



USDA-NIFA-ARPAED-009362
From Learning to Leading: Cultivating the Next Generation
of Diverse Food and Agriculture Professionals
Department of Agriculture
National Institute of Food and Agriculture

NEXTGEN PROPOSAL DEVELOPMENT GUIDE

Version 2.0, November 14, 2022

APPLICATION DEADLINE EXTENDED: December 14, 2022

About this Guide

This guide has been developed by the Extension Foundation to support all Eligible Institutions in their development, preparation, and application of the **From Learning to Leading: Cultivating the Next Generation of Diverse Food and Agriculture Professionals Program (NEXTGEN)** USDA-NIFA-ARPAED-009362 funding opportunity. The Extension Foundation is the Technical Service Provider of this grant and will provide information in this guide, online support, and consultation to accelerate the application process for eligible institutions.

This work is supported through an agreement between the USDA National Institute of Food and Agriculture (NIFA) and the Extension Foundation serving as the Technical Assistance Advisor for From Learning to Leading: Cultivating the Next Generation of Diverse Food and Agriculture Professionals (NEXTGEN). Any opinions, findings, conclusions, or recommendations expressed in this publication/website are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.

This guide does not replace and is superseded by the RFA found at [NIFA.USDA.gov/grants](https://nifa.usda.gov/grants) and [Grants.gov](https://grants.gov) [USDA-NIFA-ARPAED-009362](https://grants.gov). This guide is designed to increase understanding of the RFA and highlight important elements for the purposes of planning and submission. Any italicized text in this Application Toolkit reflects information directly quoted from the RFA.

Contact Extension Foundation, Technical Service Provider Support

REQUEST SUPPORT Must Register at: NEXTGEN Applicant/Proposal Intake	ACCESS ONLINE SUPPORT & KNOWLEDGE BASE: https://nextgen.extension.org/
--	---

Contact NIFA Representatives

Main email contact: NIFA.workforce@usda.gov Ahlshia Shipley Capacity Program Leader Ahlshia.Shipley@usda.gov Carlos Ortiz National Program Leader K-14 Education and Workforce Development Carlos.Ortiz@usda.gov Erin Riley National Program Leader 1994 Land-grant Institutions Erin.Riley@usda.gov	Irma Lawrence National Program Leader Hispanic-Serving, Alaska-Serving, Native Hawaiian-Serving, and Insular Areas ILawrence@usda.gov Manoharan Muthusamy National Program Leader 1890 Land-grant institutions Manoharan.Muthusamy@usda.gov Administrative Questions Janette Jensen janette.jensen@usda.gov
---	--

TABLE OF CONTENTS

About this Guide	2
Contact Extension Foundation, Technical Service Provider Support	2
Contact NIFA Representatives	2
Are you Eligible and Ready to Apply?	5
We Can Help	6
NEXTGEN Award Overview	7
NEXTGEN Grant Details	7
Assistance Listing Number	7
Key Dates and Deadlines	7
First Steps: Grant Support Team Recommendations	8
Let Us Be Of Service: Engaging Grant Support Team	9
→ Proposal Strategy And Planning	9
→ Partnerships & Collaboration Prospecting	9
→ Proposal Design And Plans For Narrative	9
→ Proposal Budgets And Justifications	10
→ Proposal Editing Service To Help Refine Proposals	10
→ Office Hours and Chat with NEXTGEN Support Staff	10
Proposal Development Resources	11
Developing a Plan of Work	11
SMARTIE Leading Questions	11
Define Specific Objectives	11
Building your Logic Model & Performance Metrics	12
Logic Model	12
Impact Worksheet to Identify Performance Metrics	12
Find Partners that Align with Your Application Goals	12
Partnership Commitment Letter	13
Data Management Plan	14
NIFA Document Templates	15
Required NIFA Documents	15
Optional NIFA Documents	15
NEXTGEN Planning Resources	15
Additional Planning Resource Templates and Tutorials	15
Proposal Examples	16
RFA Question 2a: Potential for Preparing and Supporting Students to Enter the Future Food and Agricultural Workforce	16
Response Question 2a Example 1: Institutional Alignment	16

Response Question 2a Example 2: Justification	17
Response Question 2a Example 3: Overview/Justification	17
RFA Question 2b: Proposed Approach and Cooperative Linkages	18
Response Question 2b Example 1: Objectives	18
Response Question 2b Example 2: Activity - Internship Experience	19
Response Question 2b Example 3: Activity - Capstone Courses and Projects	19
Response Question 2b Example 4: Expected Outcomes	20
Response Question 2b Example 6: Recruitment and Selection Plan	21
Response Question 2b Example 7: Retention	21
Response Question 2b Example 8: Sustaining Student Mentoring Relationships	22
Response Question 2b Example 9: Objective Incorporation in Performance Measure	22
Response Question 2b Example 10: Logic Model	23
Response Question 2b Example 11: Timeline	24
RFA Question 2c Key Personnel and Division of Labor	25
Response Question 2c Example 1: Key Personnel	25
Response Question 2c Example 2 Senior Personnel	26
RFA Question 2d Outcome Evaluation Plan	26
Response Question 2d Example 1: Expected Outcomes and Outcomes Measured	26
Response Question 2d Example 2: Longitudinal Tracking	27
RFA Part V Budget	27
Response Budget Example 1	27
Response Budget Example 2	30
RFA Part V Data Management Plan	30
Response Data Management Plan Example 1	30
Response Data Management Plan Example 2	33
Contact Technical Service Provider Support	35

Are you Eligible and Ready to Apply?



Before you read further, please check the following:

1. Confirm your institution's eligibility to apply for NEXTGEN funding?







Section 1006 of the American Rescue Plan, as amended by Section 22007 of the Inflation Reduction Act (Pub.L. 117-169) defines eligible applicants as 1890 land-grant institutions, 1994 land-grant institutions, Alaska Native serving institutions and Native Hawaiian serving institutions, Hispanic-serving institutions, and insular area institutions of higher education located in the U.S. territories. ¹

This list does not guarantee eligibility. If you are uncertain of your eligibility, please consult your institution or [NIFA](#) directly (NIFA.workforce@usda.gov).

2. Consider if your institution has the capacity to manage this award or will you need to engage a program manager or an accountant?

