REQUEST FOR APPLICATIONS

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

FUNDING YEAR:	Fiscal Years 2021 and 2022
APPLICATION DEADLINE:	January 28, 2021; January 27, 2022
LETTER OF INTENT DEADLINE:	Not Applicable
AWARD AMOUNT:	Approximately $3.1 million
CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER:	10.210

INITIAL ANNOUNCEMENT

National Institute of Food and Agriculture, United States (U.S.) Department of Agriculture (USDA).

Catalog of Federal Domestic Assistance. The Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship (NNF) is listed in the Assistance Listings under the Catalog of Federal Domestic Assistance number 10.210.

Table 1: Key Dates and Deadlines

Task Description	Deadline
Application:	5:00 P.M. Eastern, January 28, 2021 [*Ref to Part I § C of this RFA*] 5:00 P.M. Eastern, January 27, 2022 [*Ref to Part I § C of this RFA*]
Letter of Intent:	Not Required
Applicants Comments:	Within six months from the issuance of this notice (*NIFA may not consider comments received after the sixth month*)

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

EXECUTIVE SUMMARY

NIFA requests applications for the Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship (NNF) Grants Program for two funding cycles, Fiscal Years (FY) 2021 and 2022, to provide traineeship programs to eligible institutions for meeting the national need to develop scientific and professional expertise in the food and agricultural sciences. The anticipated amount available for grants in FY 2021 is approximately $3.1 million.

This notice identifies the objectives for NNF projects, deadlines, funding information, eligibility criteria for projects and applicants, and application forms and associated instructions.

This RFA is being released prior to the passage of a full appropriations act for FY 2021. Enactment of additional continuing resolutions or a full appropriations act may affect the availability or level of funding for this program. The anticipated amount available for grants in FY 2021 is approximately $3.1 million.

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PART I. FUNDING OPPORTUNITY DESCRIPTION

A. Legislative Authority

Section 1417 of the National Agricultural Research, Extension and Teaching Policy Act of 1977 (NARETPA); codified at 7 U.S.C. 3152 authorizes the Secretary to conduct a program of competitive grants (or grants without regard to any requirement for competition) for all colleges and universities for the purpose of furthering education in the food and agricultural sciences. Specifically, the Secretary may make grants to conduct graduate and postdoctoral fellowship programs to attract highly promising individuals to research or teaching careers in the food and agricultural sciences (7 U.S.C. 3152 (b)(6)).

NIFA administers this Federal assistance competitive 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, is developing intellectual capital to ensure the preeminence of U.S. food and agricultural systems. This program is subject to federal regulations as outlined in administrative provisions that can be found in PART 3402—Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship Grants Program.

B. Purpose and Priorities

The purpose of the NNF Grants Program, Assistance Listing 10.210, 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 and agricultural sciences. The overarching goals and objectives of these graduate fellowships are to encourage outstanding students to pursue and complete graduate degrees in the areas of food and agricultural sciences designated by NIFA as national needs. 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 this 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 the training for and completion of master's and doctoral degree programs in the food and agricultural sciences; and
2. Special International Study or Thesis/Dissertation Research Travel Allowances (IRTA) for NEW eligible master's and doctoral USDA Fellows.

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

a. 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 food and agricultural sciences.

b. 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.

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

Leadership Skills Development. The development of leadership skills, knowledge, and qualities are necessary to prepare students for agricultural and related careers in the private sector, government, and academia. NNF applications must demonstrably incorporate a leadership development component to equip students with technical and leadership abilities upon graduation. Specific activities may include:

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

Incorporation of Social Sciences and Enhancing Impacts. NNF supports social and behavioral science disciplines. Projects that integrate social and biological 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.

Handling of baseline data and data collection will be addressed in the Data Management Plan (DMP) in accordance with the Part IV(B) of this RFA.

eXtension. NNF encourages (but does not require) projects that develop content suitable for delivery through eXtension.

Global Engagement. NNF is intended to promote advances in U.S. food and agricultural 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

By developing the next generation of a highly-skilled workforce for food and agricultural sciences, NNF is directly aligned with the 2018-2022 USDA Strategic Plan,;

Strategic Goal 2: Maximize the Ability of American Agricultural Producers to Prosper by Feeding and Clothing the World and 4: Facilitate Rural Prosperity and Economic Development;

Strategic Goal #4 -- Facilitate Rural Prosperity and Economic Development; Objective 4.1: Expand rural business opportunity and rural quality of life with access to capital; improved infrastructure, broadband access and connectivity; and support for workforce availability.

