prevention;
- c. Food Safety;
- d. Food Security; and
- e. Sustainable Bioenergy.

In FY 2010, NIFA released several AFRI RFAs to address these challenges at a meaningful scale and to achieve outcomes of relevance to the societal challenges. These RFAs addressed each of the five challenges, enabled transition and refocusing of grants made previously under AFRI, and provided pre- and postdoctoral fellowship opportunities. These RFAs solicited applications for larger awards for longer periods of time to enable greater collaboration among institutions and organizations and integration of basic and applied research with deliberate education and extension programs.

In FY 2011 and 2012, AFRI is soliciting projects addressing the above challenges through five separate challenge area RFAs, each addressing one of the challenges. AFRI is also supporting Research and Integrated Project grants in the six AFRI priority areas to continue building a foundation of knowledge in fundamental and applied food and agricultural sciences critical for solving current and future societal challenges. These six foundational programs were announced in a single, separate RFA. In addition, funding opportunities for pre- and postdoctoral fellowship grants are being offered in this single, separate RFA.

NIFA Fellowships Grant Program:

The AFRI NIFA Fellowship RFA focuses on developing the next generation of scientists who will lead agriculture into the future by solving current and future challenges facing our society. The AFRI NIFA Fellowships Grant Program targets talented, highly-motivated doctoral candidates and postdoctoral trainees that demonstrate remarkable promise and the ability to increase the number of gifted agricultural scientists in the United States. The NIFA Fellows are individuals who have the potential for remarkable accomplishments in agricultural science. The Program seeks to develop the technical and academic competence of doctoral candidates and the research independence and teaching credentials of postdoctoral scientists in the food, forestry and agricultural sciences that are within NIFA's challenge areas through well-developed and highly interactive mentoring and training activities. Project types supported by AFRI within this

RFA include single-function Research, Education, and Extension Projects and multi-function Integrated Research, Education, and/or Extension Projects.

In addition to AFRI, another source of NIFA funding for fellowships is:

- *Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship Grants Program*
Total Program Funds: Approximately \$3.6 million
Information is available at www.nifa.usda.gov/funding/nnf/nnf.html

C. Program Area Description

Background

The goal of the AFRI NIFA Fellowships Grant Program is to strongly support the intellectual talent needed to meet the challenges facing the nation's agriculture and food systems. Meeting these challenges will require innovative approaches that foster multi-disciplinary projects. This means that scientists must be educated and prepared to work effectively across disciplines in order to work to solve agricultural and educational challenges. The goal of this program is to develop the next generation of leaders who will be actively engaged in agriculture, forestry, and food related research, education, and extension careers. NIFA will provide federal assistance through fellowships to emerging pre-and postdoctoral candidates to accomplish this goal.

Projects are expected to address one of the stated Program Area Priorities which collectively contribute to the achievement of the following objectives:

1. Strengthen the ability of the nation's scientific community to meet the current and future challenges facing agriculture, forestry and food systems.
2. Develop the technical and academic competence of doctoral candidates.
3. Develop the research independence and teaching credentials of postdoctoral scientists.

In order to achieve these program objectives, the AFRI NIFA Fellowships Grant Program will award fellowships to applicants with focused objectives aligned with NIFA's challenge and Foundational Program areas and well-developed and highly interactive mentoring and training activities.

Program Areas (Fellowship Categories):

1. *NIFA Predoctoral Fellowships*

Program Area Code – A7101

Program Area e-mail for Submission of Letter of Intent – nifafellows@nifa.usda.gov

Letter of Intent Deadline – November 8, 2011 (5:00 p.m., ET); see Part IV, A (page 14) for instructions

Application Deadline – January 19, 2012

Proposed Budget Requests –

- Predoctoral Fellowship applications must not exceed \$75,000 total (including institutional allowance) for project periods of up to 2 years.
- Requests exceeding the budgetary guidelines will not be reviewed.

Requested Project Type – Research or Education Projects

Requested Grant Type – Predoctoral Fellowship Grant

Program Area Contact – Drs. Ray Ali (202-720-2727; nifafellows@nifa.usda.gov) and Margo Holland (202-401-5044; nifafellows@nifa.usda.gov).

Program Area Priority – NIFA Predoctoral Fellowships will support Research or Education Projects that address one or more of the following issues:

- a. Projects aligned with one of the five AFRI Challenge Areas:
 - 1) Agricultural Science for Climate Variability and Change;
 - 2) Childhood Obesity Prevention;
 - 3) Food Safety;
 - 4) Food Security; and
 - 5) Sustainable Bioenergy.

- b. Projects aligned with one of the six AFRI Foundational areas:
 - 1) Plant health and production and plant products;
 - 2) Animal health and production and animal products;
 - 3) Food safety, nutrition, and health;
 - 4) Renewable energy, natural resources, and environment;
 - 5) Agriculture systems and technology; and
 - 6) Agriculture economics and rural communities.

Other Program Area Requirements:

- All applications must adhere to the requirements beginning in Part IV (page 14).
- The applicant may determine the functional focus of the fellowship (research or education) leading to a doctoral degree.
- The selection of which disciplines to combine to address an issue is to be determined by the prospective applicant in consultation with appropriate mentors.
- Evidence of scholastic achievement (*e.g.* current doctoral transcript, Graduate Record Exam scores, and other academic successes) must be demonstrated.
- Priority will be given to applications that show a novel and innovative approach that will advance knowledge in targeted discipline(s). Multidisciplinary approaches are encouraged.

2. NIFA Postdoctoral Fellowships

Program Area Code – A7201

Program Area e-mail for Submission of Letter of Intent – nifafellows@nifa.usda.gov

Letter of Intent Deadline – November 8, 2011 (5:00 p.m., ET); see Part IV, A (page 14) for instructions

Application Deadline – January 19, 2012

Proposed Budget Requests –

- Postdoctoral Fellowship applications must not exceed \$130,000 total (including institutional allowance) for project periods of up to 2 years.
- Requests exceeding the budgetary guidelines will not be reviewed.

Requested Project Type – Research, Education, Extension, or Integrated Projects

Requested Grant Type – Postdoctoral Fellowship Grant

Program Area Contact – Drs. Ray Ali (202-720-2727; nifafellows@nifa.usda.gov) and Margo Holland (202-401-5044; nifafellows@nifa.usda.gov).

Program Area Priority – NIFA Postdoctoral Fellowships will support projects across any of the three functions of the agricultural knowledge system (research, education, and/or extension) that address one or more of the following issues:

- a. Projects aligned with one of the five AFRI Challenge Areas:
 - 1) Agricultural Science for Climate Variability and Change;
 - 2) Childhood Obesity Prevention;
 - 3) Food Safety;
 - 4) Food Security; and
 - 5) Sustainable Bioenergy.

- b. Projects aligned with one of the six AFRI Foundational areas:
 - 1) Plant health and production and plant products;
 - 2) Animal health and production and animal products;
 - 3) Food safety, nutrition, and health;
 - 4) Renewable energy, natural resources, and environment;
 - 5) Agriculture systems and technology; and
 - 6) Agriculture economics and rural communities.

Other Program Area Requirements:

- All applications must adhere to the requirements beginning in Part IV (page 14).
- The applicant may determine the functional focus of the fellowship (research, education, extension, or combination of functions (integrated)).
- The selection of which disciplines to combine to address an issue is to be determined by the prospective applicant in consultation with appropriate mentor(s).
- Evidence of scholastic achievement (*e.g.*, publications, scientific presentations, and other achievements appropriate for applicant's discipline).
- Priority will be given to applications that show a novel and innovative multidisciplinary approach.
- During the Fellowship the Fellow may be asked to serve on an AFRI peer review panel to evaluate competitive proposals. NIFA will support travel to Washington, DC for panel participation directly and these costs should not be included in the budget submitted for the fellowship.

PART II – Award Information

A. Available Funding

There is no commitment by USDA to fund any particular application or to make a specific number of awards. In FY 2012, it is anticipated that approximately \$264 million will be available for support of the AFRI Program. Of this amount, no less than 30 percent will be made available to fund integrated research, education, and extension projects.

In FY 2012, NIFA anticipates that approximately \$12 million will be available for support of the NIFA Fellowships Grant Program. Applications may be submitted either directly by the individual or through the mentor's institution. Awards for NIFA Fellowship Grants are made with the predoctoral or postdoctoral NIFA Fellow as the Project Director (PD). No more than eight Pre- and Postdoctoral Fellowships will be awarded to a single institution in a single FY. There is no limit to the number of applications that can be submitted from a single institution in a single FY.

Awards issued as a result of this RFA will have designated the Automated Standard Applications for Payment System (ASAP), operated by the Department of Treasury's Financial Management Service, as the payment system for funds. For more information see http://www.nifa.usda.gov/business/method_of_payment.html.

B. Types of Applications

1. New Application

A new application is an application that has not been previously submitted to AFRI. New applications will be reviewed competitively using the evaluation criteria specified in Part V, B (page 23).

