Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship (NNF) Grants Program

2018 Request for Applications (RFA)

MODIFICATION PAGE: Cover Page, 2, 6 & 29

APPLICATION DEADLINE: February 12, 2019

ELIGIBILITY: See Part III, A of RFA



United States Department of Agriculture

National Institute of Food and Agriculture

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

FOOD AND AGRICULTURAL SCIENCES NATIONAL NEEDS GRADUATE AND POSTGRADUATE FELLOWSHIP GRANTS PROGRAM

INITIAL ANNOUNCEMENT

CATALOG OF FEDERAL DOMESTIC ASSISTANCE: This program is listed in the Catalog of Federal Domestic Assistance under 10.210.

DATES: Applications must be received by **5 p.m. Eastern Time** on February 12, 2019. Applications received after this deadline will normally not be considered for funding (see Part IV, C of this RFA). Comments regarding this request for applications (RFA) are requested within six months from the issuance of this notice. Comments received after that date will be considered to the extent practicable.

STAKEHOLDER INPUT: We at the National Institute of Food and Agriculture (NIFA) seek your comments about this RFA. We will consider your comments when we develop the next RFA for the program, if applicable, and we'll use them to meet the requirements of section 103(c)(2) of the Agricultural Research, Extension, and Education Reform Act of 1998 (7 U.S.C. 7613(c)(2)). Submit your written stakeholder comments by the deadline set forth in the DATES portion of this notice via email to Policy@nifa.usda.gov. (This email address is only for receiving comments regarding this RFA and *not* for requesting information or forms.) In your comments, please state that you are responding to the **Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship Grants Program** RFA.

EXECUTIVE SUMMARY: NIFA requests applications for the **Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship (NNF) Grants Program** for fiscal year (FY) 2018 to provide graduate level training programs to eligible institutions for meeting the national need to develop scientific and professional expertise in the Food, Agricultural, Natural Resources, and Human Sciences. The anticipated amount available for grants in the FY 2018 award cycle is approximately $3,100,000.

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

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PART I—FUNDING OPPORTUNITY DESCRIPTION

A. Legislative Authority

Section 7106 of the Food, Conservation, and Energy Act (FCEA) of 2008 (P.L. 110-246) amended the legislative authority for this program in section 1417 of the National Agricultural Research, Extension and Teaching Policy Act of 1977 (NARETPA) (7 U.S.C. 3152) to include the University of the District of Columbia as an eligible applicant.

NIFA administers this Federal assistance grant program specifically designated for graduate degree programs and postgraduate training of the next generation of policy makers, researchers, and educators in the Food and Agricultural Sciences. This program, in collaboration with eligible higher education institutions, helps develop intellectual capital to ensure the availability of trained professionals to lead U.S. food and agricultural systems. This program is subject to federal regulations as outlined in administrative provisions that can be found in 7 CFR 3402.

B. Purpose and Priorities

The purpose of the NNF Grants Program is to provide funding to support graduate student training and completion of master's and/or doctoral degree programs in identified national need areas within the Food, Agricultural, Natural Resources, and Human (FANH) Sciences. Awards made under NNF are specifically intended to support traineeship programs that engage outstanding students to pursue and complete their degrees in areas where there is a national need for the development of scientific and professional expertise in the food and agricultural sciences. NNF awards invest in graduate training and relevant international experiential learning for a cadre of diverse individuals who demonstrate their potential to successfully complete graduate degree programs in disciplines relevant to the mission of the USDA. **This funding opportunity is open to eligible institutions. Individuals are not eligible to apply.**

For the FY 2018 award cycle, NIFA intends to support graduate Fellowship training grants for both master's and doctoral levels of study only. **Post-doctoral Fellowships will not be awarded** under this grant announcement.

NIFA is soliciting applications for the Food and Agricultural Sciences National Needs Graduate Fellowship Grants Program under the following areas:

(1) Graduate Fellowships to support training for and the completion of master's and doctoral degree programs in the FANH sciences; and
(2) Special International Study or Thesis/Dissertation Research Travel Allowances (IRTA) for eligible new master's and doctoral USDA Fellows.

Working collaboratively with eligible institutions, the objectives of the FY 2018 NNF program are:

(1) To support the training of **new** students at the master's and doctoral levels, in order to fill nationally identified expertise shortage areas in the FANH sciences.
(2) To increase the number, quality, and diversity of students in the food, agricultural and

related sciences by recruiting outstanding students, particularly those from traditionally underrepresented groups, to enter and complete graduate training in these areas.

(3) To ensure that the National Needs Fellows build science competencies through research and extension activities, experience, and engagement in an international setting within the Targeted Expertise Shortage Area (TESA) in FANH sciences through the IRTA awards.

All NNF projects are required to provide leadership skills opportunities. The development of leadership skills, knowledge and qualities are necessary for preparing students for agricultural related careers in the private sector, industry, government and academia. Projects must demonstrably incorporate a leadership development component to ensure that students are equipped with both technical and leadership abilities. Specific activities may include:

- Developing practical applications to increase understanding of leadership roles, including critical thinking, problem solving, communication, ethics, professionalism, and working in teams;
- Connecting the academic classroom experience with daily leadership roles and organizational activities;
- Providing opportunities for mentoring and shadowing; and
- Organizing leadership academies, workshops, trainings, etc.

NNF supports social and behavioral science disciplines. Projects that integrate social and behavioral sciences to provide experiential learning opportunities for students in applied research, and related community development programs are encouraged. Incorporation of social and behavioral sciences is important for addressing many of the challenges facing agriculture and rural communities, such as increasing global demand for food production in the face of limited natural resources; improving health and reducing obesity by engaging in healthy diets; and alleviating poverty by fostering economic opportunity.

NNF is intended to promote advances in U.S. FANH sciences. Agriculture, however, is increasingly worldwide in scope and reach. To attain NNF's goals for U.S. agriculture, applicants may include international partnerships or engagement in proposals as appropriate. Any international activities proposed under NNF, such as partnerships, study abroad, exchanges, training, trips, etc., must first and foremost support NNF's domestic program goals. Applicants must clearly describe and demonstrate how international activities proposed in applications submitted to NNF will contribute to and support advances in American agriculture.

If international activities (e.g., partnerships, exchanges, travel) are proposed, then applicants shall describe indicators that will be used to assess those activities. Additional guidance on including international activities is provided on the NIFA Global Engagement Programs webpage https://nifa.usda.gov/program/global-engagement-programs.

NIFA encourages, but does not require, projects that develop content suitable for delivery through eXtension (https://extension.org/).

By developing the next generation of a highly-skilled workforce for the food, agricultural, natural resources, and human sciences, the National Needs Fellowship Program (NNF) directly aligns with:

- the USDA Strategic Plan 2018-2022, specifically addressing Goals 2: Maximize the Ability of American Agricultural Producers To Prosper by Feeding and Clothing the World and 4: Facilitate Rural Prosperity and Economic Development;
- the USDA Research, Education and Economics (REE) Action Plan, specifically addressing Goal 6: Education and Science Literacy;

The 2015-2020 Employment Opportunities for College Graduates in Food, Renewable Energy, and the Environment Report indicates shortages of graduates, specifically in the food, agriculture, natural resources and human sciences disciplines, to fill the estimated 57,900 annual openings for individuals with baccalaureate or higher degrees in food, renewable energy, and environmental specialties between 2015 and 2020. The NNF aligns with the effort to produce graduates from colleges of agriculture and life sciences, forestry and natural resources, and veterinary medicine for FANH sciences careers.

C. Program Area Description

NNF grants will support awards leading to master's and doctoral levels of study.

The NNF Program furthers exceptional graduate training in the food and agricultural sciences to develop human capital to participate in meeting the mission of the USDA.