The program also aligns with the **USDA Science Blueprint** addressing Theme 5, Ag Science Policy Leadership, Objective: Develop an effective and diverse U.S. agriculture workforce that contributes to safer, healthier, vibrant, sustainable, and innovative communities; and

USDA's Agriculture Innovation Agenda to position American agriculture as a leader in the effort to meet the food, fiber, fuel, feed, and climate demands of the future.

Additional requirements on expected performance goals, indicators and targets may be required as a condition of award.

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 careers in food and agricultural sciences.

Table 2: Program Key Information

Title	Description
Program Code:	KK
Program Code Name:	National Needs Graduate Fellowship Program
CFDA Number	10.210
Project Type:	Education Projects Only
Grant Type:	Standard Grants Only
Application Deadline	January 28, 2021 January 27, 2022
Grant Duration:	Approximately 60 Months
Anticipated # of Awards:	Approximately 14 per year
Maximum Award Amount:	Approximately $262,500

C. Program Area Description

NNF grants will support 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 and agricultural sciences disciplines identified as national needs or Targeted Expertise Shortage Areas (TESAs). The IRTA component 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. IRTA grants, if requested, are provided to National Needs Fellows to be recruited under current applications to allow them to conduct thesis/dissertation research or undertake studies outside the United States. The duration for successful applications under this RFA must not exceed 60 months.

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 completed more than one semester or equivalent hours of full-time study as defined by the institution in the same academic program at the same degree level.

b) Eligibility for IRTA – At the time of travel under the IRTA grant 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) (see Part IV, B, 3, (b));

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. 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;
(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.

PART II. AWARD INFORMATION

A. Available Funding

The anticipated amount available for NNF in FY2021 is approximately $3.1 Million. The assistance instrument will be in the form of standard grants. This RFA is being released prior to passage of a full appropriations act for FY2021. Enactment of a continuing resolution or a full appropriations act may affect the availability or level of funding for this program.

USDA is not committed to fund any particular application or to make a specific number of awards. The Automated Standard Application for Payments, operated by the Department of Treasury, Bureau of Fiscal Service, is the designated payment system for awards resulting from this RFA.

B. Application Restrictions

NIFA will evaluate applications using the criteria described in Part V of this RFA. Applications are limited to the following application types:

1. *New application*: New applications will be evaluated using the criteria described in Part V of this RFA and are subject to the due dates herein (see Appendix III for definition).
2. *Resubmitted application*: Resubmitted applications must include the respond to the previous review panel summary and are subject to the same criteria and due dates herein. Resubmitted applicants must enter the NIFA-assigned proposal number of the previously submitted application in the *Federal Field (Field 4)* on the application form (see Appendix III for definition).

C. Project and Grant Types

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

1. Project Types. Applicants may only submit proposals for Education/Teaching Projects. Single-function Education Projects develop human capital relevant to overall program goals for U.S. agriculture.
    a. *Single Function Education:* 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:
        i. Increasing the number of graduates with the necessary technical skills for entry-level positions in food, agriculture, natural resources and human sciences;
        ii. Improving the technical competencies needed for the workforce to ensure that U.S. agriculture remains globally competitive; or
        iii. Enhancing the diversity of the workforce in food, agriculture, natural resources and human sciences.

2. Grant Types. Applicants must select from the 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.**

i. **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 $2,000 per year cost-of-education allowance ($4,000 maximum).

ii. **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).

iii. **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 re-budgeted 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 approximately $525,000 in awards for this award competition**.

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 **proposals submitted in response to this RFA must differ substantively in scope and objectives from previously funded NNF projects in the last five years by the same Project Director.**

D. Ethical Conduct of Funded Projects

In accordance with sections 2, 3, and 8 of 2 CFR Part 422 institutions that conduct USDA-funded extramural research must foster an atmosphere conducive to research integrity, bear primary responsibility for prevention and detection of research misconduct, and maintain and

effectively communicate and train their staff regarding policies and procedures. In the event an application to NIFA results in an award, the Authorized Representative (AR) assures, through acceptance of the award that the institution will comply with the above requirements. Award recipients must, upon request, make available to NIFA the policies, procedures, and documentation to support the conduct of the training. See Responsible and Ethical Conduct of Research for further information.