2. Resubmitted Application

A resubmitted application is an application that has previously been submitted to AFRI, but was not funded. Project Directors (PD) must respond to the previous panel review summary; see Response to Previous Review, Part IV, C. 4. c (page 1818). Resubmitted applications must be received by the relevant due dates, will be evaluated in competition with other pending applications in the appropriate area to which they are assigned, and will be reviewed according to the same evaluation criteria (Part V, B (page 32)) as New Applications. Applications which appear to be resubmissions (regardless of the designation) are regarded as such by the program and the panel and compete on the same basis with all other applications submitted to the Program Area at the same time.

Applicants submitting to Fellowship Categories from the FY 2010 AFRI NIFA Fellowships RFA may resubmit applications to the appropriate Fellowship Category within this RFA.

All Fellowship Grants will be made as standard awards. A standard award is an award instrument by which the Department agrees to support a specified level of effort for a predetermined project period without the announced intention of providing additional support at a future date.

C. Project Types

The overall goal of the NIFA Fellowships Grant Program is to develop the next generation of scientists who will be leaders in their fields and be engaged in research, education, extension, or any combination thereof. Fellowship Grant applicants should propose work that will cover any of the AFRI supported project types such as single-function Research, Education, and Extension Projects and multi-function Integrated Research, Education, and/or Extension Projects that is requested by the Fellowship Category under the Program Area. The grant types that fall under this program are: Pre- and Postdoctoral Fellowship Grants.

The work proposed for the project type selected must address a specific Program Area Priority described under Program Area Description beginning in Part I, C (page 3). Additionally, applicants must adhere to the Application and Submission Information beginning in Part IV (page 11) when preparing applications.

NOTE: In Fiscal year 2012, Predoctoral Fellowship applicants are not eligible for Extension or Integrated Projects.

1. Research Projects

Single-function Research Projects support fundamental or applied research conducted by the individual applicant who acts as the Project Director works with a mentor within the same discipline or as part of a multidisciplinary team.

***Fundamental research** means research that (i) increases knowledge or understanding of the fundamental aspects of phenomena and has the potential for broad application and (ii) has an effect on agriculture, food, nutrition, or the environment.*

***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.*

***Multidisciplinary projects** are those in which investigators from two or more disciplines collaborate closely to address a common problem. These collaborations, where appropriate, may integrate the biological, physical, chemical, or social sciences.*

2. Education Projects

Single-function Education Projects develop human capital relevant to overall program goals for U.S. agriculture, forestry, and food science. An education activity or teaching activity is formal classroom instruction, laboratory instruction, and practicum experience in the food, forestry, and agricultural sciences and other related matters such as faculty development, student recruitment and services, curriculum development, instructional materials and equipment, and innovative teaching methodologies.

The applications for Education Projects may include any of the following activities: conducting classroom and laboratory instruction and practicum experience; development of cutting-edge agricultural science and technology curriculum; creation of practices for

innovative teaching methodologies; development of innovative instructional materials; development of novel education delivery systems; development of advanced student experiential learning methodologies or processes (student led-research; internships; externships; clinics) that include student learning styles and student-centered instruction; development of unique student recruitment and retention efforts and strategies; career planning materials and counseling; development of faculty development programs; development of modules for on-the-job training; providing knowledge and skills for professionals creating policy or transitioning to the agriculture workforce; creative faculty and student exchanges strategies; and student study abroad and/or international research opportunities relevant to overall program goals for U.S. agriculture. The activities for Education Projects must show direct alignment with increasing technical and academic competencies in AFRI Priority Area(s) to ensure that the U.S. remains globally competitive in the knowledge age.

Education Projects should address one or both of the following key strategic actions:

- 1) Training students for Associate, Baccalaureate, Master's or Doctoral degrees; and/or
- 2) Preparing K-12 teachers and higher education faculty to enhance their understanding and, therefore, the teaching of agriculture, forestry, and food sciences.

These projects should lead to measurable, documented changes in learning, actions, or conditions in an identified audience or stakeholder group. These projects should synthesize and incorporate a wide range of the latest relevant research results. Participation in Education Projects by the predoctoral fellow is intended to provide the fellow with educational program experience in conjunction with the completion of the PhD degree.

3. Extension Projects

Single-function Extension Projects conduct programs and activities that deliver science-based knowledge and informal educational programs to people, enabling them to make practical decisions. Program delivery may range from community-based to national and from face-to-face to electronic or combinations thereof. Extension Projects may also include related matters such as certification programs, in-service training, client recruitment and services, curriculum development, instructional materials and equipment, and innovative instructional methodologies appropriate to informal educational programs.

Extension Projects address one or more of the following key strategic actions:

- 1) Support informal education to increase food and agricultural literacy of youth and adults;
- 2) Promote science-based agricultural literacy by increasing understanding and use of food and agricultural science data, information, and programs;
- 3) Build science-based capability in people to engage audiences and enable informed decision making;
- 4) Develop new applications of instructional tools and curriculum structures that increase technical competency and ensure global competitiveness;
- 5) Offer non-formal learning programs that increase accessibility to new audiences at the rate at which new ideas and technologies are tested and/or developed at the community-scale; and

- 6) Develop programs that increase public knowledge and citizen engagement leading to actions that protect or enhance the nations' food supply, agricultural productivity, environmental quality, community vitality, and/or public health and well-being.

These projects should lead to measurable, documented changes in learning, actions, or conditions in an identified audience or stakeholder group. These projects should synthesize and incorporate a wide range of the latest relevant research results. Participation in extension activities by the predoctoral fellow is intended to provide the individual with extension program experience in conjunction with the completion of the PhD degree.

4. **Integrated Research, Education, and/or Extension Projects (Postdoctoral applicants only)**

An Integrated Project includes at least two of the three functions of the agricultural knowledge system (*i.e.*, research, education, and extension) within a project, focused around a problem or issue. The functions addressed in the project should be interwoven throughout the life of the project and act to complement and reinforce one another. The functions should be interdependent and necessary for the success of the project and no more than two-thirds of the project's budget may be focused on a single component.

- 1) The proposed **research** component of an integrated project should address knowledge gaps that are critical to the development of practices and programs to address the stated problem.
- 2) The proposed **education** (teaching and teaching-related) component of an Integrated Project should follow the same scope and principles as Education Projects.
- 3) The proposed **extension** component of an Integrated Project should follow the same scope and principles as Extension Projects.

Integrated Projects aim to resolve today's problems through the application of science-based knowledge and address needs identified by stakeholders. Integrated Projects clearly identify anticipated outcomes and have a plan for evaluating and documenting the success of the project.

Integrated Project applicants are encouraged to review www.nifa.usda.gov/funding/integrated/integrated.html for additional information on integrated programs, including tips for writing Integrated Project applications and an example of an integrated application. Those interested in submitting Integrated Project applications are encouraged to contact the appropriate Program Area Contact to discuss the anticipated project parameters and outcomes to ensure the application content appropriately meets the requirements of an Integrated Project.

D. Grant Types

Pre- and Postdoctoral Fellowship Grants for the AFRI NIFA Fellowships Grant Program are supported through the Food and Agricultural Science Enhancement (FASE) Grants of AFRI.

FASE Grants strengthen science capabilities in research, education, extension, and integrated programs. FASE Grants are designed to help institutions develop competitive research, education, extension, and integrated projects, and to attract new scientists and educators into careers in high-priority areas of national need in agriculture, forestry, and food sciences as defined by the Program Area Priorities in this request for applications (see Part I, C (page 5)).

1. Predoctoral Fellowship Grants

The following requirements apply for all Predoctoral Fellowship Grants:

- a. The applicant must have successfully completed their preliminary, qualifying, or general exams (oral and/or written, as per institutional requirements) and provide documentation from the graduate advisor/graduate committee or the institution by the application deadline; and
- b. The individual must be a citizen, national, or permanent resident of the United States as defined in Part VIII, H (page 29).

Predoctoral Fellowship Grants are limited to a total of \$37,500 per year for a period of up to two years for: stipend support (up to \$20,000 per year); tuition, fees, and fringe benefits (up to \$12,000 per year); supplies needed to complete the project (up to \$3,000); and travel (up to \$2,500 per year); and are not renewable. Institutional allowance, in lieu of indirect costs, not to exceed \$2,400 per year, may be requested within the \$75,000 per award maximum limit. Indirect costs are not permitted on Predoctoral Fellowship Grant awards.

2. Postdoctoral Fellowship Grants

The following requirements apply for all Postdoctoral Fellowship Grants:

- a. The doctoral degree must be awarded by the candidate's institution no earlier than January 1, 2009 and no later than July 19, 2012; and
- b. The individual must be a citizen, national, or permanent resident of the United States as defined in Part VIII, H (page 29).

Although a proposed project may fit in the context of the mentor's existing scientific area, the Postdoctoral Fellowship Grant should initiate an independent scientific program, rather than serve as an extension of ongoing projects in the mentor's laboratory. Postdoctoral Fellowship Grants are limited to a total award of \$130,000 for two-year duration and are not renewable. Funds should be requested primarily for salary support, although other expenditures (*e.g.*, fringe benefits, supplies, travel, workshops, and publication) are allowable costs. Expenditures other than salary support may not exceed \$20,000 per year and must be itemized and properly justified. Institutional allowance, in lieu of indirect costs, not to exceed \$2,400 per year, may be requested within the \$130,000 maximum award limit. Indirect costs are not permitted on Postdoctoral Fellowship Grant awards.