NNF supports NIFA's goal to increase human resource diversity in the agricultural enterprise by providing funds for eligible full-time students pursuing graduate studies at the master's and doctoral levels within the Food, Agricultural, Natural Resources, and Human (FANH) Sciences disciplines identified as national needs or Targeted Expertise Shortage Areas (TESAs). The IRTA component of an NNF award also supports NIFA's goal by allowing students to have additional training through experiential learning or research opportunities and travel awards that are expected to expand the competencies and skills of USDA Fellows and eventually lead to their completion of advanced degrees in the food and agriculture sciences. IRTAs may be provided to proposed Fellows under current applications to allow them to conduct thesis/dissertation research or undertake studies outside the United States.

Program Code – KK
Program Code Name – National Needs Graduate Fellowship Program
Proposed Budget Requests – Up to $262,500
Requested Project Types –Education Projects Only
Requested Grant Type – Standard Grants Only
Letter of Intent not required for this program area
Application Deadline –February 12, 2019 (5:00 p.m., Eastern Time)
Program Area Contact – Dr. Ray Ali (202) 720-2727 or NNF@nifa.usda.gov

1. Student Eligibility

a) Eligibility for NNF – The grantee institutions develop the selection criteria and it is their responsibility to award fellowships to high caliber students in superior academic standing. Only individuals who meet the eligibility requirements listed below will be awarded fellowships. In order for individuals to receive Fellowship stipend support they must:

i. Be citizens or nationals of the United States of America as determined in accordance with Federal law;

ii. Have strong interest, as judged by the institution, in pursuing a degree in a national TESA; are preparing for a career as a food or agricultural or natural resources scientist or professional; are registered as full-time students; and

iii. Not have:
   a) Completed more than one semester or equivalent hours of full-time study as defined by the institution, or
   b) Been enrolled previously in the same academic program at the same degree level.

b) Eligibility for IRTA – At the time of travel under the IRTA award, USDA Fellows conducting research at alternate locations or outside the United States must:

i. Be supported under a USDA NNF grant and be registered as a full-time student;

ii. Have completed one academic year of full-time study, as defined by the institution under the fellowship appointment;

iii. Have formalized arrangements to study and/or conduct research in the foreign/alternate location(s);

iv. Have sufficient time remaining in their fellowship award to complete the proposed IRTA travel or research; and

v. Have a completed NIFA Form 2010 – Fellowship Appointment Form on file with the funding agency (NIFA).

2. FY 2018 Targeted Expertise Shortage Areas (TESA)

Applicants should propose training projects at the master's and/or doctoral levels to support graduate fellowship stipends for NNF and/or IRTA in **ONE** of the following TESAs:

(a) Animal Production
(b) Plant Production
(c) Forest Resources
(d) Agricultural Education and Communication

(e) Agricultural Management and Economics
(f) Food Science, Human Nutrition and Human Sciences
(g) Agricultural Biosecurity
(h) Data Science (to enable systems and communities to effectively utilize data, improve resource management, and integrate new technologies and approaches to further U.S. food and agriculture enterprises)

3. Funding Preference

Funding preference will be given to applications that propose to:

(a) Establish innovative and evidence-based frameworks for graduate training, including substantive partnerships with industry;
(b) Establish master's degree or doctoral programs;
(c) Establish multidisciplinary graduate training programs;
(d) Increase the multicultural diversity of the nation's scientific and professional expertise in the food and agricultural sciences;
(e) Partner with teaching/research/extension or across colleges/institutions or public/private sectors;
(f) Provide leadership skills opportunities; and/or
(g) Develop performance measures for evaluating the overall effectiveness of the graduate training.

The anticipated start date for successful applications under this RFA is May 15, 2019 and the duration is 5 years.

PART II—AWARD INFORMATION

A. Available Funding

The anticipated amount available for the NNF grant in the **FY 2018** award cycle is approximately **$3,100,000**.

There is no commitment by USDA to fund any particular application or to make a specific number of awards.

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

B. Types of Applications

For the **FY 2018** award cycle, you may only submit an application to the NNF Program as one of the following types of requests:

New application. This is a project application that has not been previously submitted to the NNF Program. We will review all new applications competitively using the screening for administrative requirements, review panel evaluation of proposals using evaluation criteria and selection process described in Part V—Application Review Requirements.

Resubmitted application. This is an application that had previously been submitted to the NNF Program but not funded. Project Directors (PDs) must respond to the previous review panel summary (see Response to Previous Review, Part IV). 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 as new applications.

C. Project and Grant Types

1. Project Types

Applicants may only submit proposals for Education/Teaching Projects.

Single-function Education Projects develop human capital relevant to overall program goals for U.S. agriculture. Projects must focus on developing skills necessary for entry- and mid-level technical employment or for entering graduate programs in food, agriculture, natural resources and human sciences.

Educational activities must show direct alignment with one of the following:

- Increasing the number of graduates with the necessary technical skills for entry-level positions in food, agriculture, natural resources and human sciences;

- Improving the technical competencies needed for the workforce to ensure that U.S. agriculture remains globally competitive; or
- Enhancing the diversity of the workforce in food, agriculture, natural resources and human sciences.

Grant Types

The following is a list of available grant types under this RFA.

(a) Standard. This is an award instrument by which NIFA 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.

A single application may propose funding under any single TESA for any of the Award Categories listed below, either singly or in any combination**, up to a maximum of $262,500 per application. Applicants may not request partial fellowships.**

Standard Grant: Category No. 1 -- Master's Level Training: Funding at $41,000 for each Fellow. This consists of a student stipend of $18,500 per year for two years, plus a $2,000 per year cost-of-education allowance ($4,000 maximum).

Standard Grant: Category No. 2 -- Doctoral Level Training: Funding at $79,500 for each Fellow. This consists of a student stipend of $24,500 per year for three years, plus $2,000 per year cost-of-education allowance ($6,000 maximum).

Standard Grant: Category No. 3 -- Special International Study or Thesis/Dissertation Research Travel Allowances (IRTA): One-time award of up to $4,500 for each eligible **NEW** (i.e. to be recruited) USDA National Needs Master's Fellow and/or a one-time award of up to $8,000 for each eligible **NEW** (i.e. to be recruited) USDA National Needs Doctoral Fellow.

> **NOTE: Awarded IRTA funds must be used exclusively for IRTA purposes, and CANNOT be rebudgeted amongst other budget categories (i.e. stipend or cost-of-education allowance) during the performance period of the award.**

There is no limit to the number of applications an eligible institution may submit; however, **an institution may only receive support up to a maximum of $525,000 in awards for the FY 2018 award cycle**.

Each application may request any combination of Category No. 1 (Master's), Category No. 2 (doctoral) or Category No. 3 (IRTA) funds, not to exceed $262,500. A separate application must be submitted for each Targeted Expertise Shortage Area (see Part I, C. 2.) for which support is requested. NIFA reserves the right to fund fewer Fellows than requested in an application, and to partially fund IRTA requests.

Project Directors who have received NNF awards in the last five years may also apply. However, the respective **FY 2018 proposals must differ substantively in scope and objectives from previously funded NNF projects in the last five years by the same Project Director**.

D. Responsible and Ethical Conduct of Research

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

PART III—ELIGIBILITY INFORMATION

A. Eligible Applicants

Pursuant to section 1417 of the NARETPA of 1977 (7 U.S.C. 3152), and administrative provisions that can be found in 7 CFR 3402 applications may be submitted by:

(1) Land-grant institutions (1862, 1890 and 1994 Institutions);
(2) Colleges and universities having significant minority enrollments and a demonstrable capacity to carry out the teaching of food and agricultural sciences; and
(3) Other colleges and universities having a demonstrable capacity to carry out the teaching of food, and agricultural sciences.

Research foundations maintained by an eligible college or university may submit graduate training proposals under this RFA. **Applicants should be institutions that confer a graduate degree in at least one of the TESAs** in Part I of this RFA. Award recipients may subcontract to organizations not eligible to apply provided such organizations are necessary for the conduct of the project. Failure to meet an eligibility criterion by the application deadline may result in the application being excluded from consideration or, even though an application may be reviewed, will preclude NIFA from making an award.