¹ Page 15 of the [RFA](#)

We Can Help

	<p>Register for Grant Support Team Help</p> <p>You MUST first register for Technical Advising Services from our Grant Support Team. Registered institutions qualify for up to 8 hours of individualized grant developing support. Institutions can request support across the proposal lifecycle or specific needs such as proposal design consultations, copy-editing services, budget consultation/justification, etc. Review the support services.</p>
	<p>Request a Proposal Copy/Edit Appointment</p> <p>Would you like one of our Grant Support Team members to review your whole proposal or parts of your proposal? Request a 3-hour appointment at a date/time convenient for you.</p>
	<p>Search for Answers to your Questions</p> <p>Our NEXTGEN information knowledge base will offer searchable content to address frequently asked questions that support the development of your NEXTGEN proposal.</p>
	<p>Chat with NEXTGEN Support Staff</p> <p>Our chat located on the NEXTGEN website will search frequently asked questions from the NEXTGEN information knowledge base 24/7 and connect you to a live support person from 8 AM ET - 4 PM ET Mondays through Fridays.</p>
	<p>Register and Attend Support Webinars</p> <p>Applicants can attend as many scheduled support webinars as needed and can choose from a wide variety of days and times offered. There will be two types of events applicants can join to get help. Find support sessions that fit your schedule and register to attend at: NEXTGEN Calendar of Support.</p> <ol style="list-style-type: none"> 1. REGISTER for Technical Grant Support Introductions & Partnership Opportunities workshops - REGISTER HERE - Held Oct 3, 4, 5, & 6, 2022 2. JOIN 90 minute “walk-in” Office Hours as needed to consult with Grant & Budget Support via Zoom/phone (see calendar for details and to register) 3. ATTEND a last-minute proposal copy/edit review session on Dec. 8, 2022. REGISTER HERE This review does not “count” towards the institutional 8-hour grant support total.
	<p>Request a Phone Call</p> <p>Email us at NEXTGEN@extension.org or message us using the NEXTGEN website chat feature to request a call back. You will have a response within 24 hours of the initial request M-F.</p>

NEXTGEN Award Overview²

The primary goal of the From Learning to Leading: Cultivating the Next Generation of Diverse Food and Agriculture Professionals Program (NEXTGEN) is to enable 1890 institutions, 1994 institutions, Alaska Native-serving institutions and Native Hawaiian-serving institutions, Hispanic-serving institutions, and insular area institutions of higher education located in the U.S. territories to build and sustain the next generation of the food, agriculture, natural resources, and human sciences (FANH) workforce including the future USDA workforce primarily through providing student scholarship support, meaningful paid internships, fellowships, and job opportunity matching, and also facilitating opportunities to learn the processes and pathways leading to training and employment in the federal sector.

NEXTGEN Grant Details

Complete grant information can be located at: NIFA.USDA.gov/grants and apply directly at: Grants.gov [USDA-NIFA-ARPAED-009362](https://Grants.gov). Review the [Nextgen Summary Fact Sheet](#) (High Level 2 page fact sheet with links)

FUNDING YEAR: Fiscal Year 2022

APPLICATION EXTENDED DEADLINE: 5:00 P.M. Eastern, December 14, 2022

ANTICIPATED FUNDING: \$250,000,000

AVERAGE AWARD RANGE: \$500,000 - \$20,000,000

FUNDING OPPORTUNITY NUMBER: USDA-NIFA-ARPAED-009362

ASSISTANCE LISTING NUMBER: 10.237

NOTICE OF INTENT DEADLINE: 5:00 PM Eastern, September 16, 2022 (Optional); In order to facilitate the expedited review process of applications, a Notice of Intent (NOI) submission is highly encouraged, but not required, and must be submitted by an eligible institution.

Assistance Listing Number






The From Learning to Leading: Cultivating the Next Generation of Diverse Food and Agriculture Professionals (NEXTGEN) Program is listed in the Assistance Listings under number 10.237.

Key Dates and Deadlines

1. Application Deadline: 5:00 P.M. Eastern, December 14, 2022
2. Notice of Intent: 5:00 P.M. Eastern, September 16, 2022 (Optional)
3. Applicants Comments Deadline: Within six months from the issuance of this notice (NIFA may not consider comments received after the sixth month)

² Page 1 through 6 of the [REA](#)

First Steps: Grant Support Team Recommendations

RIGHT AWAY	ACTIVITY
	Read about this grant opportunity: “ From Learning to Leading: Cultivating the Next Generation of Diverse Food and Agriculture Professionals (NEXTGEN) ”
	Register for Technical Advising Services from our Grant Support Team. Registered institutions qualify for up to 8 hours of individualized grant developing support. Review the support services .
	<p>Verify Grants.gov account is current. Coordinate with your Institution Development (grants and contracts) office to make sure the appropriate entry codes are in place for Grants.gov.</p> <p><i>Applicants must apply to this RFA electronically. The electronic application for this RFA and additional resources are available on Grants.gov and Grants 101. Help and Resources: 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.³</i></p> <p>HELPFUL HINT:</p> <ul style="list-style-type: none"> • Passwords to these sites expire frequently so please ensure that your account is current. • Plan to submit a few days before the deadline to allow time for technical difficulties.
	Identify Core Team Members. Who will be the responsible team from your institution? Who are your grants office points of contact? Budget estimation contacts? Subject Matter Experts? Begin to consider what partnering institutions you wish to engage in your proposal.
	<p>Prepare Optional Notice of Intent (NOI) for submission by 5PM ET, 9/16/22. <i>In order to facilitate the expedited review process of applications, a Notice of Intent (NOI) submission is highly encouraged, but not required, and must be submitted by an eligible institution.</i>⁴</p> <p>NOI will be accepted after the deadline.</p>

³ Page 16 of the [RFA](#)

⁴ Page 16 of the [RFA](#)

Let Us Be Of Service: Engaging Grant Support Team

The Grant Support Team (GST) strives to support the development of your proposal. We can provide the following services up to 8 hours of support time per institution with exceptions noted below. If you have not already done so, please **Register** for [Technical Advising Services](#) from the GST to be contacted to receive this support and email the GST at NEXTGEN@extension.org.