PART III – ELIGIBILITY INFORMATION

A. Eligible Applicants

NIFA Pre- and Postdoctoral Fellowship Grants will support research, education, extension, or integrated activities that address one of the Challenge Areas or Foundational Program Areas, as submitted by eligible (i) students pursuing a doctorate degree and who have successfully completed their preliminary, qualifying, or general exams (oral and/or written, as per institutional requirements) prior to the application deadline; and (ii) individuals seeking postdoctoral opportunities who have received their doctoral degree no earlier than January 1, 2009 and not later than July 19, 2012.

Applicants must respond to the Program Area Priorities and deadlines found in the FY 2012 RFA. Applications submitted by non-United States organizations will not be considered for support. However, U.S. citizens, nationals, or permanent residents applying for Pre- and Postdoctoral Fellowships may do all or part of the proposed work at a non-United States organization.

Research, Education, or Extension Projects

Eligible applicants for the program implemented under this subpart include: (1) State Agricultural Experiment Stations; (2) colleges and universities (including junior colleges offering associate degrees or higher); (3) university research foundations; (4) other research institutions and organizations; (5) Federal agencies, (6) national laboratories; (7) private organizations or corporations; (8) individuals who are U.S. citizens, nationals, or permanent residents; and (9) any group consisting of two or more entities identified in (1) through (8). Eligible institutions do not include foreign and international organizations.

B. Cost Sharing or Matching

If a funded project 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.

PART IV – APPLICATION AND SUBMISSION INFORMATION

A. Letter of Intent Instructions

All Program Areas within the AFRI NIFA Fellowships Grant Program require a Letter of Intent for submission of an application. Refer to the Program Area Descriptions beginning in Part I, C (page 5) for Letter of Intent deadlines for a specific Program Area.

Failure to follow the guidelines below may result in the Letter of Intent being removed from consideration.

1. The Letter of Intent must adhere to the following formatting guidelines:
 - a. Font size must be at least 12 point
 - b. Margins must be at least one inch in all directions
 - c. Line spacing must not exceed six lines of text per vertical inch
2. The Letter of Intent is limited to **two pages** for all project and grant types.
 - a. On Page 1 provide **only** the following information:
 - i. The name, professional title, department, institution and e-mail address of the applicant and name, professional title, department, and institution of all mentors;
 - ii. Indicate if this is a pre- or postdoctoral application;
 - iii. Indicate the project type (*i.e.*, Research, Education, Extension, or Integrated Project);
 - iv. A descriptive title; and
 - v. A list of key words.
 - b. On Page 2 include:
 - i. Applicant's goals and objectives of career development;
 - ii. Brief description of the potential impacts and expected outcomes on the applicant's development into a productive independent leader in an agriculture-related field;
 - iii. Project rationale; and
 - iv. Specific objectives of the proposed project.
3. NIFA will only accept Letters of Intent in the portable document format (PDF). Attach the PDF Letter of Intent to an email addressed to nifafellows@nifa.usda.gov. In the email subject line write: *Letter of Intent [Program Area Code] _ [PDs Last Name]*.
4. Submission of more than one Letter of Intent to a program is discouraged.
5. An acknowledgement receipt will be sent by replying to the sender within five business days.
6. Letters of Intent will be reviewed by scientific program staff in order to plan for appropriate expertise for the peer review panel and ensure that the proposed project fits appropriately within the Program Area Priorities.
7. Within three weeks after the Letter of Intent deadline, the PD will receive a response from the Program Area Contact.

8. Applications submitted without a prior Letter of Intent submission will not be reviewed.
9. Applicants must notify the appropriate Program Area Contact of any changes to project key personnel, title, or objectives from the Letter of Intent to the submission of a full application.

B. Electronic Application Package

Only electronic applications may be submitted via Grants.gov to NIFA in response to this RFA. Prior to preparing an application, it is suggested that the PD first contact an Authorized Representative (AR) to determine if the organization is prepared to submit electronic applications through Grants.gov. If the organization is not prepared, the AR should see http://www.grants.gov/applicants/get_registered.jsp for steps for preparing to submit applications through Grants.gov.

The steps to access application materials are as follows:

1. In order to access, complete and submit applications, applicants must download and install a version of Adobe Reader compatible with Grants.gov. This software is essential to apply for NIFA Federal assistance awards. For basic system requirements and download instructions, please see http://www.grants.gov/help/download_software.jsp. To verify that you have a compatible version of Adobe Reader, Grants.gov established a test package that will assist you in making that determination. Grants.gov Adobe Versioning Test Package: <http://www.grants.gov/applicants/AdobeVersioningTestOnly.jsp>.
2. The application package must be obtained via Grants.gov. Go to <http://www.grants.gov>, click on “Apply for Grants” on the left navigation menu, click on “**Step 1: Download a Grant Application Package and Instructions,**” enter the Funding Opportunity Number **USDA-NIFA-AFRI-003538** in the appropriate box, and click “Download Package.” From the search results, click “Download” to access the application package.

Contained within the application package is the “NIFA Grants.gov Application Guide: A Guide for Preparation and Submission of NIFA Applications via Grants.gov.” 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 assistance is needed to access the application package (*e.g.*, downloading or navigating Adobe forms), refer to resources available on the Grants.gov Web site first. Grants.gov assistance is also available as follows:

Grants.gov customer support
Toll Free: 1-800-518-4726
Business Hours: 24 hours a day, 7 days a week. Closed on [Federal Holidays](#)
Email: support@grants.gov

See <http://www.nifa.usda.gov/funding/electronic.html> for additional resources for applying electronically.

C. Content and Form of Application Submission

Electronic applications must be prepared following Part V and VI of the document entitled “A Guide for Preparation and Submission of NIFA Applications via Grants.gov.” This guide is part of the corresponding application package (see Part IV, B (page 15)). The following is **additional information** needed in order to prepare an application in response to this RFA. If there is discrepancy between the two documents, **the information contained in this RFA is overriding.**

All application information provided herein is general for all Project and Grant Types. However, some types require different information. These differences are noted by a ☼ symbol. Proper preparation of an application will assist reviewers in evaluating the merits of each application in a systematic, consistent fashion.

1. Attachment Requirements

NIFA will only accept attachments in PDF. See Part III of the NIFA Grants.gov Application Guide. SUBMITTED APPLICATIONS THAT DO NOT MEET THESE REQUIREMENTS FOR PDF ATTACHMENTS WILL NOT BE REVIEWED. If you do not own PDF-generating software, Grants.gov provides online tools to assist applicants at <http://www.grants.gov/agencies/software.jsp#3>.

NOTE: DO NOT use the “Assemble Files into a PDF Package” feature of Adobe Acrobat Professional. This will prevent reviewers from reading the files. Use the “Merge Files into a Single PDF” feature.

Submitted PDF documents must adhere to the following formatting guidelines:

- Font size must be at least 12 point
- Margins must be at least one inch in all directions
- Line spacing must not exceed six lines of text per vertical inch
- Follow the page limitations for each attachment
- Number pages sequentially for each attachment
- Title each attachment in the document header and save each file with the referenced name
- The PDF attachment must **NOT** be password protected.
- File names of PDF attachments must be limited to 50 characters, may not include special characters (*e.g.*, #, \$, %, &, *, -, /, ', ”), periods (.), blank spaces, or accent marks and must be unique (*i.e.*, no other attachment may have the same file name). An underscore (example: my_Attached_File.pdf) may be used to separate a file name.
- Do not use special characters (*e.g.*, #, \$, %, &, *, -, /, ', ”) when completing the forms within the Grants.gov application package. Use of special characters is acceptable within the text of the PDF attachments to the application.

Note: It is important to compress PDF attachments (especially those that include scanned files) prior to uploading into the Grants.gov application package to control the overall file size.

2. SF 424 R&R Cover Sheet

Instructions related to this form are explained in detail in Part V, 2. of the NIFA Grants.gov Application Guide.

If the application is submitted through an institution, the SF 424 R&R Cover Sheet must be endorsed by the AR who possesses the necessary authority to commit the applicant's time and other relevant resources. If an application is to be submitted by an individual, the submitting individual must be the proposing pre- or postdoctoral applicant.

a. Field 13. Proposed Project – For the start date of the project, select a date at least six months after the submission deadline date for the program. Choose the end date to correspond to the correct duration of the project.

b. Field 20. Pre-application – Do not fill out this portion of the form. While AFRI is not accepting pre-applications in FY 2012 in any of the programs, the Program Areas under this RFA require a Letter of Intent. See the Program Area Descriptions in Part I, C (page 5) and Part IV, A (page 14) for more details.

3. SF 424 R&R Project/Performance Site Location(s)

Instructions related to this form are explained in detail in Part V, 3. of the NIFA Grants.gov Application Guide.

4. R&R Other Project Information

Instructions related to this form are explained in detail in Part V, 4. of the NIFA Grants.gov Application Guide.

a. Field 1 and 2. Are Human Subjects Involved? and Are Vertebrate Animals Used?