PART III. ELIGIBILITY INFORMATION

A. Eligibility Requirements

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

Only the following are eligible to apply: Land-grant institutions, Colleges and universities having significant minority enrollments and a demonstrable capacity to carry out the teaching of food and agricultural sciences; and 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 are eligible to submit graduate training proposals under 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.

Applicants should be institutions that confer a graduate degree in at least one of the TESAs listed in Part I of this RFA. 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 start date of a grant. Post-doctoral Fellowships will not be awarded under this grant announcement.

1. Institutions that fail to meet this deadline will be required to refund monies associated with unawarded Fellowships to NIFA.
2. 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.
3. 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.

For those new to Federal financial assistance, a Grants Overview is available on the NIFA website. This page includes information about free Grants 101 Training and other resources that are highly recommended for those seeking an understanding of Federal awards.

Duplicate or Multiple Submissions – duplicate or multiple submissions are not allowed. NIFA will disqualify both applications if an applicant submits duplicate or multiple submissions. For those new to Federal financial assistance, NIFA's Grants Overview provides highly recommended information about grants and other resources to help understand the Federal awards process.

B. Cost Sharing or Matching

No Match Required - The NNF has ***NO*** matching requirement. NIFA will not factor matching resources into the review process as an evaluation criterion.

PART IV. APPLICATION AND SUBMISSION

A. Method of Application

Applicants must apply to this RFA electronically; no other method or response is accepted. The electronic application for this RFA and additional resources are available on Grants.gov and Grants 101. **Table 3** provides instructions on how to obtain an electronic application. **Part II § 1** of the NIFA Grants.gov Application Guide (Application Guide) contains detailed information regarding the Grants.gov registration process.

Table 3. Steps to Obtain Application Materials

Steps	Action
Step One: Register	*New Users* to Grants.gov must register early with Grants.gov prior to submitting an application (Register Here).
Step Two: Download Adobe	Download and Install Adobe Reader (see Adobe Software Compatibility for basic system requirements)
Step Three: Find Application	Using this funding opportunity number USDA-NIFA-HEP-008012, search for application here: Opportunity Package.
Step Four: Assess Readiness	Contact an AR prior to starting an application to assess the organization's readiness to submit an electronic application.

Table 4: Help and Resources

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

B. Content and Form of the Application

The Application Guide is part of the corresponding application package for this RFA. The RFA overrides the Application Guide if there is a discrepancy between the two documents. NIFA will accept subsequent submissions to an application until the application deadline. However, applicants that do not meet the application requirements, to include partial applications, risk being excluded from NIFA's review. NIFA will assign a proposal number to all applications that meet the requirements of this RFA. Applicants must refer to the proposal number when corresponding with NIFA. **Table 5** outlines other key instructions for applicants.

Table 5: Key Application Instructions

Instruction	References (All references are to the Application Guide)
Attachments must be in a portable document format (PDF) format.	**Part III § 3**
Check the manifest of submitted files to verify attachments are in the correct format.	**Part III § 6.1**
Conduct an administrative review of the application before submission.	**Part VII**
Follow the submission instructions.	**Part IV § 1.5**
Provide an accurate email address, where designated, on the SF-424 R&R.	**Part IV § 1.5**
Contact the Grants.gov helpdesk for technical support, and keep a record of the correspondence.	**N/A**
Contact NIFA if applicant does not received correspondence from NIFA regarding an application within ***45*** days of the application deadline.	**N/A**

SF 424 R&R Cover Sheet. See **Part V § 2** and **Part V § 2.17**of the Application Guide for the required certifications and assurances.

SF 424 R&R Project/Performance Site Location(s). See **Part V § 3** of the Application Guide.

R&R Other Project Information Form. See **Part V § 4** of the Application Guide.

1. Field 7. Project Summary (PS)/Abstract. (Required Attachment – Must be PDF format). The PS must show how the project goals align with the project goals of the NNF. See **Part V § 4.7** of the Application Guide for instructions and suggested templates.

   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.**

   a. List the proposal title;
   b. List the names of Project Director(s) and institution(s);
   c. Identify the primary Targeted Expertise Shortage Area (TESA) being addressed (see following) – **applicants must select only ONE TESA per application**;

d. Identify the major academic program or discipline(s) being addressed (see following) – applicants may indicate a single or multiple discipline code(s);
e. Clearly indicate the number of Fellows and degree level(s) to be supported under the application; and
f. Clearly indicate the number and degree level of IRTAs to be supported.