→ Proposal Strategy And Planning

Solicitations are often lengthy and complex. Luckily, the Extension Foundation Grant Support Team is available to help decipher these challenging documents. This service involves an individual consultation, which may include any or all of these services:

- Review the full list of services available from the Extension Foundation and identify what will best support the Institution in developing a quality proposal.
- Clarify the key requirements and constraints of the Request for Proposals (RFP).
- Support identification of a strong, qualified team for your proposal development
- Identify resources available to enhance a component of the proposal.
- Create a checklist of the necessary components which may include an accompanying timeline.
 - For this service, the Grant Support Team can collaborate with other support staff, such as partnership strategists, budget specialists, or engagement coordinators to support institutions in developing a quality submission.

→ Partnerships & Collaboration Prospecting

Engagement Coordinators and Extension Foundation support staff can assist in the following areas *and this support is not counted towards the 8 hrs of grant support team support*.

- Partnership strategies / how to best work together for the grant purposes
- Partnership conceptualization / how might partnerships support the overall program design
- Helping to identify potential partners
- Providing introductions across Institutions
- Match-making of interested parties

→ Proposal Design And Plans For Narrative

Our team can support you with developing a strategy and provide a foundation for your proposal writing team to be competitive.

- Developing a logic model that builds understanding and clarity about your program
- Identify the sequencing of activities to be implemented
- Identify resources needed for your proposal

- Establish a timeline for proposal development and resources needed
- Identify a program implementation timeline
- Establishing evaluation plans (not in the evaluation of this proposal)
- Other items as needed to bring clarity to the Institution's proposal writing team

→ Proposal Budgets And Justifications

The Grant Support Team can assist Institutions with preparation of proposal budgets for funding opportunities by providing the following services and expertise:

- Creation of a budget and justification that are compliant with sponsor's guidelines.
- Converting your budget and justification into a sponsored required format.
- Serving as a point of contact with sponsoring agencies for budget development

→ Proposal Editing Service To Help Refine Proposals

The Grant Support Team is available to help put the finishing touches on proposals. This service involves:

- Validating that all requested information is included within the project narrative
- Editing to improve clarity, flow, and style
- Proofreading to achieve a grammatically correct and professionally polished document that adheres to formatting requirements.

→ Office Hours and Chat with NEXTGEN Support Staff

These services are not included in an institution's 8 hours of GST. We encourage you to use these services for additional help and answers to your questions.

Proposal Development Resources

Developing a Plan of Work

A clearly defined Plan of Work will provide the structure to your proposal needed to define activities and measurable outcomes. One tool that helps you do this in a systematic way is the SMARTIE approach.

SMARTIE Leading Questions

- **Specific.** *What exactly are we going to do for whom?* Lay out what population you are going to serve and any specific actions you will use to help that population.
- **Measurable.** *Is it quantifiable and can we measure it?* Can you count the results?
- **Achievable.** *Can we get it done in the time allotted with the resources we have available?* The objective needs to be realistic given the constraints.
- **Relevant.** *Will this objective have an effect on the desired goal or strategy?* Make sure your objectives and methods have a clear, intuitive relationship.
- **Time-bound.** *When will this objective be accomplished, and/or when will we know we are done?* Specify a hard end date for the project. Stipulate which, if any, outcomes would cause your project to come to a premature end, with all outcomes having been achieved.
- **Inclusive.** Brings traditionally marginalized people—particularly those most impacted—into processes, activities, and decision/policy-making in a way that shares power.
- **Equitable.** Seeks to address systemic injustice, inequity, or oppression.

Define Specific Objectives

Under each objective list 1-2 top priority activities that your team will do/complete to accomplish the objectives. Be sure to include DEI-focused activities and those activities that can be linked to research.

Goal 1: Big Goal here		
Objectives <i>(Specific, Measurable, Achievable, Relevant, and Time-bound, Inclusive, Equitable)</i>	Activities <i>(what we do to achieve objectives/goals)</i>	Outcomes <i>(short-, medium-, and long- term desired results of activities)</i>
1 First SMARTIE objective	1.1 first Activity related to first objective	1.1 first projected outcome related to first objective
2 Second SMARTIE objective	1.2 second activity related to first objective	1.2 second projected outcome related to first objective
	2.1 first Activity related to second objective	2.1 first projected outcome related to second objective
	2.2 second activity related to second objective	2.2 second projected outcome related to second objective

Building your Logic Model & Performance Metrics

Logic Model



Applications should contain a logic model to define your proposal. It is helpful to review the elements of a logic model and reacquaint yourself with these components. Watch more to learn [What is a Logic Model?](#) And review this [Practical Example of a Logic Model](#) to get you started. The University of Wisconsin also provides an online [Logic Model Training](#).

[The Logic Model Planning Process by NIFA](#) is well defined and we encourage you to use the following resources to review examples and take advantage of the fillable pdf template.

- [Generic Logic Model For NIFA Reporting](#)
- [Generic Logic Model Example](#)
- [Generic Logic Model Template \(fillable PDF\)](#)

Impact Worksheet to Identify Performance Metrics



Another tool for building out the outcomes portion of a logic model is something we call an Impact Worksheet. Review an explanation of the [Impact Worksheet](#) and use this tool to help you reach maximum impact using the [Impact Worksheet Template \(PDF\)](#). This information is a transferable tool to complete your logic model.

Find Partners that Align with Your Application Goals

The Extension Foundation, through the use of Partnership Coordinators, will assist with connecting eligible institutions with other universities to ensure that connections are made and relationships formed so that meaningful and beneficial partnership can be developed. **Tier 2 and Tier 3 funding requires an eligible institution to partner with one or more eligible institutions within or outside their home state, territories, or tribal nations.**⁵

Applicants are also encouraged to collaborate with 1862 Land Grant Universities, certified Non-Land Grant Colleges of Agriculture (NLGCA), Historically Black Colleges and Universities (HBCUs), Tribal Colleges and Universities, community colleges, technical and vocational schools and other accredited academic institutions with food, agriculture, natural resources, and human sciences including nutrition, rural sociology, public policy or public administration and allied disciplines programs, as appropriate and beneficial to meeting the objectives of proposed projects.