Awards are made to eligible colleges and universities. **Individuals are not eligible to apply for these grants to support their graduate education.**

Successful applications must select and identify Fellows and award Fellowships within eighteen (18) months of the effective date of a grant. Post-doctoral Fellowships will not be awarded under this grant announcement.

- Institutions that fail to meet this deadline will be required to refund monies associated with unawarded Fellowships to NIFA.
- Graduate fellowship appointments must be awarded only to registered students who are pursuing full-time study in graduate programs in the TESA and at the degree level supported by the grant.
- Applicants may not request partial fellowships.

A USDA Fellow at the master's degree level who maintains satisfactory progress is eligible to receive grant support for a maximum of twenty-four (24) months during a thirty (30) month period. A USDA Fellow at the doctoral degree level who maintains satisfactory progress is eligible to receive grant support for a maximum of thirty-six (36) months within a forty-two (42) month period.

It is the intent of this program that Graduate Fellows pursue full-time uninterrupted study or thesis/dissertation research, including time spent pursuing USDA-funded special international study or thesis/dissertation research activities. Graduate Fellows in academic institutions are not entitled to regular annual leave but are entitled to the normal student holidays observed by the institution. The time between academic semesters or quarters is to be utilized as an active part of the grant period. During the period of support, USDA Graduate Fellows, at the discretion of their

institutions, may accept additional supplemental employment that would positively contribute to their training or research and would make them eligible for tuition waivers (e.g., full or partial tuition waivers with research or teaching assignments).

A Graduate Fellow who finds it necessary to interrupt his/her program of study because of health, personal, or other reasonable non-academic and non-disciplinary cause(s) must be allowed to resume funded study at any time within 6 months of the interruption, provided there is **adequate time remaining** before the award expires (i.e. within the 30-month total funding period for a master's Fellow, and 42-month total funding period for a Doctoral Fellow). A Graduate Fellow who finds it necessary to interrupt his/her program of study more than one time cannot exceed 6 total months of cumulative leave without forfeiting NNF eligibility.

Failure to meet an eligibility criterion by the application deadline may result in the application being excluded from consideration or, even though an application may be reviewed, will preclude NIFA from making an award.

B. Cost Sharing or Matching

There are no matching requirements and matching resources will not be factored into the review process as evaluation criteria.

PART IV—APPLICATION AND SUBMISSION INFORMATION

A. Electronic Application Package

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

New Users of Grants.gov

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

Steps to Obtain Application Package Materials

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

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

Funding Opportunity Number: USDA-NIFA-HEP- 006673
Click "Search." On the displayed page, click the corresponding link to continue. A Grant Application Package is tied to a particular funding opportunity. You may submit an application ONLY to the particular funding opportunity to which the Grant Application Package is associated.

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

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

Grants.gov customer support
800-518-4726 Toll-Free or 606-545-5035
Business Hours: 24 hours a day, 7 days a week. Closed on federal holidays.
Email: support@grants.gov

Grants.gov iPortal (see https://grants-portal.psc.gov/Welcome.aspx?pt=Grants):
Top 10 requested help topics (FAQs), Searchable knowledge base, self-service ticketing and ticket status, and live web chat (available 7 a.m. - 9 p.m. EST).
Have the following information available when contacting Grants.gov:

Funding Opportunity Number (FON)
Name of agency you are applying to
Specific area of concern

B. Content and Form of Application Submission

Electronic applications are to be prepared following Parts V and VI of the NIFA Grants.gov Application Guide. This guide is part of the corresponding application package (see Section A of this part). The following is **additional information** you need 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.**

Note the attachment requirements (e.g., PDF) in Part III, Section 3 of the guide. ANY PROPOSALS THAT ARE NON-COMPLIANT WITH THE REQUIREMENTS (e.g., content format, PDF file format, file name restrictions, and no password protected files) WILL BE AT RISK OF BEING EXCLUDED FROM NIFA REVIEW. Grants.gov does not check for NIFA required attachments or whether attachments are in PDF format; see Part III, Section 6.1 of the guide for how to check the manifest of submitted files. Partial applications will be excluded from NIFA review. We will accept subsequent submissions of an application until close of business on the closing date in the RFA (see Part V, 2.1 of the NIFA Grants.gov Application Guide for further information).

For any questions related to the preparation of an application, review the NIFA Grants.gov Application Guide and the applicable RFA. If assistance is still needed for preparing application forms content, contact:
Email: electronic@nifa.usda.gov
Phone: 202-401-5048
Business hours: Monday through Friday, 7 a.m. – 5 p.m. EST, excluding federal holidays.

1. SF 424 R&R Cover Sheet
Information related to the questions on this form is dealt with in detail in Part V, 2 of the NIFA Grants.gov Application Guide. See Part V, Section 2.18 of the NIFA Grants.gov Application

Guide for the required certifications and assurances (e.g., Prohibition Against Entities Requiring Certain Internal Confidentiality Agreements).

2. SF 424 R&R Project/Performance Site Location(s)
Detailed information related to the questions on this form is available in Part V, 3 of the NIFA Grants.gov Application Guide.

3. R&R Other Project Information Form
Detailed information related to the questions on this form is available in Part V, 4 of the NIFA Grants.gov Application Guide.

a. Field 7. Project Summary/Abstract.
The summary should also include the relevance of the project to the goals of **NNF**.

IMPORTANT – The Project Summary/Abstract is **REQUIRED** in all applications and is limited to **two** pages. Applicants are encouraged to revisit the page numbers after converting the narrative to PDF format and make the necessary adjustments if the required page limit has been exceeded. **A Project Summary/Abstract that exceeds this page limit requirement will not be accepted for review**.

1. List the proposal title;
2. List the names of Project Director(s) and institution(s);
3. Identify the primary Targeted Expertise Shortage Area (TESA) being addressed **– applicants must select only ONE TESA per application;**
4. **Identify the major academic program or discipline(s) being addressed – applicants may indicate a single or multiple discipline code(s)**;
5. Clearly indicate the number of Fellows and degree level(s) to be supported under the application; and
6. Clearly indicate the number and degree level of IRTAs to be supported.

In addition to the above, the rest of the *Project Summary* should:

1. Be concise and precise at no more than 250 words;
2. Provide a clear description of the type of project proposed (fellowships and/or IRTA), succinctly providing information about its major features and a specific description of the activities to be undertaken;
3. State the overall project **goal(s)** and supporting **measurable objectives**;
4. Give a concise **overview** of plans for the training project to accomplish project goal(s) for national targeted expertise shortage area, include measurable targets, in specified timeline, to meet proposed objectives;
5. State the **relevance** of the project to the NNF program goals, and the USDA Strategic Goals and Objectives; and
6. State the anticipated, measurable national impact(s) on the Targeted Expertise Shortage Areas (TESAs).

Title the attachment 'Project Summary' in the document header and save the file in PDF format with the title 'Project Summary'. **The importance of a concise, informative Project Summary cannot be overemphasized.**

Targeted Expertise Shortage Areas (TESA) FY 2018 Funding Cycle
Animal Production
Plant Production
Forest Resources
Agricultural Education and Communication
Agricultural Management and Economics
Food Science, Human Sciences, and Human Nutrition
Agricultural Biosecurity
Data Science (to enable systems and communities to effectively utilize data, improve resource management, and integrate new technologies and approaches to further U.S. food and agriculture enterprises)

Relevant Disciplines for the FY 2018 Funding Cycle	Code
Animal Science	A
Biotechnology, Biochemistry and Microbiology	B
Conservation and Renewable Natural Resources (including Forestry, Air Quality, Sustainable Agriculture, Climatology/Climate Change or Biofuels)	C
Soil Sciences (includes Soil Quality; Processes)	D
Agricultural/Biological Engineering (includes Rangeland, Urban/Rural Technology)	E
Food Science/Technology/Manufacturing/Safety	F
Interdisciplinary, Sustainable Food, Agricultural and Environmental Sciences, Social Sciences and Economics Graduate Degree Programs	G
International Agriculture (includes Disciplines Related to Global Food and Agricultural Systems and Competitiveness)	I
Environmental Sciences/Management (includes Economics, Decision Management and Biometry)	L
Agricultural Marketing and Management (includes Agricultural Economics)	M
Human Nutrition (includes obesity and relevant to USDA Strategic Goals)	N
Plant Sciences and Horticulture (includes Turf Grass/Weed Science/Plant Breeding)	P
Agricultural Social Sciences (includes Rural Sociology)	S
Veterinary Medicine (graduate degree training)	V
Water Sciences/Resources (includes Water Quality)	W
Agricultural Biosecurity	X

See Part V. 4.7 of NIFA Grants.gov Application Guide for further instructions and a link to a suggested template.

b. Field 8. Project Narrative.