Applicants whose research requires use of human subjects or vertebrate animals must have their project reviewed by the appropriate committee(s) at the institution where the research will be conducted.

b. Field 7. Project Summary/Abstract – PDF Attachment. The Project Summary is limited to **250 words**. Title the attachment as ‘Project Summary’ in the document header and save file as ‘ProjectSummary’.

A recommended template for the Project Summary/Abstract can be found at:
http://www.nifa.usda.gov/funding/templates/project_summary.doc.

The Project Summary must list the names and institutions of the PD and Mentors and **indicate which specific FY 2012 Challenge Area or Foundational Program Area the proposed project addresses**. Applications that do not address at least one Program Area Priority will not be reviewed.

The Project Summary should be a short, concise description of the research, education, and/or extension project to be pursued in the applicant's proposed doctoral problem to be

studied or postdoctoral training. The summary should also include the relevance of the project to the goals of AFRI NIFA Fellowships Grant Program.

c. *Field 8. Project Narrative* – PDF Attachment. 12-15-Page Limit. Title the attachment as ‘Project Narrative’ in the document header and save file as ‘ProjectNarrative’.

For Predoctoral Grant applications, the Project Narrative section may not exceed a total of 12 pages. For Postdoctoral Grant applications, the Project Narrative section may not exceed a total of 15 pages. All applications must have 12-point font and line spacing not exceeding six lines of text per vertical inch, including all figures and tables.

To ensure fair and equitable competition, applications exceeding the applicable page limitation will not be reviewed.

Project Narrative must include all of the following:

- 1) Response to Previous Review (if applicable)
This requirement only applies to Resubmitted Applications as described in Part II, B (page 8). The Project Narrative attachment should include two components: 1) a one-page response to the previous review panel summary titled “Response to Previous Review” included as the first page of the Project Narrative attachment and 2) the 12- or 15-page Project Narrative, as required (see Part IV, C. 4. c above).
- 2) Candidate’s Background
Fellowship applicants must include activities that demonstrate scholastic achievement and excellence. These may include but are not limited to academic indicators, awards, honors, publications, presentations, professional society membership, etc. and other metrics that demonstrate scholastic achievement and excellence. Predoctoral applicants must include Grade Point Average (GPA) and Graduate Record Exam (GRE) scores on the LAST page of the Project Narrative. Documentation of GPA and GRE scores will be required for predoctoral applicants funded prior to receipt of award.
- 3) Training/Career Development Plan
The Training/Career Development Plan is a description of all activities that applicant plans to perform and participate in that will enhance the pre- or postdoctoral training during the fellowship award period.
 - a) For Predoctoral Fellowship applicants, a Training/Career Development Plan should include their personal statement addressing future career directions or preparation for entering the workforce, overall career goals and objectives, as well as how, if awarded, the fellowship will allow them to accomplish their professional goals and objectives. Any other training objectives should be included. Predoctoral students may also include any extension and educational activities to enhance their career development that will be undertaken during their doctoral training.
 - b) For Postdoctoral Fellowship applicants, a Training/Career Development Plan includes plans for transition to career independence by development of professional skills; what those career and training goals are; and results of the

postdoctoral fellow's previous and current research and scholarship that include publications, presentations, etc.

4) Project Plan

a) Introduction. The introduction should include a well-defined problem, a clear statement of the long-term goal(s), and supporting objectives of the proposed project. Summarize the body of knowledge or other past activities that substantiate the need for the proposed project. Describe ongoing or recently completed activities related to the proposed project including the work of key project personnel. Include preliminary data/information pertinent to the proposed work. All works cited should be referenced (see Bibliography & References Cited in Part IV,C.4.d (page 22)).

b) Rationale and Significance

- Concisely present the rationale behind the proposed project and how it will advance the current knowledge in the field;
- Clearly describe the specific relationship of the project's objectives to one of the Program Area Priorities. The Program Area Priority(ies) must be specifically identified. Applications that do not address at least one Program Area Priority will not be reviewed; and
- Describe how the proposed curricular activities (predoctoral) will support educational goals and project activities.

c) Approach

Provide a detailed description of the proposed project and the problem(s) to be addressed. Clearly describe the approaches to be used. Specifically, this section must include:

- A description of the project details proposed and the sequence in which the activities are to be performed;
- Methods to be used in carrying out the proposed project and feasibility of the methods;
- Expected outcomes and outcome measures;
- Means by which results will be analyzed, assessed, or interpreted;
- How results or products will be used;
- Pitfalls that may be encountered;
- Limitations to proposed procedures;
- A full explanation of any materials, procedures, situations, or activities related to the project that may be hazardous to personnel, along with an outline or precautions to be exercised to avoid or mitigate the effects of such hazards;
- A timeline for attainment of objectives and for production of deliverables that includes annual milestones with specific, measurable outcomes; and
- Establishment of a profile on an established professional social networking site to document career progress during and beyond the term of the Fellowship

5) Mentoring Plan

The applicants are expected to engage their mentors and/or advisors in the development of their application. Thus, prior to submission of the application, prospective fellows should already identify a mentor(s) who will be willing to help them in their projects as well as professional development. Because this is a very important component of the project, the commitment of the mentor(s) is included in

the evaluation criteria as it pertains to project personnel. In describing the role of the mentor, the proposal should:

- a) Show the research, education, and/or extension training that will contribute to the NIFA Fellow's transition as an independent researcher and/or other science professional and how the mentoring and educational training will add to the skill sets of the NIFA Fellow.
 - b) Include an explanation on the commitment of the mentor in ensuring that the fellowship will augment the NIFA Fellow's training in oral and written communications such as teaching a class, giving seminars, invited lectures, carrying out extension services, writing scientific articles (both peer-reviewed and not), and writing grant applications.
 - c) Provide a list of former mentees and their current positions.
- 6) Evaluation Plan
- a) A plan for evaluating progress toward achieving project objectives. The plan must include milestones, which signify the completion of a major deliverable, events, or accomplishment and serve to verify that the project is on schedule and on track for successful conclusion. The plan should also include descriptions of indicators that will be measured to evaluate whether the education activities are successful in achieving project goals and contribute to the achievement of the stated program goals and outcomes; and
 - A dissemination plan describing the methods that will be used to communicate findings and project accomplishments.

☀ *For Education Project Applications* – In addition to the Project Narrative requirements above, the proposed Education Project should clearly articulate:

- The potential for advancing the quality of education by addressing a specific problem or opportunity; and
- The target audience and the level of education addressed.

☀ *For Extension Project Applications* –

- Extension Projects should involve a series of connected learning activities that engage the public in practical problem solving. Programming should be more than a one-time event, a single publication, a one-dimensional activity, or a general public awareness campaign. Together, informal learning activities should be elements in a curriculum-based program that has learning goals and objectives.
- Extension Projects should be connected to both 1) scientific-research based information and 2) science-based teaching techniques and informal education principles.
- In addition to the Project Narrative requirements above, the proposed Extension Project should give emphasis to scholarly principles of engagement and outreach that clearly articulate:
 - The importance of informal education to address a specific local problem or issue;
 - The theoretical basis of informal outreach methods used;
 - Development and/or implementation of a curriculum-based series of connected learning activities (including educational materials) that engage the public in practical problem solving;

- A plan for evaluating progress toward achieving project objectives. The plan must include milestones, which signify the completion of a major deliverable, event, or accomplishment and serve to verify that the project is on schedule and on track for successful conclusion;
- The plan should also include descriptions of indicators that you will measure to evaluate whether the extension activities are successful in achieving project goals and in contributing to achievement of the stated program goals and outcomes; and
- A dissemination plan describing the methods that will be used to communicate findings and project accomplishments.
- AFRI encourages “community-based” Extension Projects. Community-based programming ranges from a single town to a county, collection of counties, state, or region. Applications with leadership from campus-based faculty specialists that incorporate programming/work of local agents are highly desirable.
- AFRI encourages Extension Projects that develop content suitable for delivery through eXtension. This content is for “end users” as opposed to staff development and must follow the eXtension Guiding Principles and guidelines for including eXtension in a proposal presented at http://about.extension.org/wiki/NIFA_RFA_Information. Funds may be used to 1) enhance an existing Community of Practice or 2) to establish a new Community of Practice, as appropriate.

☀ *For Integrated Project Applications – (Postdoctoral applicants only)*

- Integrated Project applications must include at least two of the three functions of the agricultural knowledge system (*i.e.*, research, education, and extension). Each function should be represented by one or more objectives within the application.
- Projects must budget sufficient resources to carry out the proposed set of research, extension, and/or education activities that will lead to the desired outcomes. No more than two-thirds of a project’s budget may be focused on a single function.
- Integrated Projects must include individuals on the project team with significant expertise in each component of the project (research, education, and/or extension).
- A plan for evaluating progress toward achieving project objectives must be included. The plan must include milestones, which signify the completion of a major deliverable, event, or accomplishment and serve to verify that the project is on schedule and on track for successful conclusion. The plan should also include descriptions of indicators that you will measure to evaluate whether the research, education, and/or extension activities are successful in achieving project goals and in contributing to achievement of the stated program goals and outcomes.
- In addition to the Project Narrative requirements above, the proposed Integrated Project should clearly articulate:
 - Stakeholder involvement in project development, implementation, and evaluation, where appropriate;
 - Objectives for each function included in the project (note that extension and education activities are expected to differ and to be described in separate project objectives; see enumerated descriptions in Part II, C (page 7); and
 - A dissemination plan describing the methods that will be used to communicate findings and project accomplishments.