*It is recommended that applicants propose efforts designed to build and sustain partnerships with organizations who have a vested public interest in developing a diverse workforce in food and agriculture, broadly speaking. These entities serve as **connectors** between the eligible institutions, their students, and USDA. Examples of these ‘connector organizations’ include MANRRS, the Hispanic Association of Colleges and Universities*

⁵ Pages 13-14 of the [RFA](#)

(HACU), the American Indian Higher Education Consortium (AIHEC), the Association of 1890 Research Directors, the Association of Extension Administrators for the 1890 Land-Grant Universities, the Federation of Southern Cooperatives, and the National Young Farmer Coalition. Additional ‘connector organizations’ may include non-profit organizations, workforce development centers, businesses, local school districts, and professional societies. Applicants may also pursue relationships and partnerships with programs, such as AmeriCorps and other national service programs, the Rural Partners Network, the Congressional Hunger Center and the U.S. Forest Service Youth Conservation Corps, to cultivate interest in pursuing careers in food, agriculture, natural resources and human sciences.⁶

Partnership Commitment Letter

A **Partnership Commitment Letter** to solidify the collaboration is highly encouraged and could be provided as an attachment to the narrative proposal. A basic example of such a letter would include the following:

Example body of a partnership letter of commitment:

Dear [Project Director]:

[Optional short introduction describing the partnering organization’s mission and its interest in BFR development.]

The purpose is to ...

We commit to participating in and supporting the 2022 NEXTGEN USDA proposal entitled [Project Title], for the time period of [include dates of commitment within proposed project period] in the following way:

Person1 will (describe role: what the person will do, time commitment)

Person2 will (describe role: what the person will do, time commitment)

The individuals and our organization agree to abide by the Management Plan contained in the application.

Sincerely,

[signature of AR]

Name of AR (Authorized Representative)

AR’s Title (e.g., Executive Director)

Address and telephone number if that information is not on the letterhead

⁶ Page 9 of the [RFA](#)

Data Management Plan

All applications must contain a Data Management Plan. Compiled here are tutorials to assist you in crafting this plan.

- [Knowledge clip: Data Management Plans \(DMPs\)](#)
- [Content of a Data Management Plan](#)
- [Data Management Plans in 3 Minutes](#)
- [Examples found in this document](#)



NIFA Document Templates

NIFA provides fillable documents for use in this Pre-Award Application. They can be located at [Grants.gov](https://www.grants.gov) [USDA-NIFA-ARPAED-009362](https://www.grants.gov/USDA-NIFA-ARPAED-009362) under the *Package* tab and selecting the *Preview* of forms link. The latest downloads can be obtained from this site.

Required NIFA Documents

- [SF424 \(R & R\) \[V5.0\]](#)
- [NIFA Supplemental Information \[V1.2\]](#)
- [Project/Performance Site Location\(s\) \[V4.0\]](#)
- [Research & Related Budget \[V3.0\] - \(Examples\)](#)
- [Research & Related Personal Data \[V1.2\] - \(Examples\)](#)
- [Research & Related Other Project Information \[V1.4\]](#)
- [Research & Related Senior/Key Person Profile \(Expanded\) \[V4.0\] - \(Examples\)](#)

Optional NIFA Documents

- [R & R Subaward Budget Attachment\(s\) Form 5 YR 30 ATT \[V3.0\]](#)
- [USDA AD-3030 \[V2.0\]](#)

NEXTGEN Planning Resources

- [NEXTGEN Grant Information and Application link](#)
- [NEXTGEN Summary Fact Sheet](#) (High Level 2 pager | contains some old information)
- [NEXTGEN Proposal Template](#) (DOCX will download automatically)
- [What Makes a Well-Conceived Proposal for Federal Help?](#)
- [Example Integrated Proposal](#)
- [Writing A Winning Proposal](#)
- [NIFA grants.gov application guide](#)
- NIFA provides an FAQ on how to [Calculate Indirect Cost](#) (PDF)

Additional Planning Resource Templates and Tutorials

- [Proposal Planning Worksheet](#) (DOCX will download automatically)
- [Proposal Timeline Template](#) (XLSX will download automatically)
 - [Creating a Timeline for a Research Proposal with MS Word](#) Video tutorial
- [Budget Form Sample](#) (XLSX will download automatically)
 - [Budget Planning Template](#) (XLSX)
- Logic Model Examples and Templates: [Logic Model Workshop Slides \(Example\)](#)
 - [Generic Logic Model For NIFA Reporting](#)
 - [Generic Logic Model Example](#)
 - [Generic Logic Model Template \(fillable PDF\)](#)
- Generic [biosketch template](#)
- [Biosketch template example](#) for use with required submission of [Research & Related Senior/Key Person Profile \(Expanded\) \[V4.0\]](#)

Proposal Examples

INSTRUCTIONS

The following excerpts are examples of successfully funded USDA grant proposals. Please note that examples are not necessarily relevant to NEXTGEN proposals, but are examples of good responses. Each response is prompted first by an RFA question found in the gray box above each set of examples. **Do not attempt to recreate these responses with your information, as it may not include the correct information.**

Always refer to the RFA for the required information for each section.

RFA Question 2a: Potential for Preparing and Supporting Students to Enter the Future Food and Agricultural Workforce

Please explain how your project will promote advancements in building and sustaining the future workforce in food, agriculture, natural resources, and human sciences and build awareness of the processes and pathways leading to training opportunities and employment in the federal sector while advancing equity. Include the following: i. Introduction and justification; ii. Institutional alignment; iii. Innovation

Please see RFA for all required information for this section

Response Question 2a Example 1: Institutional Alignment

“This project is aligned with the USDA’s strategic plan #4: Facilitate Rural Prosperity and Economic Development. The specific objectives for this proposal are to: Objective #1: Develop a mentoring and support system to recruit and retain five American students (scholars) from communities; Objective #2: Train scholars in key technical skills, increase industry exposure, and promote the development of essential skills through the creation of an internship experience; Objective #3: Broaden critical thinking and problem-solving skills through scholar participation in course-based undergraduate research experiences; Objective #4: Enhance - scholars’ leadership skills through scholar-created outreach programming and delivery for high school students; Objective #5: Develop - scholars’ intercultural competence through the creation of international and on-campus opportunities”

Response Question 2a Example 2: Justification

“As the number of United States citizens directly involved in agriculture continues to decline, a similar trend is reflected in the undergraduate student body interested in Animal Science is no exception (citation). There are approximately 1000 job openings each year in agriculture, but only 100 of these jobs will be filled with expertise in the respective areas. Careers are readily available, but poultry science is an area often overlooked by students, and those who graduate are not meeting employment demands. Nationally, University ranks in the top 5 Agricultural programs, and in 2019, the poultry industry contributed over \$\$\$ economy. However, the majority of employees from underrepresented backgrounds are employed in entry-level jobs and the majority of managerial positions are filled by Caucasian employees (personal communications). Therefore, there is a need to provide students from underrepresented backgrounds with exposure to and opportunities within the poultry industry and to promote skills needed to be successful in the industry. The overarching goal of this proposal is to create a program that will develop leadership, intercultural, and interpersonal skills in context.”