NOTE: The Project Narrative shall not exceed **15** pages of written text and up to **5** additional pages for figures and tables. We have established this maximum of **20 total** pages) to ensure fair and equitable competition. The Project Narrative must include all of the following:

- Formatting shall be **one-inch margins, no smaller than 12-point font (Times New Roman or similar), and DOUBLE-SPACED**. **Project narratives that are formatted incorrectly and/or exceed this page limit requirement will not be accepted for review.**

- **The Project Narrative must include and be organized into the four sections identified below**. A description of the information that must be included in each section is also provided.

Section 1: Progress Report (if applicable) and Institutional Data and Profile

Progress Report (if applicable, maximum of two pages)

If the application is from a Project Director that has received a NNF grant funded competitively by this agency in the past five years, include a clearly marked progress report (no longer than two pages) describing results to date from the previous award. The progress report must contain the following information:

(a) The Grant Number (xxxx-38420-xxxxx) for the award;
(b) A comparison of actual accomplishments with the objectives established for the previous award;
(c) The reasons established objectives were not met, if applicable;
(d) A listing of any graduated NNF Scholars, new curricula, service-learning, or other outputs, including those outputs identified in the project logic model resulting from the award; and
(e) An explanation of how the current proposal differs substantively in scope and objectives from previously funded NNF projects in the last five years by the same Project Director.

The Progress Report (maximum of two pages) does not count against the page limit of the Project Narrative (**20 pages**).

Institutional Profile

(1) Discuss the quality of education for all students in the graduate program. Describe aligned data, accountability and knowledge management to support graduate training program development for improvement in practice, policy, and strategy to increase achievement, graduation and post-graduation success in the targeted expertise shortage areas. Provide supporting data with numbers, demographics, and results from Program Quality Review(s). Describe curriculum and instructional approaches, the availability of research training opportunities, and strategies or activities for developing the leadership, management, critical thinking and problem-solving skills of students or unique mentoring experiences that may assist in preparing students for placement following graduation.

(2) Present evidence that the overall academic program has an established record that recognizes and addresses current trends and future needs, and prepares students for the national targeted expertise shortage area of the application and successful careers in the food and agricultural sciences professional and scientific workplaces.

(3) Discuss current or planned programs at the institution designed to engage outstanding graduate students, especially from traditionally underrepresented groups, to pursue and complete further graduate/professional studies to pipeline into the workforce, filling areas of management and leadership in food and agricultural sciences disciplines and how these programs will be synergistic or augment the current application.

(4) Substantiate clearly, with data indicating prior graduate training success in the TESA, the quality of graduate training and/or international experiential learning available through the institution's graduate teaching, research and experiential program(s) in the food and agricultural sciences in the discipline(s) for which Fellows are being recruited.

(5) Demonstrate the likelihood that the proposed program of graduate study will result in the development of outstanding graduates with effective leadership and communication skills and the technical and functional competence to meet the future needs of a globally interconnected, technologically advanced, rapidly diversifying and stakeholder-driven food and agricultural industry.

(6) If funds requested in this application include Award Category 3 (International Research and/or Thesis/Dissertation Allowance), please include the information below:

i. The anticipated destination(s) and duration of the travel;
ii. A brief description of example projects the proposed Fellows would be encouraged to undertake;
iii. Information about the objectives, timeline, expected outcomes and deliverables;
iv. Explanation about how the experience will contribute to the USDA Fellow's program of study;
v. The contact personnel where Fellowship and/or IRTA activity will be undertaken; include the summary credentials of both the U.S. and international faculty or other professionals with whom the USDA Fellow will be working during the international experience and the nature of support to be provided to ensure success of the Fellow's experience;
vi. The criteria that will be used to evaluate success of the IRTA;

Section 2: Proposed activities

Describe in detail the proposed activities and strategies that will be employed to carry out the following:

(1) **Recruitment and selection of Fellows**

a) Describe the plans for the recruitment of outstanding Fellows, **especially from traditionally underrepresented groups**, including a brief justification for focusing recruitment efforts on any particular group(s), and if recruiting from specific colleges and universities include institutional letters of support from

targeted institutions; the rationale for using proposed strategies and procedures should be provided.

b) Discuss the strategies and procedures for **recruiting and selecting** students committed to the TESA as participants in the Fellowship program, including selection criteria for choosing outstanding Fellows who are considered likely to pursue degrees in national targeted expertise shortage areas.

(2) **Academic advising, research training, professional counseling, mentoring, pipelining**

a) Describe the organization and philosophy of the proposed graduate training program relative to the TESA, identify the core competencies that each Fellow will be expected to attain; and how these will be evaluated as part of the Fellowship outcome measures.

b) Describe plans and procedures for assessing, monitoring, counseling, guiding, and sustaining Fellows' continued commitment and progress toward securing an education with the core competencies to be attained in preparation for a career that meets the need of national targeted expertise shortage areas.

c) Describe the nature of professional mentoring to be provided to Fellows and the subsequent follow up on their graduation and further training or entry into the workforce; identify the specific type(s) of workforce positions the NNF Fellows are being trained for.

d) Provide evidence based on research, published materials and common practices that the proposed strategies above are effective.

(3) **Experiential learning: hands-on research, extension, teaching and other activities**

a) Discuss the plans that will allow the Fellows to be engaged in experiential learning such as hands-on research, teaching practicum, extension experience and other learning activities (written and oral communication skills, leadership training, service learning) that will enhance the academic experience of the fellows. Develop activities that are feasible, effective (based on studies or common practices), and realistic based on the resources available at the institution(s).

b) Describe plans for mentorship and scholarship during the experiential learning opportunity.

c) Identify the goals of the experiential learning opportunity and their relevance to the TESA and overall objectives of the training project.

(4) **Measuring performance outcomes**

Using the mean of two years prior to project start as the baseline data, and demonstrating how the training project will help increase the number and/or percentage of students graduating with master's or doctoral degrees in Food and Agricultural Sciences versus the normal outcome without a grant award. Include:

a) Plans for achieving a **completion rate of greater than the institutional average** for the specific graduate program of study. Completion rate is computed as number of Fellows graduated divided by number of Fellows recruited, expressed as a percentage;
b) Description of the institution's mentoring and other support services and how they **promote and achieve successful** multicultural and/or first-generation college graduate student retention through graduation and pipelining to further graduate training or the workforce; and
c) Plans and procedures to **measure and report** performance outcomes and impacts; describe ongoing evaluation of the graduate training project implementation and effectiveness, measuring program outcomes and impacts (e.g., technical competence; scholarly contributions), pipelining, and tracking Fellows' accomplishments up to five (5) years after graduation. Provide details of how the proposed graduate training will lead to achieving the goals of the NNF grants program. The applicant should project a goal for tracking (e.g. expressed as a less than 10 percent "unable-to-contact" rate during the 36-month post-graduation follow-up phase). As an example, the Unable-to-Track Rate is computed as the number of "unable-to-contact" graduated USDA Fellows divided by the number of graduated Fellows, expressed as a percentage. An escalating unable-to-contact rate is of considerable concern.