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

a. Be concise and precise at no more than 250 words;
b. 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;
c. State the overall project **goal(s)** and supporting measurable **objectives;**
d. Give a concise **overview** of plans for training project to accomplish project goal(s) for national targeted expertise shortage area, include measurable targets, in specified timeline, to meet proposed objectives;
e. State the **relevance** of the project to the NNF program goals, and the USDA Strategic Goals and Objectives; and
f. 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.**

Table 6 Targeted Expertise Shortages Areas

Targeted Expertise Shortage Areas (TESA) this 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)

Table 7 Relevant Disciplines this Funding Cycle

Relevant Disciplines this Funding Cycle	Code
Animal Science	A
Biotechnology, Biochemistry and Microbiology	B
Plant Sciences and Horticulture (includes Turf Grass/Weed Science/Plant Breeding)	P
Conservation and Renewable Natural Resources (including Forestry, Air Quality, Sustainable Agriculture, Climatology/Climate Change or Biofuels)	C
Environmental Sciences/Management (includes Economics, Decision Management and Biometry)	L
Soil Sciences (includes Soil Quality; Processes)	D
Water Sciences/Resources (includes Water Quality)	W
Agricultural/Biological Engineering (includes Rangeland, Urban/Rural Technology)	E
Agricultural Marketing and Management (includes Agricultural Economics)	M
Food Science/Technology/Manufacturing/Safety	F
Human Nutrition (includes obesity and relevant to USDA Strategic Goals)	N
International Agriculture (includes Disciplines Related to Global Food and Agricultural Systems and Competitiveness)	I
Agricultural Social Sciences (includes Rural Sociology)	S
Veterinary Medicine (graduate degree training)	V
Interdisciplinary, Sustainable Food, Agricultural and Environmental Sciences, Social Sciences and Economics Graduate Degree Programs	G
Agricultural Biosecurity	X
Other (Describe only if not listed above)	O

2. Field 8. Project Narrative (PN). The PN shall not exceed **20 pages of written text, inclusive of figures and tables**. We have established this maximum (20 total pages) to ensure fair and equitable competition. Appendices to the PN are allowed if they are directly germane to the proposed project. Do not add appendices to circumvent the page limit. **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 may not be accepted for review

The PN must include all the following:

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

a. Progress Report (if applicable, maximum of two pages)
If the application is from a Project Director that has received an 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:

i. The Grant Number (xxxx-38420-xxxxx) for the award;
ii. A comparison of actual accomplishments with the objectives established for the previous award;
iii. The reasons established objectives were not met, if applicable;

b. 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

i. 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).

a. Institutional Profile

i. 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.
ii. 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.
iii. 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.
iv. 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.
v. 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.

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

When applying for an IRTA award, the *Project Narrative* should include all of the following:

a. The anticipated, specific destination(s) and duration of the travel;
b. A brief description of example projects the proposed Fellows would be encouraged to undertake;
c. Information about the objectives, timeline, expected outcomes and deliverables from the participating, eligible USDA Fellow(s);
d. Explanation about how the experience will contribute to the USDA Fellow's program of study;
e. 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;
f. The criteria that will be used to evaluate success of the Fellowship and/or IRTA; and

Section 2: Proposed activities

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

a. Recruitment and selection of Fellows

i. 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.

ii. 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.

b. Academic advising, research training, professional counseling, mentoring, pipelining

i. 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.

ii. 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.
iii. 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.
iv. Provide evidence based on research, published materials and common practices that the proposed strategies above are effective.

c. Experiential learning: hands-on research, extension, teaching and other activities

i. 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).
ii. Describe plans for mentorship and scholarship during the experiential learning opportunity.
iii. Identify the goals of the experiential learning opportunity and their relevance to the TESA and overall objectives of the training project.

d. 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:

i. 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;
ii. 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
iii. 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.

e. 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:
    i. Output and outcomes reporting, including impacts of experiential learning activities, of fellowship recipients; and
    ii. 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:

a. 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).
b. 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.
c. Demonstrate institutional commitment to supporting 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.
d. 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 **innovative** and 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:

a. 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.
b. 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.
c. 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.
d. Describing the wider array of resources (such as private-sector companies; 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.

3. Field 9. Bibliography & Cited References - (Optional Attachment – Must be PDF format).

If needed, provide a complete list of all references cited in the application.

4. 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 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 shall be included as a part of Other Attachments, see Field 12 below.