Response Question 2a Example 3: Overview/Justification

“Agriculture plays a key role in the U.S. and global economy, supplying food, feed, fiber, and fuel to meet the demands of an ever-growing population. Maximizing crop production in the face of climate change, declining fertilizer reserves, and the global spread of pests and diseases is a challenge that can only be met through a well-prepared, innovative workforce (citation). The U.S. Bureau of Labor Statistics projected a faster-than-average growth in employment of agricultural and food scientists from 2019 to 2029. Despite a steady growth in undergraduate enrollment over the last decade, the number of earned associate’s and bachelor’s degrees in agricultural sciences has lagged behind many other STEM fields (citation). Accordingly, a recent study projected a 39% shortfall in college graduates versus employment demand in agriscience between 2020 and 2025 (citation). Two potential barriers to entry are that undergraduates are not well informed about post-graduate education and career opportunities in agriscience, and they lack compelling agricultural research and/or extension experiences to envision themselves as competent and valuable members of the agriscience community.”

RFA Question 2b: Proposed Approach and Cooperative Linkages

The activities proposed to achieve each objective must be clearly stated and the approaches being applied to achieve each objective must be clearly described. Specifically, this section must include: i. Description of Activities and Approach; ii. Cooperative Linkages/Partnership; iii. List and describe all intended outcomes along with indicators to be tracked and monitored; iv. Timeline; v. Recruitment and Reach; vi. Scalability; vii. Sustainability; Potential Challenges

Please see RFA for all required information for this section

Response Question 2b Example 1: Objectives

“The goal of this application is to establish the Research and Extension Experiences for Undergraduates (REEU) program at the Alpha College. To enhance diversity in agricultural sciences, this REEU will focus on increasing participation of underrepresented minorities (URMs), primarily from 1890 Land Grant Universities (LGUs), in agricultural STEM disciplines and careers. Enhanced representation of URMs will be achieved by creating opportunities for students to perform research under the mentorship of expert scientists who currently work together in an integrated pipeline (Fig.1) that creates novel crop traits and applies innovative bioprocessing and formulation technologies to develop new food and feed applications.”

“Students will also receive diverse professional development training that promotes leadership, critical thinking, problem solving, and communication skills as applied to emerging areas of agriculture science innovation. Together, these experiences will allow student participants to gain a unique perspective on the range of scientific disciplines that can be interconnected to promote food innovations. Moreover, we will build on the relationships established between our REEU student participants and their faculty mentors to create research and graduate student recruitment partnerships between Institution and 1890 LGUs as well as other Historically Black Colleges and Universities (HBCUs). Maintaining and growing these critical connections will help ensure sustained enhanced participation of URM students in agricultural sciences. To accomplish these goals, we propose three specific objectives for our REEU: 1. Recruit and provide 46 undergraduate students, primarily from 1890 LGUs and other HBCUs with a research-intensive training experience in the laboratories of interdisciplinary faculty teams to develop crop and food solutions for human and livestock nutrition and health. 2. Provide training activities that expand the participation of URM students in agricultural sciences

by preparing them for future opportunities in graduate education and careers in crop and food innovation 3. Promote student leadership skills through scientific communication training that builds on an extension framework to enhance students' abilities to understand and relate emerging technologies in crop and food production to diverse audiences.”

Response Question 2b Example 2: Activity - Internship Experience

“During the summer between junior and senior year, scholars will participate in a paid 10-week internship program with a Bravo company (see support letters). Scholars will be placed with a company based on their interests and professional goals. The internships will allow scholars opportunities to engage with industry professionals and to better understand the complexity of the agricultural manufacturing process. The project team will work closely with each internship supervisor to establish objectives for the experience. Scholars will be required to submit weekly reflections during the experience and will have bimonthly meetings with one of the project directors. Additionally, a project director will visit the internship location once during the program to meet with the scholar and supervisor. The goal of this visit is to give the scholar an opportunity to share and demonstrate what they are learning. This process builds confidence and also shows scholars that the team cares about what they are learning and experiencing. This approach also promotes public relations between the companies and the university. During the following fall semester, the scholars will share presentations about their experiences with students in Introduction to Agricultural Manufacturing.”

Response Question 2b Example 3: Activity - Capstone Courses and Projects

“Capstone Courses and Projects. the College MSP participants will complete two capstone pieces via formal coursework (AG 452) and the development of their Mentoring Action Plan. Scholars will share their Mentoring Action Plan and its progress over the course of their the College MSP participation at their program exit interview. This Mentoring Action Plan will serve as evidence of their culminated experience in the College of Charlie”

Response Question 2b Example 4: Expected Outcomes

This table DOES NOT represent a table in the NEXTGEN RFA but does provide an example of how this information may be submitted. As you use tables to make your content more understandable, be creative and follow the submission guidelines. This table is an image and not necessarily sized to follow RFA guidelines.

Please see RFA for all required information for creating tables.

7. Expected Outcomes

Total Expected Outputs During Grant Period	Expected Number
(1) Number of <u>male</u> students to be directly supported by this grant (i.e., scholarships, fellowships, assistantships, internships included as a cost in your project budget) for undergraduate education	23
(2) Number of underrepresented <u>male</u> students to be supported during the grant period (Provide the best estimate based on past experience)	20
(3) Number of <u>female</u> students to be directly supported by this grant (i.e., scholarships, fellowships, assistantships, internships included as a cost in your project budget) for undergraduate education	23
(4) Number of underrepresented <u>female</u> students to be supported during the grant period (Provide the best estimate based on past experience)	20
(5) Number of students supported by this grant (i.e., scholarships, fellowships, assistantships) who are pursuing:	
5-A. Two-year or other certificates	5
5-B. Four-year Undergraduate degrees	41
(6) Number of students who will be supported by this grant on:	
6-A. Domestic experiences with a government or non-governmental organization that is not affiliated with your university	0
6-B. International experiences including study abroad, educational travel longer than a month, etc.	0

Response Question 2b Example 5: Expected Outcomes

“We expect that our program will lead to greater self-efficacy and enthusiasm for science as well as an increase in the number of students who pursue and persist in STEM careers, especially those in agricultural engineering. A mixed methods approach will be used to assess our predictions. Specifically, closing interviews and student surveys based on customized pre/post SALGs (i.e., a readily adaptable self-assessment questionnaire) will be used

to measure gains in students' perceived science abilities for multiple content areas as well as attitudes and aspirations towards STEM careers.