The project evaluation should describe a plan for assessment of outcomes and impacts for the TESA that includes: entry of Fellow(s) into a specific TESA; assessment if the training is well-tailored for the Fellow and should lead to expected outcomes, as well as meeting the needs of the TESA; determination of measurable change due to the training; and the accrued changes in the TESA due to the training program proposed. Describe the strategy or approach that will be used to evaluate project implementation and how success will be measured. Include a discussion of how evaluation findings would be used to modify and improve future opportunities for Fellows.

(5) **Dissemination of results and/or impacts**

Wide dissemination of results and/or impacts of the graduate training program including student achievements, should be provided to NIFA and other interested parties including the general citizenry. Make clear what specific avenues will be used and identify the expected impacts. Include plans for:

a) Output and outcomes reporting, including impacts of experiential learning activities, of fellowship recipients; and
b) Disseminating project outcomes, impacts and achievements and relevance to meeting the program purpose and goals of the funding agency to a wide audience. Indicate in plan how dissemination of project outcomes will be broadened.

Section 3: Institutional resources, support, and commitment

Substantiate clearly, with supporting documentation, that:

(1) Processes, facilities and equipment, instructional, professional mentoring, and research support resources and other attributes (e.g., professional ranking of department, other funding sources, and NIFA program evaluation) are excellent for providing outstanding teaching, research and/or extension at the forefront of science and technology related to the chosen discipline for the TESA(s).

(2) Fellowship recipients will be provided with curricula and experiential learning opportunities, including travel activities that are relevant to their course of study to prepare graduates to gain expertise and meet the national need.

(3) Demonstrate institutional commitment to support the Fellows' education and research over and beyond the funds provided by USDA. Such support beyond the USDA funding should be documented with signed letters of support.

(4) Describe support to matriculate knowledge experts and indicate plans to challenge the NNF Fellows in problem-solving and critical thinking in a broader context beyond TESA.

Section 4: Other supporting information

Identify practices and innovations in training and learning that have shown substantial achievement gains in knowledge, skills and competencies in the targeted expertise shortage area. Describe any **novel, innovative, and/or special** features of the proposed project that will be available to USDA Fellows, or required as a part of their degree programs. Such features may include:

(1) Developing intellectual capital – increase in knowledge and skills – for advancement in higher education, development of a creative and innovative workforce, and informed participation in civic life. Specifically identify experiences and expected qualitative and quantitative outcomes from Fellows.

(2) Including holistic concepts and analytical tools from a variety of disciplines to address sciences (environmental, social and economic) for sustainability and increase USDA mission science content in cyberlearning materials - based on how students learn - with deeper study of statistics, data analysis to ensure rigorous learning to advance STEM achievement of K-12 students. Specifically identify experiences and expected qualitative and quantitative outcomes from Fellows.

(3) Providing intentional leadership, management and communication experiences for the Fellows that enhance the skills of the emerging professional to contribute to areas of national targeted expertise shortage in the food and agricultural sciences and advance America's competitiveness. Specifically identify experiences and expected qualitative and quantitative outcomes from Fellows.

(4) Describing the wider array of resources (such as private-sector companies; government; industry; K-12 educational system; consulting firms; universities) that will be leveraged to increase educational assets and expand Fellows' professional development and intellectual

capacity to impact the TESA as creative and innovative thinkers. Specifically identify experiences and expected qualitative and quantitative outcomes from Fellows.

c. Field 9. Bibliography & Cited References - (Optional Attachment – Must be PDF format).
If needed, provide a complete list of all references cited in the application.

d. Field 10. Facilities & Other Resources - (Optional Attachment – Must be PDF format)
Describe the types, location, and availability of instrumentation and physical facilities necessary to carry out the work proposed. **If special academic, private, industry or government laboratories or facilities are being used, include a letter in the application from the authorized representative of the facility describing the proposed arrangements and availability.** Any such letter should be included as a part of Other Attachments, see Field 12 below.

e. Field 11. Equipment Documentation - (Optional Attachment – Must be PDF format).

f. Field 12. Add Other Attachments
See Part V. Section 4.12 of the NIFA Grants.gov Application Guide (Field 12 on the form) for instructions regarding mandatory Felony Convictions or Tax Delinquent Status.
The following instructions are in addition to those noted in Part V 4.12 of the NIFA Grants.gov Application Guide.

- **Response to Previous Review – PDF Attachment. 1-Page Limit.**
  Title the attachment as 'Response to Previous Review' in the document header and save file as 'ResponsetoPreviousReview'. This requirement only applies to "Resubmitted Applications" as described under Part II, B., "Types of Applications." PDs must respond to the previous review panel summary on **no more than one page**, titled, "RESPONSE TO PREVIOUS REVIEW." If desired, additional comments may be included in the text of the Project Narrative, subject to the page limitations of that section.

- **Appendices to Project Narrative – PDF Attachment.** Title the attachment as 'Appendices' in the document header and save file as 'Appendices'. Appendices to the Project Narrative are allowed if they are directly germane to the proposed project. **The addition of appendices should not be used to circumvent the Project Narrative page limitations.**

    - **Institutional Profile (PDF Attachment. Title the attachment as 'Appendices: Institutional Profile.' No page limit).** Supportive information may include the following institutional data and should be presented in table format:
        - Student enrollment, retention and graduation rates by gender, racial groups, socio-economic groups, and ethnic groups for the past five years;
        - Mean standardized college entrance exam scores of students from traditionally underrepresented groups and of other students admitted to the institution(s) for the past five years;
        - Placement of graduates during the past five years; and

- Enrollment, graduation rates and placement of students from traditionally underserved groups and first generation college students and/or past Fellows.

- **Collaborative Arrangements – PDF Attachment. No Page Limit.** Title the attachment as 'Collaborative Arrangements' in the document header and save file as 'CollaborativeArrangement'. If it is 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 the application, a vitae or resume should be provided. In addition, evidence (e.g., letter of support signed by the AR of the consultant/collaborating organization) should be provided that the collaborators involved have agreed to render these services. The applicant also will be required to provide additional information on consultants and collaborators in the budget portion of the application.

- **Expected Outcomes – PDF Attachment**
  Title the attachment "Expected Outcomes" in the document header and save file as "ExpectedOutcomes." Please use a format, similar to what is provided below, to submit expected impacts and attach it as the last page of the application.

Recommended Format for Submitting Expected Impacts

Primary Project Function: (Choose one)		
EDUCATION: ☐	EXTENSION : ☐	RESEARCH: ☐

DATA FOR NNF PROGRAM APPLICATIONS	
Total expected student impact during entire grant period	**Expected Number**
(1) Total number of students to be directly supported by this grant (i.e. fellowships included as a cost in your project budget) for graduate education	
(2) Number of underrepresented[1] students to be supported during the grant period (Provide the best estimate based on past experience)	
(3) Number of female students to be supported during the grant period (provide the best estimate based on past experience)	
(4) Number of students supported by this grant (i.e. fellowships) who are pursuing their degree	
4-A. Two year or other certificate	
4-B. Undergraduate or other 4 year degree	
4-C. Master's degree	
4-D. Ph.D. degree	
4-E. Post-doctorate training	
(5) Number of students who will be supported by this grant on an internship or other experiential learning opportunity	
5-A. Domestic experiences, with a government or non-governmental organization that is not affiliated with your institution.	
5-B. International experiences, including study abroad, educational travel longer than a month, etc.	

[1]underrepresented = those whose representation among food and agricultural professionals is disproportionately less than their proportion in the general population as indicated in standard statistical references, or as documented on a case-by-case basis by national survey data (e.g. the U.S. Department of Education's Digest of Education Statistics, U.S. Department of Agriculture's Food and Agricultural Education Information Systems, etc.).