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

6. Field 12. Add Other Attachments - (Must be PDF format).
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.

i. Response to Previous Review – PDF Attachment. 1-Page Limit.

a. 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.

ii. **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 text and/or figures and tables page limitations.

iii. **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:

a. Student enrollment, retention and graduation rates by gender, racial groups, socio-economic groups, and ethnic groups for the past five years;
b. 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;
c. Placement of graduates during the past five years; and
d. Enrollment, graduation rates and placement of students from traditionally underserved groups and first-generation college students and/or past Fellows.

iv. **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.

v. Expected Outcomes – PDF Attachment

a. 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

Table 8 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**
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	
Number of underrepresented[1] students to be supported during the grant period (Provide the best estimate based on experience)	
Number of female students to be supported during the grant period (provide the best estimate based on experience)	
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	
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.

R&R Senior/Key Person Profile (Expanded). See **Part V § 5** of the Application Guide for profile requirements, details about the biographical sketch, and suggested support templates.

R&R Personal Data. This information is voluntary and is not a precondition of award (see **Part V § 6** of the Application Guide).

R&R Budget. See **Part V § 7** of the Application Guide.

1. Match – If an applicant concludes that the matching requirements described under Part III § B of this RFA is not applicable to them; the applicant must include an explanation of their conclusion in the *budget justification*. NIFA will consider this justification when determining final matching requirements or if required matching can be waived. NIFA retains the right to make final determinations regarding matching requirements.
   Grants that require matching funds as specified under Part III § B of this RFA must list in their *budget justification* the matching sources, the identification of the entity(ies) providing the match, and the total pledged amount. A written verification of commitments of matching support (a pledge agreement) is not required. However, applicants are subject to the documentation, valuing and reporting requirements, as specified in 2 CFR Part 200, "Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (the Uniform Guidance)," and 7 CFR 3430, "Competitive and Noncompetitive Non-Formula Federal Assistance Programs – General Award Administrative Provisions.
2. Indirect costs (IDC) – See Part IV § C of this RFA for funding restrictions regarding indirect cost, and **Part V 7.9** of the Application Guide for additional information.
3. Funding Requirements - Funding requests for this program are restricted to **student stipends, cost of education allowances, and/or IRTA funds**. Funding amounts per student must be adhered to.

Data Management Plan. A DMP is required for this program. Applicants should clearly articulate how the project director (PD) and co-PDs plan to manage and disseminate the data generated by the project. The DMP will be considered during the merit review process (see Part V § B of this RFA, **Part III § 3.1** of the Application Guide and NIFA's Data Management Plan).

Supplemental Information Form. See **Part VI § 1** of the Application Guide.

1. Field 2. Program to which the applicant is applying. Enter the program name NNF and the program code **KK**. Accurate entry is critical.
2. Field 8. Conflict of Interest List. See **Part VI § 1.8** of the Application Guide.

Representations Regarding Felony Conviction and Tax Delinquent Status for Corporate Applicants. This is required for corporate applicants. See **Part VI § 2** of the Application Guide for a description of the term, "corporation."

C. Funding Restrictions

No Indirect Cost (IDC). IDC is *no*t authorized for this RFA. 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 (30 months), 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 forty-two-month period. In the application, 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. 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 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 re-budgeted amongst other budget categories (i.e. stipend or cost-of-education allowance) during the performance period of the award.

PART V. APPLICATION REVIEW REQUIREMENTS

A. NIFA's Evaluation Process

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

Scientific Peer Review Process:

NIFA selects reviewers for the review panel based upon their training and experience in relevant scientific, extension, or education fields, taking into account the following factors: 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 NIFA will recommend that your project is either approved for support from currently available funds or declined due to insufficient funds or unfavorable review.

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

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

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

B. Evaluation Criteria

NIFA will use the following criteria to evaluate this RFA: 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 consider the following factors.