We will also conduct long-term tracking of program participants both during and after completion of their remaining undergraduate education. Tracking will be accomplished by providing students with access to coordination-based websites and continued direct correspondence with participants and their home institutions. Together, these long-term data, along with immediate program outcomes, will enable us to determine if our programming is positively affecting student science identities and/or future plans to pursue STEM careers.”

Response Question 2b Example 6: Recruitment and Selection Plan

“The project team will work with County Extension Offices in several counties to generate a local connection to the community (support letter). Co-PIs are County Extension personnel for Delta and Echo Counties, respectively. Foxtro and Golf Farms (support letters) employ a large number of workers from our targeted communities. Both companies will disseminate scholarship information to employees. The project team will work with the County Extension Office to provide translations of scholarship materials for the parents of potential applicants. Each office will also assist in organizing a regional informational event to share information about Institution, the - program, and scholarship opportunities. Additionally, the team will work with high school guidance counselors in the three counties to disseminate scholarship and program information to high school students.”

Response Question 2b Example 7: Retention

“Although we do not anticipate that large numbers of students will terminate participation in the program early, we will take precautionary measures to limit and address student drop-out. For example, as part of our week one orientation, we will partner with the “Group Scoop” team from the institution's counseling and psychological services to deliver a short workshop that will provide holistic strategies for optimizing mental health and promoting positive interpersonal communication/relationship building in professional settings. If some students decide to leave the program early, we will have a “reserve” pool of applicants from other institutions and other universities/colleges who could readily fill any vacancies.”

Response Question 2b Example 8: Sustaining Student Mentoring Relationships

“We anticipate that mentorship relationships will be sustained in several ways following the end of the summer experience. We will encourage undergraduate mentees to present their research posters at regional and national scientific conferences. Institution faculty mentors will also allow undergraduate students to continue all, or portions of their summer research programs, when appropriate given potential constraints such as lack of required facilities and resources, in conjunction with faculty advisors at their home institutions. Institution faculty mentors will actively participate remotely in overseeing student research. We will also encourage student mentees to invite Institution faculty mentors to visit their home institutions (see Recruitment Plan). Moreover, Institution faculty mentors will be available to provide career guidance and reference letters to REEU alumni. Expected deliverables from these sustained interactions include increased retention of students in the agricultural STEM educational pipeline and increased likelihood that our alumni will pursue careers and graduate training in agricultural science-related fields. These interactions are also expected to build stronger educational and research ties between Institutions and 1890 LGUs and other HBCUs.”

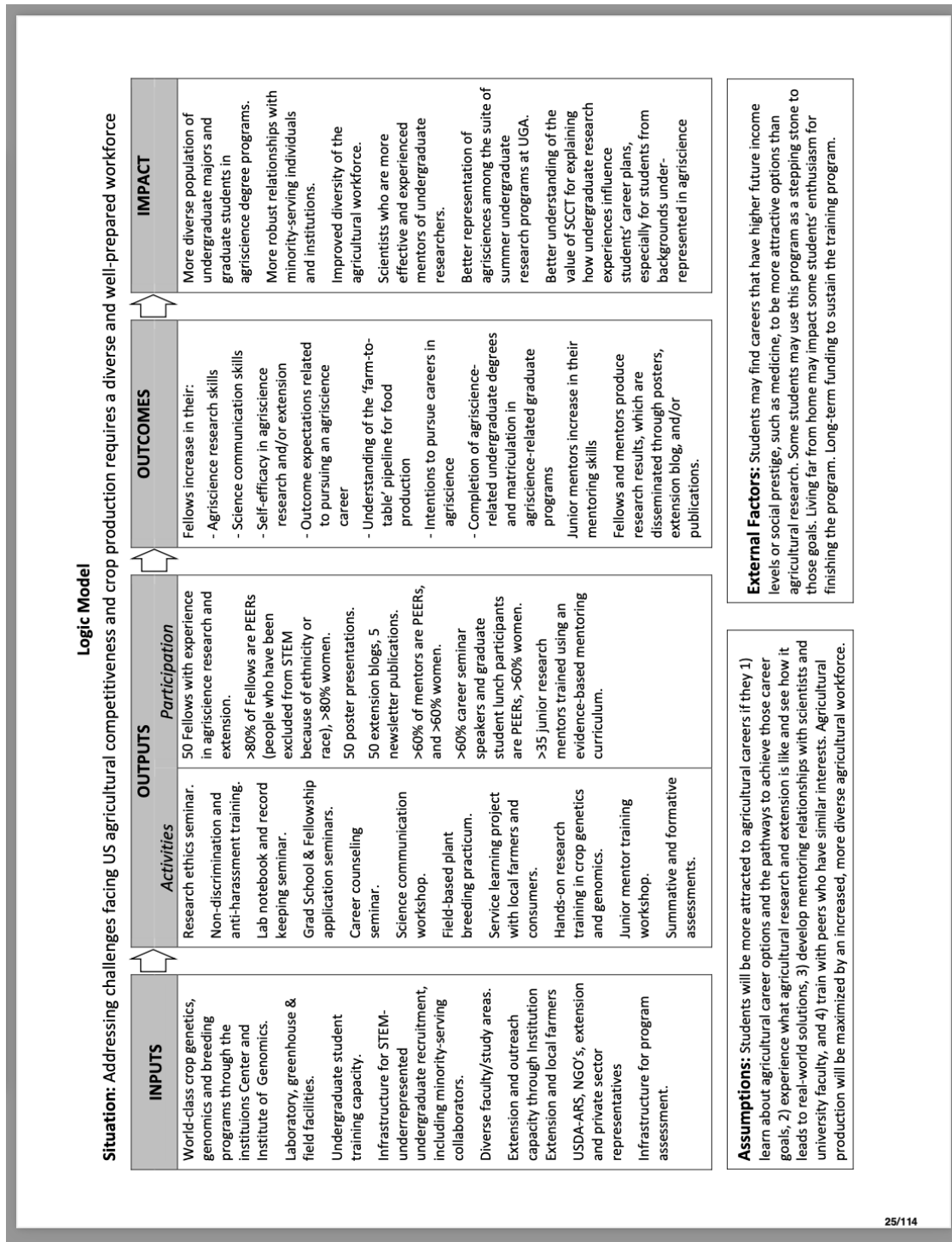
Response Question 2b Example 9: Objective Incorporation in Performance Measure