- AFRI encourages Integrated Projects that develop content suitable for delivery through eXtension. This content is for “end users” as opposed to staff development and must follow the eXtension Guiding Principles and guidelines for including eXtension in a proposal presented at http://about.extension.org/wiki/NIFA_RFA_Information. Funds may be used to 1) enhance an existing Community of Practice or 2) to establish a new Community of Practice, as appropriate.
- AFRI encourages Integrated Projects that are suitable for 4-H audiences and stakeholder groups while meeting identified program priorities. The 4-H Youth Development is the programmatic outreach of the Land Grant Universities and Institutions to our youngest citizens in their communities and provides opportunities for youth to develop skills, practical knowledge, and wisdom with an emphasis on practical application of knowledge or “learning by doing.” By engaging 4-H in AFRI projects, applicants engage young people as citizen scientists; increase their awareness of the role of agriculture; and prepare young people for higher education and the 21st century work environment. Opportunities for engaging 4-H in AFRI proposals should align with the 4-H Mission Mandates of Science, Engineering and Technology; Healthy Living; and Citizenship. See guiding principles at www.national4-hheadquarters.gov or contact your university Cooperative Extension headquarters and/or State 4-H Program Office.

d. *Field 9. Bibliography & References Cited* – PDF Attachment. No Page Limit. Title the attachment as ‘Bibliography & References Cited’ in the document header and save file as ‘BibliographyReferencesCited’.

All work cited in the text should be referenced in this section of the application. All references must be complete; include titles and all co-authors; conform to an acceptable journal format; and be listed in alphabetical order using the last name of the first author or listed by number in the order of citation.

e. *Field 10. Facilities & Other Resources* – PDF Attachment. No Page Limit. Title the attachment as ‘Facilities & Other Resources’ in the document header and save file as ‘FacilitiesOtherResources’.

Provide documentation that arrangements have been made for the necessary facilities & other resources for conduct of the research.

f. *Field 11. Equipment* – PDF Attachment. No Page Limit. Title the attachment as ‘Equipment’ in the document header and save file as ‘Equipment’.

Provide documentation that arrangements have been made for the necessary equipment for conduct of the research. In addition to describing available equipment, items of nonexpendable equipment necessary to conduct and successfully complete the proposed project should be listed in Field C. of the R&R Budget and described in the Budget Justification (Field K. of the R&R Budget).

g. Field 12. Other Attachments

- 1) **Key Personnel Roles – PDF Attachment. 2-Page Limit.** Title the attachment as ‘Key Personnel’ and save file as ‘KeyPersonnel’.

Clearly describe the roles and responsibilities of the PD, collaborator(s), mentor(s) *etc.* Biographical sketches for key personnel including mentor(s) should be attached in the R&R Senior/Key Person Profile. If it will be necessary to enter into formal consulting or collaborative arrangements with others, such arrangements should be fully explained and justified. If the consultant(s) or collaborator(s) are known at the time of application, a biographical sketch should be provided in the R&R Senior/Key Person Profile described in Part IV, C.5 (page 25). Collaborators simply providing services or materials should not be listed in the R&R Senior/Key Person Profile and a biographical sketch is not required. Evidence (letters of support) for this type of collaboration should be provided in the ‘Documentation of Collaboration’ attachment.

- 2) **Mentor Letter, Reference Letters, and Documentation of Collaboration – PDF Attachment. No Page Limit.** Title the attachment as ‘Documentation of Collaboration’ in the document header and save file as ‘Collaboration’.

Mentor Letter(s) – A minimum of one mentor letter is required. If there is more than one mentor, a mentor letter should be provided for each. The mentor letter(s) should comment on the quality of the applicant in regards to their ability to develop into a leader in agriculture, the applicant’s oral and written communication skills and critical and analytical skills, the applicant’s level of intellectual independence, role of the student and mentor in the development of the application, a statement that the research by the applicant is different and not an extension of the mentor’s research, and any other pertinent and relevant information to indicate the applicant is deserving of being awarded a prestigious NIFA Fellowship. A short description of the mentor(s) research should be included in the letter to show that the applicant’s proposed project is not an extension of the mentor(s)’ research.

Reference Letter(s) – A minimum of one reference letter is required. It should address the candidate’s research accomplishments and ability to complete a pre-doctoral research, and/or education program or undertake a postdoctoral research, education, extension, or integrated program.

Evidence, *e.g.*, letter(s) of support, should be provided that the collaborators involved have agreed to render services. The applicant also will be required to provide additional information on consultants and collaborators in the budget portion of the application.

☼ *For Predoctoral Fellowship Grant Applications* – The application must contain (A) documentation that arrangements have been made with an established investigator to serve as mentor; (B) documentation that arrangements have been made for the necessary facilities, space, and materials for conduct of the work; (C)

documentation from the PD's graduate advisor and graduate committee that the applicant has successfully completed their preliminary examination (oral and/or written); (D) documentation from the host institution's AR indicating that the host institution concurs with these arrangements; and (E) description of the mentor's research goals.

☀ *For Postdoctoral Fellowship Grant Applications* – The application must contain (A) documentation that arrangements have been made with an established investigator to serve as mentor (The letter must provide assurance that the proposed project initiates the applicant's independent research program. Although the project may fit in the context of the mentor's existing research area, it should not simply be an extension of ongoing projects in the mentor's laboratory.); (B) documentation that arrangements have been made for the necessary facilities, space, and materials for conduct of the work; (C) documentation from the host institution's AR indicating that the host institution concurs with these arrangements (Postdoctoral applicants from Federal laboratories must notify the appropriate regional office.); and (D) description of the mentor's research goals.

- 3) *Proof of Responsible Conduct of Research Training* – **PDF Attachment. No Page Limit.** Title the attachment as 'ResponsibleConductofResearchTraining' in the document header and save file as 'ResponsibleConductofResearchTraining'.

Both pre-and postdoctoral applicants must complete training for the responsible conduct of research (RCR) either from their institution or from other organizations' sponsored workshop as long as this is an institutional practice. Each institution is responsible in determining both the content and the delivery method for the training that will meet the institution's specific needs for RCR training in all areas at that institution that USDA provides support. Examples of subject matter that could be included in RCR training include, but are not limited to: conflict of interests, data sharing and management, responsible authorship, policies for handling misconduct, policies regarding the use of human and animal subjects, peer review, mentor/trainee responsible, and collaborative science. The training should be effective and long enough to allow sufficient depth in the discussion of various ethical issues and considerations.

Some examples of what could be covered in this type of training may be obtained from:

- <http://www.nae.edu/?ID=14646>
- <http://www.nigms.nih.gov/Training/responsibleconduct.htm>
- <http://www.onlineethics.org/CMS/about/UserGuide/18848.aspx>
- <http://www.nationalpostdoc.org/publications/rcr>

Certification or documentation following completion of this training must be provided either in the application packet or prior to starting the research project before an award will be made.

- 4) *Preprints – PDF Attachment. Limited to 2 preprints.* Title the attachment as ‘Preprints’ in the document header and save file as ‘Preprints’.

Preprints related to the Project Narrative are allowed if they are directly germane to the proposed project. Information may not be appended to an application to circumvent page limitations prescribed for the Project Narrative. To ensure fair and equitable competition, applications exceeding the applicable page limitation will not be reviewed. Only manuscripts in press for a peer-reviewed journal will be accepted and must be accompanied by letters of acceptance from the publishing journals). Preprints attached in support of the application should be **single-spaced**. Each preprint must be identified with the name of the submitting organization, the name(s) of the PD(s), and the title of the application.

5. R&R Senior/Key Person Profile

Instructions related to this form are explained in detail in Part V, 5. of the NIFA Grants.gov Application Guide.

A Senior/Key Person Profile should be completed for the PD and each mentor, senior associate, and other professional personnel, including collaborators playing an active role in the project. Collaborators only providing services or materials should not be listed in the R&R Senior/Key Person Profile. Evidence (letters of support) for this type of collaboration should be provided in the Documentation of Collaboration, see Part IV, C.4.g.2 (page 23 of this document).

- a. ***Project Role Field*** – Complete appropriately.

☼ *For Predoctoral Fellowship Grant Applications* – The predoctoral applicant must be the sole PD listed on the application. The mentor should not be listed as a co-PD. Select “Graduate Student” for the Predoctoral Fellowship applicant. Select “Other (Specify)” for the corresponding scientific mentor(s).

☼ *For Postdoctoral Fellowship Grant Applications* – The postdoctoral applicant must be the sole PD listed on the application. The mentor should not be listed as a co-PD. Select “Post Doctoral” for the Postdoctoral Fellowship applicant. Select “Other (Specify)” for the corresponding scientific mentor(s).

- b. ***Other Project Role Category Field*** – Complete appropriately, if applicable.

Enter “Mentor” for corresponding scientific mentor(s).