Funding preference will be given to applications that propose to:

i. Establish innovative and evidence-based frameworks for graduate training, including substantive partnerships with industry;
ii. Establish master's degree or doctoral programs;
iii. Establish multidisciplinary graduate training programs;
iv. Increase the multicultural diversity of the nation's scientific and professional expertise in the food and agricultural sciences;
v. Partner with teaching/research/extension or across colleges/institutions or public/private sectors;
vi. Provide leadership skills opportunities; and/or
vii. 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: NIFA Peer Review Process for 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

i. 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.

ii. 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

i. 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;

ii. Individualized, contextual, and student-centered career counseling, mentoring, and support services;

iii. 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:

i. Evaluate project management;

ii. 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;

iii. Track Fellows' accomplishments after graduation;

iv. 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

v. 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:

i. An integrative interdisciplinary, multi-disciplinary, or cross-disciplinary approach;

ii. A focus on innovative, multi-disciplinary education programs, material, or curricula;

iii. A multi-university collaborative approach;

iv. An emphasis on a collateral specialization or minor in a related discipline;

v. Development of policy, research opportunities, internships, experiential learning opportunities,

vi. Developing leadership, management, critical thinking and problem-solving skills that may integrally incorporate science and values for sustainability in food and agricultural sciences;

vii. 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.

A. Organizational Management Information

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

B. Application Disposition

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

PART VI. AWARD ADMINISTRATION

A. General

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

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

Program-specific reporting guidelines can be found at Fellowships and Scholarships.

B. Administrative and National Policy Requirements

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

PART VII. OTHER INFORMATION

A. Use of Funds and Changes in Budget

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

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

1. Change in the scope or the objective of the project or program without prior written approval (even if there is no associated budget revision requiring);
2. Change in a key person specified in the application or the federal award;
3. Disengagement from the project for more than three months, or a 25 percent reduction in time devoted to the project;
4. Inclusion of costs that require prior approval in accordance with 2 CFR 200 Subpart E (Cost Principles), or 45 CFR Part 75 Appendix IX, (Principles for Determining Costs Applicable to Research and Development under Awards and Contracts with Hospitals), or 48 CFR, unless waived by the federal awarding agency,
5. 48 CFR Part 31, Contract Cost Principles and Procedures;
6. Transfer of funds budgeted for participant support costs to other categories of expense (2 CFR §200.75 Participant support costs);
7. Sub-awarding, transferring or contracting out of any work under a federal award, including fixed amount sub-awards (see §200.333, Fixed Amount Sub-awards), unless described in the application and funded in the approved federal awards. This provision does not apply to the acquisition of supplies, material, equipment, or general support services;
8. Changes in the approved cost-sharing or matching provided by the non-federal entity; and
9. The need for additional federal funds to complete the project.

B. Confidential Aspects of Applications and Awards

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

C. Regulatory Information

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

APPENDIX I: AGENCY CONTACT

Programmatic Contact

Name	Email	Telephone	Fax
Dr. Ray A. Ali	NNF@usda.gov	816-926-1453	
Chinatu Gladrich	NNF@usda.gov		

For administrative questions related to

- Grants.gov, see Part IV of this RFA
- Other RFA or application questions, please email policy@usda.gov
- Awards under this RFA, please email awards@usda.gov

NIFA's Mailing Address:

U.S. Postal Mailing Address:

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

Courier/Package Delivery Address:

National Institute of Food and Agriculture
United States Department of Agriculture
2312 East Bannister Road, MS 10000
Kansas City, MO 64141-3061

APPENDIX II: GLOSSARY OF TERMS

Name	Acronyms
Agricultural Research, Extension, and Education reform Act of 1998	AREERA
Agriculture and Food Research Initiative	AFRI
Authorized Representative	AR
Catalog of Federal Domestic Assistance	CFDA
Center of Excellence	COE
Coordinated Agricultural Project	CAP
Data Management Plan	DMP
National Institute of Food and Agriculture	NIFA
Request for Application	RFA
Research, Education, and Economics	REE
United States Department of Agriculture	USDA

APPENDIX III: DEFINITIONS

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

Terms	Definitions
Continuation Award	An award instrument by which NIFA agrees to support a specified level of effort for a predetermined period of time with a statement of intention to provide additional support at a future date, provided that performance has been satisfactory, appropriations are available for this purpose, and continued support would be in the best interest of the federal government and the public.
Matching	The process through which a grant recipient match awarded USDA funds with cash and in-kind contributions on a dollar-for-dollar basis. The matching funds must derive from non-Federal sources.
New Application	An application not previously submitted to a program.
Renewal Application	A project application that seeks additional funding for a project beyond the period that was approved in an original or amended award.
Resubmitted Application	A project application that was previously submitted to a program, but the application was not funded.
Resubmitted Renewal Application	A project application that requests additional funding for a project beyond the period that was approved in the original award. This is an application that had previously been submitted for renewal to but not funded.