“Objective #1 Data collection on program outputs, such as scholar retention rate, honors, awards, and abstracts/presentations at conferences, will be used to determine program success. Objective#2 Data collected from a pre-post skills assessment test and Essential Skills Survey will be analyzed to determine if the program is successful at increasing technical and essential skills. Objective #3 Materials, such as scholar writing assignments and reflections, will be evaluated throughout the program and the CURE, to determine if the program is developing scholars’ critical thinking and problem-solving skills. Objective#4 Project Narrative. Data on individual scholars’ strengths will be collected and a plan will be created with a mentor to establish clear goals for developing leadership skills during the program. Objective#5 Pre-IDI data will inform project directors on the types of intercultural activities and reflections that are needed during the international experience (described in more detail in section 7) to maximize scholar’s intercultural development.”

Response Question 2b Example 10: Logic Model

This image is a representation of a logic model example sized to fit this guide and is not necessarily sized following RFA guidelines. See [more Logic Model examples](#).

Please see RFA for all required information for creating tables and formatting.



Response Question 2b Example 11: Timeline

This table DOES NOT represent a table in the NEXTGEN RFA but does provide an example of how this information may be submitted. As you use tables to make your content more understandable, be creative and follow the submission guidelines. This table is an image and not necessarily sized to follow RFA guidelines.

Please see RFA for all required information for creating tables.

i. Management Plan with Timeline:

Table 2. Project timetable and milestones: August (A) to July (J) calendar year

Year 1	A	S	O	N	D	J	F	M	A	M	J	J
Recruitment plan develop and implement			X	X	X	X	X					
Mentors identified and trained										X	X	X
Year 2	A	S	O	N	D	J	F	M	A	M	J	J
Scholars arrive on campus	X											
Industry tour #1			X									
Year 3	A	S	O	N	D	J	F	M	A	M	J	J
Scholars complete CURE course	X	X	X	X	X							
Industry Tour #2			X									
Scholars: prepare and submit abstracts						X	X	X				
Scholars attend professional conference												X
PD attend project directors meeting												
Year 4	A	S	O	N	D	J	F	M	A	M	J	J
Industry Tour #3			X									
Scholars develop and implement high school program						X	X	X	X	X		
Study abroad experience									X			
Scholars complete internships										X	X	
PD attend project directors meeting												
Year 5	A	S	O	N	D	J	F	M	A	M	J	J
Industry Tour #4			X									
Scholars graduate with B.S.										X		
Final Program Evaluation							X	X	X	X		
Publications/Dissemination										X	X	X

RFA Question 2c Key Personnel and Division of Labor

Key Personnel and Division of Labor: Proposals must clearly identify the role of all key personnel, the responsibilities for each member, and the percent of time each will be dedicated to the project, describe the qualifications and experience relevant to the development, implementation, and evaluation of the proposed project.

Please see RFA for all required information for this section

Response Question 2c Example 1: Key Personnel

“Key Personnel Dr. C will serve as Project Director (PD) for the project and Primary Mentor. The Project Director will provide overall direction for the proposal with the support of the co-PDs. His research focuses on fruit and vegetable production. Dr L will serve as a mentor mentoring one or two undergraduate students per year. Her research aims to understand how to increase yields. Dr A will serve as a mentor mentoring one or two undergraduate students per year. His work’s aim is improve soil quality for production. Dr F will serve as a mentor mentoring one or two undergraduate students per year. The goal of the research in the F Lab is preventing oxidization of fruits. Dr T will serve as a mentor mentoring one or two undergraduate students per year. His work uses tools that are industry standards. Dr H will serve as a mentor mentoring one or two undergraduate students per year. Her research interests are tree fruit insects. Dr V will serve as mentor mentoring one or two undergraduate students per year. Dr. V is currently working on a project to grow more fruit trees in less space. She and her research team will be commencing this project during the grant implementation year. Dr Y will serve as a project manager and will support the PD and co-PDs with the coordination of the project. She formerly was the research coordinator for the A-funded D program. Dr W will serve as a mentor mentoring one or two undergraduate students per year. His work compares the ability of varieties of fruit to resist disease and insects. His research seeks to determine if hybrid plants will naturally be more resistant to invasive insects. Dr G will serve as co-PD and Mentor. Dr. G will support the PD with the overall direction. Her research interests include ways to reduce the amount of potentially hazardous chemicals used in growing fruit. Dr I will serve as a mentor mentoring one or two undergraduate students per year. His work is focused on ways to improve strawberry propagation for a future of clean strawberry plants. Dr K will serve as a mentor mentoring one or two undergraduate students per year. His work Dr Q will serve as co-PD and

Mentor. Q will support the PD with the overall direction. His work seeks to reduce losses of organic and other locally-grown produce while improving quality and extending shelf life. Dr Z will serve as a mentor mentoring one or two undergraduate students per year. His research interests include healthy soil and efficient water use. Dr C will serve as mentor mentoring one or two undergraduate students per year. His research is mainly focused on soilless cultivation.

Response Question 2c Example 2 Senior Personnel

“Dr. The Project Director, PI, (effort = 0.1 summer months) will be responsible for the overall project management as well as serving as Primary Mentor. The Project Director will be responsible for serving as a liaison with USDA-NIFA, Graduate Studies, and Hotel institutions’ Administration, faculty, and staff. The PI will also manage the budget.

Dr. Strange, Co-PI, (effort = 0.1 summer months) will share the responsibility of overseeing the overall project management as well as serving as a mentor.

Dr.Jekyl, Co-PI, (effort = 0.2 summer months) will share the responsibility of overseeing the overall project management as well as serving as a mentor.

Other Personnel:

Mr.T, (Project Management Specialist), (effort = 1 calendar month) will be responsible for supporting the PI in the management of the project including budget management and helping in the coordination of the summer program.”

RFA Question 2d Outcome Evaluation Plan

Outcome Evaluation Plan: Proposals should include a clear internal evaluation plan which describes measures and methods for collecting and analyzing primarily student-focused outcomes and impacts, including metrics/indicators, to determine the extent to which the stated objectives have been achieved.