- c. ***Attach Biographical Sketch Field – PDF Attachment. 2-Page Limit*** (excluding publications listings) per PD, mentor, senior associate, and other professional personnel. Title the attachment as ‘Biographical Sketch’ in the document header and save file as ‘BiographicalSketch’.

A Biographical Sketch for both the pre- or postdoctoral applicant and the scientific mentor(s) must be submitted.

A biographical sketch (vitae) of additional senior associates and other professional personnel should be included.

The Conflict of Interest list should not be included in the biographical sketch, but it must be provided as a separate document, see Part IV, C.8.c (page 29) of this document.

d. *Attach Current and Pending Support Field – PDF Attachment. No Page Limit.* Title the attachment as ‘Current and Pending Support’ in the document header and save file as ‘CurrentPendingSupport’.

Current and Pending Support for both the pre- or postdoctoral applicant and the scientific mentor(s) (as documentation of on-going work in the mentor's laboratory) must be completed.

A recommended template for the Current and Pending Support can be found at:
http://www.nifa.usda.gov/funding/templates/current_pending.doc.

Current and Pending Support information is only required for personnel with PD or mentor indicated as their Project Role on the R&R Senior/Key Person Profile. All applications must contain a list of all Current and Pending Support detailing public or private support (including in-house support) to which personnel identified in the application have committed portions of their time, whether or not salary support for person(s) involved is included in the budget. Please note that the project being proposed should be included in the pending section of the form. Total project time listed for each PD should be indicated as percent effort and not exceed 100% for concurrent projects. It is expected that at the time of the award, fellows are required to carry out their projects and training on a full-time basis, normally defined as 40 hours per week or as specified by the sponsoring institution in accordance with its own policies.

The AFRI program will not fund an application that duplicates or overlaps substantially with other NIFA funding (including non-competitive funds such as Special Grants or Hatch formula funds) or other Federal funding. As an addendum to the Current and Pending Support, provide a brief summary for any completed, current, or pending projects that appear similar to the current application, especially previous NRI or AFRI awards.

6. R&R Personal Data

Instructions related to this form are explained in detail in Part V, 6. of the NIFA Grants.gov Application Guide.

7. R&R Budget

Instructions related to this form are explained in detail in Part V, 7. of the NIFA Grants.gov Application Guide.

a. Budget Periods. Applications must contain a budget for each budget period for the entire duration of the proposed project. Annual and cumulative budgets are required.

If a Fellowship is funded, beginning in the first year of funding, the project director will be required to attend annual investigator meetings in Washington, DC. Reasonable travel expenses should be included as part of the project budget.

☼ *For Predoctoral Fellowship Grant Applications* – The budget is limited to a total of \$37,500 per year for a period of up to two years for stipend support (up to \$20,000 per year); tuition, fees, and fringe benefits (up to \$12,000 per year); supplies for completion of the project (\$3,000); and travel (up to \$2,500 per year); and are not renewable. Institutional allowance, in lieu of indirect costs, not to exceed \$2,400 per year, may be requested within the \$75,000 per award maximum limit. Indirect costs are not permitted on Predoctoral Fellowship Grant awards. The institutional allowance should be included in Field F., Other Direct Costs, Line 8. of the R&R Budget.

☼ *For Postdoctoral Fellowship Grant Applications* – The budget is limited to a total award of \$130,000 for two-year duration and are not renewable. Funds should be requested primarily for salary support, although other expenditures (*e.g.*, fringe benefits, supplies, travel, workshops, and publication) are allowable costs. Expenditures other than salary support may not exceed \$20,000 per year and must be itemized and properly justified. Institutional allowance, in lieu of indirect costs, not to exceed \$2,400 per year, may be requested within the \$130,000 maximum award limit. Indirect costs are not permitted on Postdoctoral Fellowship Grant awards. The institutional allowance should be included in Field F., Other Direct Costs, Line 8. of the R&R Budget.

The institutional allowance of \$2,400 per year may be used to help defray expenses such as limited research supplies, attendance to scientific meetings, and attendance in teacher’s certification training workshops. Health insurance coverage using this allowance is allowable if this is consistent with institutional practices. This allowance is not available until the Fellow officially activates the award. If the fellowship was used for less than 6 months of the award year, only one-half of the year’s allowance may be charged to the grant. If the Fellow does not complete the training, any unused balance must be returned to the NIFA.

☼ *For Extension Project Applications* – Projects that include partnering with eXtension must include financial support for the Community of Practice core functions as well as project-specific activities.

☼ *For Integrated Project Applications* – Projects must budget sufficient resources to carry out the proposed set of research, extension, and/or education activities that will lead to the desired outcomes. No more than two-thirds of a project’s budget may be focused on a single component. Projects that include partnering with eXtension must include financial support for the Community of Practice core functions as well as project-specific activities.

b. Subcontract Arrangements. If it will be necessary to enter into a formal subcontract agreement with another institution, financial arrangements must be detailed in the “R&R

Subaward Budget Attachment(s) Form.” Annual and cumulative budgets and a budget justification are required for each subcontract agreement. Refer to Part V, 8. of the NIFA Grants.gov Application Guide for instructions on completing this form.

c. *Field H. Indirect Costs* – Indirect costs are not allowed on NIFA Pre- and Postdoctoral Fellowship Grants. An institutional allowance, in lieu of indirect costs, not to exceed \$2,400 per year, may be requested within the maximum award limit. See Part IV, E (page 20) for additional information.

d. *Field K. Budget Justification* – PDF Attachment. No Page Limit. Title the attachment as ‘Budget Justification’ in the document header and save file as ‘BudgetJustification’.

All cumulative budget categories for which support is requested must be individually listed (with costs) in the same order as the cumulative budget. If consulting, collaborative, or subcontractual arrangements are included in the application, these arrangements should be fully explained and justified. The rate of pay for any consultant must be included, if known at the time of application. Please include a cost breakdown for the consultant, including the number of days in service, travel, and per diem, as well as the rate of pay. Letters of consent or collaboration and other evidence should be provided in the Documentation of Collaboration (see Part IV, C.4.g.2 (page16)) to show that collaborators have agreed to participate. A proposed statement of work, biographical sketch, and a budget for each arrangement involving the transfer of substantive programmatic work or the provision of financial assistance to a third party must be supplied. Allowable expenditures must be appropriately discussed in the budget justification. In multi-institutional applications, a budget and budget narrative must be included for each institution involved. The lead institution and each participating institution must be identified.

e. Matching

If a funded project 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.

The sources and the amount of all matching support from outside the applicant organization should be summarized on a separate page and placed in the application immediately following the Budget Justification. All pledge agreements must be placed in the application immediately following the summary of matching support.

The value of applicant contributions to the project shall be established in accordance with applicable cost principles. Applicants should refer to OMB Circular A-21 (2 CFR Part 220), Cost Principles for Educational Institutions, for further guidance and other requirements relating to matching and allowable costs.

8. Supplemental Information Form

Instructions related to this form are explained in detail in Part VI, 1. of the NIFA Grants.gov Application Guide.

a. **Field 1. Funding Opportunity** – Funding Opportunity Name is pre-populated with “Agriculture and Food Research Initiative” and “USDA-NIFA-AFRI-003538” for Funding Opportunity Number in Field 1.

b. **Field 2. Program to which you are applying** – Enter the Program Code Name and the Program Code for the Program Area to which you are applying from the information provided in the Program Area Descriptions beginning in Part I, C (page 5). An application can only be submitted to one program. It is extremely important that the Program Code Name and Program Code are spelled correctly and match this RFA. If you have a question about which topic area is appropriate for your application, please contact the Program Area Contact.

c. **Field 8. Conflict of Interest List – PDF Attachment. No Page Limit.** Title the attachment as ‘Conflict of Interest’ in the document header and save file as ‘Conflict of Interest’.

Conflict of Interest list for both the pre- or postdoctoral applicant and the scientific mentor(s) must be completed.

A Conflict of Interest List is required for all applications submitted to the AFRI. The Conflict of Interest List should be provided as a separate PDF attachment and not included in the vitae or resume. A Conflict of Interest List must be completed individually for all personnel who have submitted a Biographical Sketch in the R&R Senior/Key Personnel Profile. **Collate all individual Conflict of Interest lists into a single document file.** The lists can only be submitted as a single PDF attachment.

A recommended template for the Conflict of Interest List can be found at:
http://www.nifa.usda.gov/funding/templates/conflict_of_interest.doc.

D. Submission Dates and Time

Letters of Intent must be submitted via e-mail to nifafellows@nifa.usda.gov by 5:00 p.m. ET on the November 8, 2011. **Applications submitted without a prior Letter of Intent submission will not be reviewed.**

Electronic applications must be submitted via Grants.gov by 5:00 p.m. ET on January 19, 2012. **Applications received after the deadline will not be reviewed.**

E. Funding Restrictions

Indirect costs for AFRI NIFA Fellowships Grant applications are **not allowed**. An institutional allowance, in lieu of indirect costs, not to exceed \$2,400 per year, may be requested within the maximum award limit.

Funds made available for grants under the AFRI program shall not be used for the construction of a new building or facility or the acquisition, expansion, remodeling, or alteration of an existing building or facility (including site grading and improvement, and architect fees).