Notes:

1. Please provide your best estimate based on past experiences, graduation rates, retention rates, etc.
2. Number of underrepresented students to be supported during the grant period (question #2) should be less than or equal to total number of students supported by the grant (question #1).
3. Number of female students to be supported during the grant period (question #3) should be less than or equal to total number of students supported by the grant (question #1).
4. Response to question #4 should be the sum of 4-A through 4-E.

5. Response to question #5 should be a sum of 5-A and 5-B.

4. R&R Senior/Key Person Profile (Expanded)

Detailed information related to the questions on this form is available in Part V, 5 of the NIFA Grants.gov Application Guide. This section of the guide includes instructions about senior/key person profile requirements, and details about the biographical sketch and the current and pending support, including a link to a suggested template for the current and pending support.

5. R&R Personal Data – As noted in Part V, 6 of the NIFA Grants.gov Application Guide, the submission of this information is voluntary and is not a precondition of award. Part V.6 also notes the importance and use of the information. A R&R Senior/Key Person Profile should be completed, at a minimum, for the PD, each co-PD, senior associate, and other professional personnel. A paraprofessional is an individual who through formal education, work experience and/or training has the knowledge and expertise to assist a professional person. **Note: Even if no other funding is currently reported under the 'Active' section of this attachment, you must still list information for this grant application under the 'Pending' section of this attachment for each senior/key person identified above.**

6. R&R Budget

Detailed information related to the questions on this form is available in Part V, 7 of the NIFA Grants.gov Application Guide.

This form (accompanied by the required Budget Justification attachment) contains the itemized listing and description of your project's budget. Complete all applicable fields and:

(a) Submit one R&R Budget Form for each 12-month period, plus a cumulative budget and narrative for the entire project detailing the requested total support for the overall project period. **Applicants are required to provide a 5-year budget with a zero dollar budget for any year where support is not allocated.** Planning will allow efficient recruitment and appointment of Graduate Fellows within the stipulated 18-month interval. Due to statutory restriction, no extensions beyond the 5-year period are allowed.

(b) On the R&R Budget Form, under Field E (Participant/Trainee Support Costs), enter the amount of funds to be allocated to stipends on Line 2 "Stipends." The cost-of-education allowance (CoE) funds should be entered on Line 5 "Other." The IRTA, if applicable, should be entered on Line 3 "Travel." **Costs in other sections of the budget, including PD salaries in Field A, items in Field F "Other Direct Costs," or Field H "Indirect Costs" are not allowed.**

(c) Subaward Attachment. This form is necessary only if there is a subaward. Annual budget(s) and cumulative budget with justification is required for each subaward arrangement. For each partner, make sure (1) to include a budget form for the applicant institution and a R&R subaward attachment form for each project partner (subaward), for each 12-month period plus a cumulative budget and narrative.

Applicants are required to provide a 5-year budget with a zero dollar budget for any year where support is not allocated (i.e., recruitment activities are the only sponsored activities that year).

Applicants should factor into their application a recruitment interval to meet the program requirements. Due to statutory restrictions, no extensions beyond the 5-year period are allowed. Any eligible institution may, however, apply for a new award with a different scope of work in any fiscal year(s) in which appropriated funds are available for this program.

Cost of Education Allowance. In lieu of indirect costs, institutions receive a $2,000 per year cost-of-education (CoE) allowance for each Fellow supported by a master's or doctoral award. **The Project Director is required to use part of this allowance to attend at least one NIFA-sponsored Project Directors' Conference held during the life of the grant.** In addition, institutions may use the CoE to defray program-related expenses including, but not limited to, program evaluation, program personnel salaries, student retention and mentoring programs, Fellows travel to attend professional meetings, publications fees, laboratory fees, and educational expenses (e.g., university fees, books and supplies). An institution may elect to apply the cost-of-education institutional allowance to a Fellow's tuition and fees; however, such is not required.

Budget Justification (Required Attachment – Must be PDF format) Attach a separate document (PDF format) to justify that the total budget, including funds requested from USDA, will be appropriate to carry out the activities of the project. All costs must be fully explained and justified. **The Budget Justification must be submitted as a single PDF attachment to the R&R Budget Form. Applications will not be accepted for review if this document is not included or not in PDF format. All NNF grants have a maximum of $262,500 per application. Applications with a budget request that exceeds this cap will be excluded from review.**

Cost-Effectiveness. Justify the project's cost-effectiveness. Show how the project maximizes the use of limited resources, optimizes educational value for the dollar, and achieves multicultural diversity in the food systems domain. For example, discuss how the project has the potential to generate a critical mass of expertise in students from historically underrepresented and underserved groups entering the future workforce. Justify how IRTAs associated with student training will develop human capital in students from groups historically underrepresented and underserved in the food and agricultural sciences.

7. <u>Supplemental Information Form</u>
Detailed information related to the questions on this form is available in Part VI, 1 of the NIFA Grants.gov Application Guide.

Field 2. Program to which you are applying. Enter the program code name (i.e., enter "**National Needs Graduate Fellowship Program**") and the program code (i.e., enter "**KK**"). **Failure to do so may result in the application not being considered for funding by the peer review panel**. Note that accurate entry of the program code is very important for proper and timely processing of an application.

Field 8. Conflict of Interest List. See Part VI, 1.8 of the NIFA Grants.gov Application Guide for further instructions and a link to a suggested template.

C. Submission Dates and Times

We recommend that you conduct an administrative review of the application before submission of it via Grants.gov to ensure that it complies with all preparation instructions. An application

checklist is included in Part VII of the NIFA Grants.gov Application Guide to assist with this review.

Instructions for submitting an application are included in Part IV, Section 1.9 of the NIFA Grants.gov Application Guide.

Applications must be received by Grants.gov by **5 p.m. Eastern Time on** February 12, 2019. Applications received after this deadline will normally not be considered for funding.

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

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

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

D. Funding Restrictions

No indirect cost recovery is allowed under this grant program. NIFA provides the $2,000 per year per Fellow cost-of-education allowance in lieu of indirect costs.

NNF stipend funds for fellowships must be used to: (1) support the same Fellow at the master's degree level who maintains satisfactory progress and is eligible to receive grant support for **a maximum of two years** during a 2.5 year period, and/or (2) support the same Fellow at the doctoral degree level who maintains satisfactory progress and is eligible to receive grant support for a **maximum of three years** within a 3.5 year period. Institutions must use a stipend amount of $18,500 per year for master's Fellows and $24,500 per year for doctoral Fellows.

If funds remain as a result of USDA Fellows completing their studies early (less than twenty-four months for a master's degree or less than thirty-six months for a doctoral degree) or Fellowships being terminated prematurely, such funds may be used, within the time remaining on the award, to support: (1) pursuit of a doctoral degree in a TESA in the food and agricultural sciences by a master's degree level Fellow at the grantee institution, or (2) a Replacement Fellow.

Prior approval to change a key person specified in the application or the award is required pursuant to 2 CFR 200.308 and the 2017 NIFA General Terms and Conditions for Grants and Cooperative Agreements. Any Replacement Fellow requires prior approval.

The tenure of such a Replacement Fellow is limited to whatever time is remaining on the grant before it expires; an institution may not appoint a Replacement Fellow unless there is time for the student to complete at least one semester/quarter of study before the expiration date of the grant.

Replacement Fellows must meet all of the eligibility criteria and other requirements established for Fellow selection and are subject to the same provisions as other Fellows during their tenure in the program. Replacement Fellows are entitled, during their tenure, to the same benefits that other Fellows receive from the grant award and National Needs Graduate and Post-doctoral Fellowship Grants Program. Institutions may, but are not required to, continue a Replacement Fellow's tuition and other benefits beyond the expiration date of the grant using institutional or other funds.

Remaining funds cannot be used to increase annual Fellowship stipends provided to existing Fellows. If less than one semester/quarter remains on the award, the grantee must refund unexpended monies to NIFA.

Should a USDA Fellow require additional time beyond the grant period to complete his or her degree, it is expected that the grantee will consider alternatives to continue supporting the Fellow through other means.