F. Other Submission Requirements

1. Proper Application Submission

The applicant must follow the submission requirements noted in the document entitled “A Guide for Preparation and Submission of NIFA Applications via Grants.gov.”

Described below are the requirements for successful submission of an application, all of the following steps must be met for an application to be considered for peer review:

1. Meeting the deadline:
To electronically send the application to Grants.gov the submit button is hit, which triggers a date and time stamp on the application. Note that there can be a slight delay between pressing the submit button and generation of the time stamp at Grants.gov, so please submit your application well in advance of the deadline. The date and time stamp is used to determine whether the application was received by Grants.gov before the deadline, which is 5:00 p.m. Eastern Time on January 19, 2012. An application submitted or resubmitted after the deadline is late. Consideration of late applications is only given in extenuating circumstances (*e.g.*, natural disasters, confirmed Grants.gov outage) with proper documentation and support of the Agency Contact (see Part VII, (page 27)). The occurrence of one of these situations does not automatically ensure that a late application will be accepted. If an applicant wants a late application considered under an extenuating circumstance, the applicant should contact the Agency Contact accordingly.
2. Successful Grants.gov validation:
The Grants.gov system performs a limited check of the application, and applicants are notified by Grants.gov of the outcome of the initial review. **Beginning August 9, 2011, the Grants.gov validation process will include a check for an active Central Contract Registry (CCR) registration (applicants with expired CCR registrations will be rejected).** Applications meeting Grants.gov requirements are made available to the funding agency for further processing. Applications that fail Grants.gov validation may be resubmitted to Grants.gov if the original agency deadline has **NOT** passed. (Note that the Grants.gov system may allow applications to be submitted after the deadline has passed, but the application is considered late by NIFA.)
3. Successful Agency validation:
NIFA staff perform precursory review of the application. The agency validation process includes, for example, meeting eligibility requirements and following agency application guidelines (*e.g.*, formatting, page limitations, limits on budget requests). Applicants are notified by NIFA of the outcome of this review.

2. Application Status

After an application is submitted, the AR will receive a series of four e-mails. The titles of the four e-mails are:

- #1 – Grants.gov Submission Receipt Number
- #2 – Grants.gov Submission Validation Receipt for Application Number
- #3 – Grants.gov Grantor Agency Retrieval Receipt for Application Number
- #4 – Receipt of Grant Application Number for Review at USDA

It is extremely important that the AR watch for and save each of the e-mails. The Grants.gov validation (e-mail #2) may take up to two business days from application submission. Please plan accordingly and submit early. Receipt of e-mail #4 by the AR indicates the application reached NIFA, USDA. To track a submission, use the Submission Receipt Number in e-mail #1.

Receipt of the four e-mails does not indicate the application has been accepted for review. The AR and/or PD will be notified in a subsequent e-mail if the application has been accepted or declined for program review. If accepted, the application will be assigned a NIFA application number (*i.e.*, 2012-XXXXX). This number should be cited on all future correspondence.

If an applicant has not received an e-mail within 30 days of the submission deadline either providing a NIFA application number or indicating the application was not accepted for review, the applicant must contact the agency contact (see Part VII (page 27)) immediately and ask for the status of the application. Failure to do so may result in the application not being considered for funding by the peer review panel.

3. Multiple Submissions

Duplicate, essentially duplicate, or predominantly overlapping applications submitted to one or more program areas within the AFRI (including FASE projects) 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

Each application will be evaluated in a two-part process. First, each application will be screened to ensure that it meets the administrative requirements as set forth in this RFA. Applications that do not fall within the guidelines, as stated in the RFA, will be eliminated from program competition and will not be reviewed. Second, a review panel will technically evaluate applications that meet these requirements. In addition to the review panel, written comments will be solicited from *ad hoc* reviewers when necessary. Prior to recommending an application for funding, the peer review panel and *ad hoc* reviewer comments will be presented and discussed.

Reviewers will be selected based upon their training and experience in relevant scientific, extension, or education fields, taking into account the following factors: (a) 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 projects; (b) the need to include experts from various areas of specialization within relevant scientific, education, or extension fields; (c) 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; (d) the need to include experts from a variety of organizational types (*e.g.*, colleges, universities, industry, state and Federal agencies, private profit, and non-profit organizations) and geographic locations; (e) the need to maintain a balanced composition of reviewers with regard to minority and female representation and an equitable distribution of professional rank; and (f) the need to include reviewers who can judge the effective usefulness to producers and the general public of each application.

B. Evaluation Criteria

Projects supported under this 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.

These evaluation criteria will be used for the review of all Pre- and Postdoctoral Fellowship Grant applications.

- 1. Scientific Merit of the Application for Research, Education, and/or Extension**
 - a. Novelty, multidisciplinary innovation, uniqueness, originality, and advancing current knowledge;
 - b. Conceptual adequacy of the research, education, and/or extension, as applicable;
 - c. Project objectives and outcomes are clearly described and measurable, adequate, and appropriate;
 - d. Proposed approach, procedures, or methodologies are appropriate, clearly described, suitable, and feasible;

- e. Fellow has documented achievement of high educational quality and excellence (*e.g.* Graduate Record Exam score, Grade Point Average, list of scholarly activities, honors, professional society membership, *etc.*); and
- f. Appropriate educational opportunities and curriculum plan for proposed area of study.

2. Qualifications of Project Personnel, Adequacy of Facilities, and Project Management

- a. Roles of the Fellow, mentor(s), and other key personnel are clearly defined;
- b. Assessment of applicants' critical thinking and analytical skills based on organization and details provided in the application, applicants' ability to develop into a researcher and leader in the food and agricultural sciences, applicants' 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, GRE, publications, presentations, awards), appropriate educational opportunities, mentoring, and curriculum plan for proposed area of study;
- c. Applicants, along with mentor and other key personnel, have sufficient preparation/expertise to ensure successful completion of the proposed project, and where appropriate, partnerships with other relevant disciplines (*e.g.*, food safety and psychology, nanotechnology and economics, animal science and mathematics) and institutions are established;
- d. Evidence provided that the proposed work is original and developed by the applicant in consultation with the mentor(s);
- e. Evidence that the identified institution has capacity and competence in the proposed area of work and support personnel, facilities, and instrumentation are sufficient;
- f. A clear plan is articulated for project management, including time allocated for attainment of objectives, responsibilities for deliverables, and delivery of products; and
- g. Appropriate mentor engagement and training in research, education, and/or extension is described.

3. Project Relevance

- a. Documentation that the proposed research, education, and/or extension activity is directed toward specific Program Area Priorities identified in this RFA;
- b. Plan and methods for evaluating success of project activities and documenting potential impact against measurable short and mid-term outcomes are suitable and feasible;
- c. Science-based knowledge, skills, and capabilities gained are related to the NIFA challenge areas and will enhance and sustain human capital in NIFA challenge areas beyond the life of the project; and
- d. Potential of the proposed project and training in serving as a good foundation for the applicant 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.

C. Conflicts of Interest and Confidentiality

During the peer evaluation process, extreme care will be taken to prevent any actual or perceived conflicts of interest that may impact review or evaluation. For the purpose of determining

conflicts of interest, the academic and administrative autonomy of an institution shall be determined by reference to the current Higher Education Directory, published by Higher Education Publications, Inc., 6400 Arlington Boulevard, Suite 648, Falls Church, VA 22042. Phone: (703) 532-2300. Web site: <http://www.hepinc.com>.

Names of submitting institutions and individuals, as well as application content and peer evaluations, will be kept confidential, except to those involved in the review process, to the extent permitted by law. In addition, the identities of peer reviewers will remain confidential throughout the entire review process. Therefore, the names of the reviewers will not be released to applicants.

D. Organizational Management Information

Specific management information relating to an applicant shall be submitted on a one-time basis as part of the responsibility determination 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. NIFA will provide 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). **Individuals submitting applications directly rather than through a host institution will be required to provide supplemental information to demonstrate the capacity for financial management in order to meet specific fiduciary responsibilities associated with the fellowship.**

PART VI – AWARD ADMINISTRATION

A. General

Within the limit of funds available for such purpose, the awarding official of NIFA shall make grants to those responsible, eligible applicants whose applications are judged most meritorious under the procedures set forth in this RFA. Note that the project need not be initiated on the grant effective date, but as soon thereafter as practical so that project goals may be attained within the funded project period. All funds granted by NIFA under this RFA shall be expended solely for the purpose for which the funds are granted in accordance with the approved application and budget, the regulations, the terms and conditions of the award, the applicable Federal cost principles, and the applicable Department's assistance regulations (*e.g.*, parts 3430, 3015 and 3019 of 7 CFR and Part 215 of 2 CFR).

B. Award Notice

The award document will provide pertinent instructions and information shall include at a minimum the following:

1. Legal name and address of performing organization or institution to which the Director has awarded a grant under the terms of this RFA;
2. Title of project;
3. Name(s) and institution(s) of PDs chosen to direct and control approved projects;
4. Identifying grant number assigned by the Department;
5. Project period, specifying the amount of time the Department intends to support the project without requiring re-competition for funds;
6. Total amount of Departmental financial assistance approved by the Director during the project period;
7. Legal authority(ies) under which the grant is awarded;
8. Appropriate Catalog of Federal Domestic Assistance (CFDA) number;
9. Applicable award terms and conditions (see <http://www.nifa.usda.gov/business/awards/awardterms.html> to view NIFA award terms and conditions);
10. Approved budget plan for categorizing allocable project funds to accomplish the stated purpose of the grant award; and
11. Other information or provisions deemed necessary by NIFA to carry out its respective granting activities or to accomplish the purpose of a particular grant.

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 include, but are not limited to:

2 CFR Part 215 – Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations (OMB Circular A-110).

2 CFR Part 220 – Cost Principles for Educational Institutions (OMB Circular A-21).

2 CFR Part 230 – Cost Principles for Non-Profit Organizations (OMB Circular A-122).

7 CFR Part 1, subpart A – USDA implementation of the Freedom of Information Act.

7 CFR Part 3 – USDA implementation of OMB Circular No. A-129 regarding debt collection.

7 CFR Part 15, subpart A – USDA implementation of Title VI of the Civil Rights Act of 1964, as amended.

7 CFR Part 331 and 9 CFR Part 121 – USDA implementation of the Agricultural Bioterrorism Protection Act of 2002.

7 CFR Part 3015 – USDA Uniform Federal Assistance Regulations, implementing OMB directives (*i.e.*, OMB Circular Nos. A-21 and A-122, now codified at 2 CFR Parts 220 and 230) and incorporating provisions of 31 U.S.C. 6301-6308 (formerly the Federal Grant and Cooperative Agreement Act of 1977, Pub. L. No. 95-224), as well as general policy requirements applicable to recipients of Departmental financial assistance.

7 CFR Part 3017 – USDA implementation of Governmentwide Debarment and Suspension (Nonprocurement) and 7 CFR Part 3021—Governmentwide Requirements for Drug Free Workplace (Grants).

7 CFR Part 3018 – USDA implementation of Restrictions on Lobbying. Imposes prohibitions and requirements for disclosure and certification related to lobbying on recipients of Federal contracts, grants, cooperative agreements, and loans.

7 CFR Part 3019 – USDA implementation of OMB Circular A-110, Uniform Administrative Requirements for Grants and Other Agreements With Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations.

7 CFR Part 3021—Governmentwide Requirements for Drug Free Workplace (Grants).

7 CFR Part 3052 – USDA implementation of OMB Circular No. A-133, Audits of States, Local Governments, and Non profit Organizations.

7 CFR Part 3407 – NIFA procedures to implement the National Environmental Policy Act of 1969, as amended.

7 CFR Part 3430 – NIFA Competitive and Noncompetitive Nonformula Federal Assistance Programs—General Award Administrative Provisions.

29 U.S.C. 794 (section 504, Rehabilitation Act of 1973) and 7 CFR Part 15b (USDA implementation of statute) – prohibiting discrimination based upon physical or mental handicap in Federally assisted programs.

35 U.S.C. 200 et seq. – Bayh Dole Act, controlling allocation of rights to inventions made by employees of small business firms and domestic nonprofit organizations, including universities, in Federally assisted programs (implementing regulations are contained in 37 CFR Part 401).

D. Expected Program Outputs and Reporting Requirements

Grantees are required to submit annual and summary evaluation reports via the NIFA Current Research Information System (CRIS). CRIS is an electronic, Web-based inventory system that facilitates both grantee submissions of project outcomes and public access to information on Federally-funded projects. It can be accessed at <http://cris.nifa.usda.gov>.

If a project is funded, beginning in the first year of funding, the project director will be required to attend annual investigator meetings in Washington, DC. Reasonable travel expenses should be included as part of the project budget.

For informational purposes, the “Federal Financial Report,” Form SF-425, consolidates into a single report the former Financial Status Report (SF-269 and SF-269A) and the Federal Cash Transactions Report (SF-272 and SF-272A). The [NIFA Agency-specific Terms and Conditions](#) include the requirement that Form SF-425 is due on a **annual basis no later than 90 days following the award’s anniversary date (i.e., one year following the month and day of which the project period begins and each year thereafter up until a final report is required)**. A final “Federal Financial Report,” Form SF-425, is due 90 days after the expiration date of this award.

PART VII – AGENCY CONTACTS

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

AFRI Program Office:

Dr. Franklin E. Boteler, Assistant Director, Institute of Bioenergy, Climate, and Environment

Dr. Robert E. Holland, Assistant Director, Institute of Food Safety and Nutrition

Dr. Deborah Sheely, Assistant Director, Institute of Food Production and Sustainability

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 Program Area Contacts:

Dr. Ray Ali (202-720-2727 or rali@nifa.usda.gov);

Dr. Margo Holland (202-401.5044 or mholland@nifa.usda.gov); and

NIFA Fellowship e-mail account, nifafellows@nifa.usda.gov.

PART VIII – OTHER INFORMATION

A. Access to Review Information

Copies of reviews, excluding the identity of reviewers, and a summary of the panel comments will be sent to the applicant after the review process has been completed.

B. Use of Funds; Changes

1. Delegation of Fiscal Responsibility

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

2. Changes in Project Plans

(a) The permissible changes by the grantee, PD(s), or other key project personnel in the approved project grant shall be limited to changes in methodology, techniques, or other similar aspects of the project to expedite achievement of the project's approved goals. If the grantee or the PD(s) is uncertain as to whether a change complies with this provision, the question must be referred to the Authorized Departmental Officer (ADO) for a final determination. The ADO is the signatory of the award document, not the program contact.

(b) Changes in approved goals or objectives shall be requested by the grantee and approved in writing by the ADO prior to effecting such changes. In no event shall requests for such changes be approved which are outside the scope of the original approved project.

(c) Changes in approved project leadership or the replacement or reassignment of other key project personnel shall be requested by the grantee and approved in writing by the ADO prior to effecting such changes.

(d) Transfers of actual performance of the substantive programmatic work in whole or in part and provisions for payment of funds, whether or not Federal funds are involved, shall be requested by the grantee and approved in writing by the ADO prior to effecting such transfers, unless prescribed otherwise in the terms and conditions of the grant.

(e) Changes in Project Period: The project period may be extended by NIFA without additional financial support, for such additional period(s) as the ADO determines may be necessary to complete or fulfill the purposes of an approved project, but in no case shall the total project period exceed ten years. Any extension of time shall be conditioned upon prior request by the grantee and approval in writing by the ADO, unless prescribed otherwise in the terms and conditions of a grant.

(f) Changes in Approved Budget: Changes in an approved budget must be requested by the grantee and approved in writing by the ADO prior to instituting such changes if the revision will involve transfers or expenditures of amounts requiring prior approval as set forth in the applicable Federal cost principles, Departmental regulations, or grant award.

C. Confidential Aspects of Applications and Awards

When an application results in a grant, it becomes a part of the record of NIFA transactions, available to the public upon specific request. Information that the Secretary 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. Such an application will be released only with the consent of the applicant or to the extent required by law. The original electronic application that does not result in a grant will be retained by the Agency for a period of three years. An application may be withdrawn at any time prior to the final action thereon.

D. Regulatory Information

For the reasons set forth in the final Rule-related Notice to 7 CFR part 3015, subpart V (48 FR 29114, June 24, 1983), this program is excluded from the scope 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 collections of information requirements contained in this Notice have been approved under OMB Document No. 0524-0039.

E. Application Disposition

When each peer review panel has completed its deliberations, the responsible program staff of AFRI will recommend that the project: (a) be approved for support from currently available funds or (b) be declined due to insufficient funds or unfavorable review.

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

An application may be withdrawn at any time before a final funding decision is made regarding the application; however, withdrawn applications normally will not be returned. One copy of each application that is not selected for funding, including those that are withdrawn, will be retained by AFRI for a period of three years.

F. Materials Available on the Internet

AFRI program information will be made available on the NIFA Web site: <http://www.nifa.usda.gov/funding/afri/afri.html>. The following are among the materials available on the AFRI More Information Page:

1. AFRI 2011 Requests for Applications
2. AFRI Abstracts of Funded Projects
3. AFRI Annual Reports

G. Electronic Subscription to AFRI Announcements

If you would like to receive notifications of all new announcements pertaining to AFRI RFA, you can register via Grants.gov at <http://www.grants.gov/search/subscribeAdvanced.do>.

- Enter the e-mail address at which you would like to receive the announcements
- Enter “10.310” for *CFDA Number*
- Select “Subscribe to Mailing List”

Other criteria may be selected; however, your e-mail address and the CFDA number are the only data required to receive AFRI announcements. You do not need to be a registered user of Grants.gov to use this service. You may modify your subscriptions or unsubscribe at any time.

H. Definitions

Please refer to [7 CFR 3430, Competitive and Noncompetitive Non-formula Federal Assistance Programs--General Award Administrative Provisions](#) for the applicable definitions for this NIFA Grant Program

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

Director means the Director of the National Institute of Food and Agriculture (NIFA) and any other officer or employee of NIFA to whom the authority involved is delegated.

Food and Agricultural Science Enhancement (FASE) Grants means 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.

Integrated project means a project incorporating two or three functions of the agricultural knowledge system (research, education, and extension) around a problem or activity.

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.