Tuition and fees are the responsibility of the Fellow unless an institution elects to use its cost-of-education institutional allowance for this purpose or elects to pay such costs out of non-USDA monies. No dependency allowances are provided to any USDA Graduate Fellows. Stipend payments and special international study or thesis/dissertation research travel allowances may be made to Fellows by the institution, in accordance with standard institutional procedures for graduate fellowships and assistantships.

Awarded IRTA funds must be used exclusively for IRTA purposes, and CANNOT be rebudgeted amongst other budget categories (i.e. stipend or cost-of-education allowance) during the performance period of the award.

E. Other Submission Requirements

You should follow the submission requirements noted in Part IV, Section 1.9 in the document entitled "NIFA Grants.gov Application Guide."

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

PART V—APPLICATION REVIEW REQUIREMENTS

A. General

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

We select reviewers based upon their training and experience in relevant scientific, extension, or education fields, taking into account the following factors:
the level of relevant formal scientific, technical education, or extension experience of the individual, as well as the extent to which an individual is engaged in relevant research, education, or extension activities;
the need to include experts from various areas of specialization within relevant scientific, education, or extension fields;
the need to include other experts (e.g., producers, range or forest managers/operators, and consumers) who can assess relevance of the applications to targeted audiences and to program needs;
the need to include experts from a variety of organizational types (e.g., colleges, universities, industry, state and federal agencies, and private profit and non-profit organizations) and geographic locations;
the need to maintain a balanced composition with regard to minority and female representation and an equitable age distribution; and
the need to include reviewers who can judge the effective usefulness of each application to producers and the general public.

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

NNF reserves the right to negotiate with the PD/PI 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.

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

B. Evaluation Criteria

We will use the evaluation criteria below to review applications submitted in response to this RFA. Applications are evaluated primarily for overall quality of education using sound program management, strong personnel, novelty, innovation, and institutional support to determine the intrinsic merit and alignment of proposed projects to the purpose, priorities and objectives of the NNF grants program. Therefore, in carrying out its review, the peer review panel will take into account the following factors.

Funding preference will be given to applications that propose to:

- Establish innovative and evidence-based frameworks for graduate training, including substantive partnerships with industry;
- Establish master's degree or doctoral programs;
- Establish multidisciplinary graduate training programs;
- Increase the multicultural diversity of the nation's scientific and professional expertise in the food and agricultural sciences;
- Partner with teaching/research/extension or across colleges/institutions or public/private sectors;
- Provide leadership skills opportunities; and/or
- Develop performance measures for evaluating the overall effectiveness of the graduate training.

A reviewer's written evaluation entails two levels of assessment. First, the reviewer summarizes how well the application addressed each evaluation criterion. After the application has been assessed for strengths and weaknesses of each criterion, the reviewer then evaluates the overall likelihood that the project will have significant outcome and impact. These written reviews are used to begin panel discussions with other reviewers serving on the peer review panel. Through these discussions, peer review panelists come to consensus on the final rating and ranking of proposals. A complete description of NIFA's peer review process can be found at the NIFA website: https://nifa.usda.gov/resource/nifa-peer-review-process-competitive-grant-applications.

1. Potential for Advancing the Quality of Education

a) Novelty and innovation of the proposed training that will result in the development of outstanding graduates to meet the future needs of the food and agricultural enterprise;
b) Quality (demonstrated track record or plan with high probability for successful completion) of the chosen academic training program to prepare experts in the national targeted expertise shortage area;
c) Articulated current and future demand for knowledgeable graduates in chosen discipline(s);
d) Strength of the curriculum and instructional approaches;
e) Identification of the technical core and functional competencies that each Fellow will be expected to attain;
f) Strategies for developing critical thinking, problem solving and communication skills; and
g) Prior success in or potential for graduating Fellows to meet the purpose and goals of the NNF grant program.

2. Proposed Approach

a) Recruitment and selection

(1) Novel, innovative, and appropriate strategies, procedures and established relationships for successfully identifying and recruiting outstanding students who are committed to careers in food and agricultural sciences, and forest resources as appropriate

(2) Appropriate strategies for pipelining into further graduate training or professions to broaden the diversity of the workforce in the TESA.

b) Academic advising, professional mentoring, and student support services

(1)Appropriate plans and procedures for assessing, monitoring, guiding, and sustaining a Fellow's continued commitment, and securing successful progress toward an education in preparation for a career in the TESA,

(2) Individualized, contextual, and student-centered career counseling, mentoring, and support services,

(3) Opportunities for Fellows to further professional opportunities are supported by evidence-based studies, publications, or practices.

c) Program evaluation and dissemination: The applicant's plans adequately and reasonably:

(1) Evaluate project management;

(2) Determine the overall effectiveness of the graduate training in areas of national targeted expertise shortage to prepare Fellows for careers as food and agricultural scientists or professionals;

(3) Track Fellows' accomplishments after graduation;

(4) Measure performance outcomes that evaluate how the training project increases the number and/or percentage of students graduating, above the numbers that would result without the grant measure impacts at both the funded project level and this NNF funding opportunity at the program level; and

(5) Disseminate project outcomes and achievements to a wide audience of educators and policy makers, in order to expand the pipeline of outstanding students entering further graduate training or workforce in support of the TESA in food and agricultural sciences.

3. Institutional Commitment and Resources: The degree to which the proposal substantiates clearly:

a)That the environment, facilities and equipment, instructional support resources, and other academic attributes are excellent for providing outstanding teaching and research at the forefront of science and technology related to the chosen discipline; and

b) The commitment to support the Fellow's education and research over and beyond the funds provided by NIFA during the grant, and continued support through other means, should a Fellow require additional time beyond the grant period.

4. Key Personnel

a) The expertise, qualifications, and roles of key staff assigned to the project, particularly the project director and faculty or staff having the most frequent or influential contacts with Fellows, are clearly defined.

b) Competencies and/or experiences of key staff in graduating post-baccalaureate students, research, teaching, community service, working with diverse cultural groups, students at

risk of not completing their degree programs, and leading similar projects are adequately described.

5. Broader Context Impacts

a) The adequacy of the proposed training to impact the broader context of the development of the Fellow for overall success in the next generation work force.

b) The degree to which the training provides innovative and special features of the academic program(s) that will be available **especially** to Fellows or required as a part of their degree program(s), including:

(1) An integrative interdisciplinary, multi-disciplinary, or cross-disciplinary approach;

(2) A focus on innovative, multi-disciplinary education programs, material, or curricula;

(3) A multi-university collaborative approach;

(4) An emphasis on a collateral specialization or minor in a related discipline;

(5) Development of policy, research opportunities, internships, experiential learning opportunities,

(6) Developing leadership, management, critical thinking and problem solving skills that may integrally incorporate science and values for sustainability in food and agricultural sciences;

(7) International research/educational training; and related work experiences (including those with industry) to effectively matriculate Fellows with the expertise and proficiency to meet the needs of the targeted expertise shortage areas.

C. Conflicts of Interest and Confidentiality

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

D. Organizational Management Information

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

E. Application Disposition

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

PART VI—AWARD ADMINISTRATION

A. General

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

B. Award Notice

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

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

C. Administrative and National Policy Requirements

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

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

Responsible and Ethical Conduct of Research

Refer to Part II, D for more information.

D. Expected Program Outputs and Reporting Requirements

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

Grantees are to submit initial project information and annual and summary reports to NIFA's electronic, Web-based inventory system that facilitates both grantee submissions of project outcomes and public access to information on Federally-funded projects. The details of these reporting requirements are included in the award terms and conditions. Details of annual and final technical reporting requirements also are included in the award terms and conditions.

1. Documentation of Progress on Funded Projects

Pursuant to 7 CFR Part 3402.23, Project Directors will be required to:

(a) Reporting on Individual Student Beneficiaries

(i) Student Appointment - Project Directors are required to complete and submit, to the NNF Program Office (NNF@NIFA.usda.gov), a Fellowships/Scholarships Entry Form, [Page 1 of Form NIFA-2010, http://nifa.usda.gov/sites/default/files/program/natl_needs%20exit%20form.pdf] when eligible, committed students are appointed as National Needs Graduate Fellows under an award. This information must also be provided for replacement Fellows appointed under the program.

(ii) Exit and/or Termination - Project Directors are required to complete and submit, to the NNF Program Office, a Fellowships/Scholarships Exit Form, [Page 3 of Form NIFA-2010] as soon as a Fellow either (1) graduates; (2) is officially terminated from the Fellowship or the academic program due to unsatisfactory academic progress or disciplinary action; or (3) voluntarily withdraws from the Fellowship or academic program. If a Fellow/Scholar has not completed all degree requirements at the end of the program award duration, a final Fellowships/Scholarships Exit Form is required.

(b) Annual Performance Report

Annual performance reports are due 90 days after the reporting period and submitted to NIFA. Annual performance reports must:

(1) Identify each participant in advancing from the baseline established in funded objectives;
(2) Provide actual accomplishments in USDA mission area fields, through outreach activities, new careers or advanced or graduate training with the goals established for the reporting period;
(3) As applicable, describe the IRTA activities/projects and associated accomplishments for each Fellow/Scholar;
(4) If established goals were not met, give the reasons;
(5) Include documentation of outputs; i.e. significant activities, including dissemination activities, events, services or products that contribute toward achieving the goals and objectives of the project;

(6) Include documentation on the impact to institution of having a NIFA NNF grant including participation of students that are not part of the grant in program activities, or interactions of grant students with non-grant students;
(7) Include outcomes/impacts; i.e. a change in knowledge, actions or conditions; and
(8) Include any other indication of each Fellow's increased capacity for carrying out the USDA mission.

(c) Final Technical Report

A final technical report must be submitted within 90 days after the expiration date of the project. The expiration date is specified in the award documents and modifications thereto, if any. Generally, the final technical report should be a summary of the completed project, including:

1) Identification of all of the NNF project participants from the target audience who were recruited, trained and gainfully employed and or pursuing further graduate education (full funding details and funds aligned to each beneficiary for the target audience will be needed);
2) A review of project objectives and accomplishments;
3) As applicable, the IRTA activities/projects and associated accomplishments for each Fellow/Scholar;
4) A description of outcomes resulting from the project, including impacts at the institutional level, and activities undertaken to disseminate these outcomes;
5) An explanation of partnerships and new collaborations that resulted from the project, including future initiatives that are planned as a result of the project;
6) A description of the project's impact on the Fellows, PD(s), the institution(s) involved, and the community;
7) Any pertinent data on project personnel and beneficiaries. The final technical report also must contain any other information specified in the terms and conditions of the award; and,
8) Soft and/or hard copies or samples of products or publications resulting from this project must be sent to the NIFA National Program Leader overseeing NNF (see Part VII).

When NIFA has accepted a Final Technical Report and the Fellowships/Scholarships Exit Form (OMB No. 0524-0039) for each Fellow supported by an award, the grantee has satisfied the requirements of the final performance reporting for the award. Additional follow-up reports to track Scholars' career patterns also may be requested.

(d) Project Director's Conference

If organized by the Program Office, the Project Director is required to use part of the CoE to attend at least one NIFA-sponsored Project Directors' Conference held during the life of the grant.

PART VII—AGENCY CONTACT

Applicants and other interested parties are encouraged to contact:

Programmatic Contact –
Dr. Ray A. Ali
Title: National Program Leader
Unit: Division of Community and Education
Institute of Youth, Family, and Community
Location: 4443 Waterfront Centre
Full Address and Directions
Phone: (202) 720-2727
Fax: (202) 720-2030
E-mail: NNF@NIFA.usda.gov

Administrative/Business Contact –
Sondra Watkins
Title: Team Leader, Team II
Unit: Office of Grants and Financial Management
Location: 2152 Waterfront Centre
Phone: (202) 401-4249
Email: swakins@nifa.usda.gov

Rochelle McCrea
Title: Team Leader
Unit: Office of Grants and Financial Management
Location: 2160 Waterfront Centre
Phone: (202) 401-2880
Email: rmccrea@nifa.usda.gov

PART VIII—OTHER INFORMATION

A. Use of Funds; Changes

1. Delegation of Fiscal Responsibility

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

2. Changes in Budget or Project Plans

In accordance with 2 CFR 200.308, awardees must request prior approval from NIFA for the following program or budget-related reasons:

(i) Change in the scope or the objective of the project or program (even if there is no associated budget revision requiring prior written approval).

(ii) Change in a key person specified in the application or the federal award.

(iii) The disengagement from the project for more than three months, or a 25 percent reduction in time devoted to the project, by the approved project director or principal investigator.

(iv) The inclusion, unless waived by the federal awarding agency, of costs that require prior approval in accordance with 2 CFR 200 Subpart E—Cost Principles of this part or 45 CFR Part 75 Appendix IX, "Principles for Determining Costs Applicable to Research and Development under Awards and Contracts with Hospitals," or 48 CFR Part 31, "Contract Cost Principles and Procedures," as applicable.

(v) The transfer of funds budgeted for participant support costs as defined in §200.75 Participant support costs to other categories of expense.

(vi) Unless described in the application and funded in the approved federal awards, the subawarding, transferring or contracting out of any work under a federal award, including fixed amount subawards as described in §200.332 Fixed amount subawards. This provision does not apply to the acquisition of supplies, material, equipment, or general support services.

(vii) Changes in the approved cost-sharing or matching provided by the non-federal entity.

(viii) The need arises for additional federal funds to complete the project.

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

B. Confidential Aspects of Applications and Awards

When an application results in an award, it becomes a part of the record of NIFA transactions, available to the public upon specific request. Information that the Secretary of Agriculture determines to be of a confidential, privileged, or proprietary nature will be held in confidence to the extent permitted by law. Therefore, any information that the applicant wishes to have

considered as confidential, privileged, or proprietary should be clearly marked within the application. We will retain for three years a copy of an application that does not result in an award. Such an application will be released only with the consent of the applicant or to the extent required by law. An application may be withdrawn at any time prior to the final action thereon.

C. Regulatory Information

This program is not subject to the provisions of Executive Order 12372, which requires intergovernmental consultation with state and local officials.

Under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), the collection of information requirements contained in this notice have been approved under OMB Document No. 0524-0039.

D. Definitions

Refer to 7 CFR 3430, Competitive and Noncompetitive Non-formula Financial Assistance Programs--General Award Administrative Provisions, for applicable definitions for this NIFA grant program. Also see 7 CFR 3402, Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship Grants Program.

First generation means an individual neither of whose parents completed a baccalaureate degree, or in the case of any individual who regularly resided with and received support from only one parent, an individual whose only such parent did not complete a baccalaureate degree.

Minority means Alaska Native, American Indian, Asian-American, Black (African-American), Hispanic American, Native Hawaiian, Pacific Islander, or any other group underrepresented in undergraduate and first professional degree study in the food and agricultural sciences as indicated in standard statistical references, or as documented on a case-by-case basis by national survey data submitted to and accepted by the Secretary.

Multi-institutional means a request for funding for a single academic program or an interdisciplinary program involving two or more institutions in a graduate training program.

Traditionally underrepresented in the food and agricultural sciences means groups that have been historically, and are currently, underrepresented among recipients of undergraduate and first professional degrees in the food and agricultural sciences.

Underrepresented means proportionate representation as measured by degree recipients that is less than the proportionate representation in the general population--(i) As indicated by (A) The most current edition of the Department of Education's Digest of Education Statistics; (B) The National Research Council's Doctorate Recipients from United States Universities; or (C) Other standard statistical references, as documented by national survey data submitted to and accepted by the Secretary on a case-by-case basis.