Please see RFA for all required information for this section

Response Question 2d Example 1: Expected Outcomes and Outcomes Measured

“Both formative and summative evaluations will be conducted to ensure the quality and effectiveness of the program’s processes and outcomes (Table 5). We will ask several questions to determine the success of the - program: (1) is the program successful at recruiting and

retaining underserved students in Animal Sciences; (2) is the program effective at generating interest and awareness of the poultry industry; (3) does the program develop students self-awareness, self-motivation, and essential skills (such as communication, problem-solving, empathy, efficient work habits, teamwork, professionalism, and leadership); (4) are - program graduates more likely to obtain careers in the agricultural industry; and (5) do scholars see value in the program.”

Response Question 2d Example 2: Longitudinal Tracking

“Plan for Longitudinal Tracking of Scholars for up to Three Years After Exit: Student metrics (grades, academic progress) will be tracked throughout the program. Graduates going on to graduate or professional school and/or into the workplace will be surveyed annually to document post-grad academic activities, as well as, using the National Student Clearinghouse. Scholars that graduate or prematurely exit the program will be interviewed to explore their perceptions of the program and its impact on their success.”

RFA Part V Budget

R&R Budget

Please see RFA for all required information for this section

Response Budget Example 1

These tables DO NOT represent a table in the NEXTGEN RFA but does provide an example of how this information may be submitted. As you use tables to make your content more understandable, be creative and follow the submission guidelines. This table is an image and not necessarily sized to follow RFA guidelines.

Please see RFA for all required information for creating tables.

Travel

“PD Meeting: The project director will travel to the national project meeting. The PD meeting is once during the lifetime of the award, it usually occurs in the 3rd year. We are estimating a total cost of \$1,325 for PD travel to this meeting.”

D. Travel						
Position / Name	Components/Info	YEAR 1	YEAR 2	YEAR 3	YEAR 4	Total
		TERM DATES				
PD	Airfare to US City, \$750, Hotel 3 nights/\$125/night, Meal Allowance, \$150, Ground Transportation, \$50			\$1,325		\$1,325

“Recruitment travel: Every year, the PD or other member of his team will travel to four different cities for recruitment purposes. We are requesting \$4,600 per person/year to accomplish recruitment purposes.”

D. PD Recruitment Travel						
Position / Name	Components/Info	YEAR 1	YEAR 2	YEAR 3	YEAR 4	Total
		TERM DATES				
PD or other member	Airfare to US City, \$750, Hotel 3 nights/\$125/night, Meal Allowance, \$150, Ground Transportation, \$50	\$1,150	\$1,150	\$1,150	\$1,150	\$4,600

“For year 1, 2, 4, and 5 total is \$4,600 per year. For year 3 we request \$5,925 (4 visits for recruitment (\$4,600) + PD travel to grant meeting (\$1,325)”

Participant Support Costs

“Stipends: We request funds to provide a \$6,500 stipend per student for the 10-week program for a total of \$299,000 for 46 students.”

	<i>Per Student</i>	<i>6 Students/Year for Y1</i>	<i>10 Students/year in Y2-Y5</i>	<i>Total for 46 students</i>
<i>Stipend</i>	\$6,500.00	\$39,000.00	\$65,000.00	\$299,000.00

Travel: We request a total of \$34,500 to assist all student participants with all travel costs.

	<i>Per Student</i>	<i>6 Students/Year for Y1</i>	<i>10 Students/year in Y2-Y5</i>	<i>Total for 46 students</i>
<i>Travel costs (roundtrip flight, 2 checked bags)</i>	\$750.00	\$4,500.00	\$7,500.00	\$34,500.00

“Subsistence: Room and board will be on the Institution campus in student residence halls. The cost will be approximately \$3,453 per student for suite-style housing thereby totaling \$20,717 for the 10-week program for six students in year 1. 3% cost of living increase applied to years 2-5. The number of students for years 2-5 is 10 students/year (\$35,564/yr 2, \$36,631/yr3, \$37,730/yr 4, and \$38,862/yr 5). The budget is based on current housing fees.”

	<i>Per student</i>	<i>Days/ units</i>	<i>Per student in Y1</i>	<i>Total 6 students/Y1</i>
<i>Lodging</i>	\$24.10	67	\$1,614.70	\$9,688.20
<i>Meals</i>	\$27.85	66	\$1,838.10	\$11,028.60
Total year 1	\$51.95		\$3,452.80	\$20,716.80

“Other: A total cost of \$16,297 is requested to support a total of 46 students over a 5y period. This cost provides students with access to the Institution Health and Recreational Centers, identification cards, lunch discussion groups, parking and other transportation, and social activities.”

“The table below shows detailed information during year 1 for 6 students with a total cost of \$1,992. A 3% increase was applied to years 2-5. The number of students for years 2-5 is 10 students/year (\$3,419/yr 2, \$3,522/yr 3, \$3,628/yr 4, and \$3,736/yr 5). The budget is based on current Institution fees.”

	<i>Per student</i>	<i>6 students Y1</i>
<i>Star Tran bus pass</i>	\$25.00	\$150.00
<i>Ncard Fee</i>	\$10.00	\$60.00
<i>* Medicine</i>	\$53.78	\$322.68
<i>CAPS</i>	\$9.19	\$55.14
<i>Campus Rec</i>	\$74.00	\$444.00
<i>Pixel Lab</i>	\$40.00	\$240.00
<i>Parking</i>	\$120.00	\$720.00
<i>Total other expenses Y1.</i>	\$332.00	\$1,992.00

“Other Direct Cost

Supplies

We are requesting a total of \$46,000 (\$1,000/mentee per year) to support supplies used in the hosting lab during the participant’s training. For year 1 we request \$6,000 (for 6 students at \$1,000/student). For years 2-5, we request the cost for 10 students/year = \$10,000 per year.”

“Facilities & Administrative Cost

The overall indirect cost rate of 48.5% MTDC (federally negotiated rate) for agricultural research was used in this proposal as it resulted in fewer indirect costs than 30% TFFA.”

Response Budget Example 2

“Special Experiential Learning Total - \$20,000. Transportation - \$10,000 Funds are requested to support airfare (\$1,500/scholar) and in-country transportation (\$500/scholar) for five scholars to participate in a 10-day international experience to study healthy food and living environment in the Netherlands. Lodging – \$4,500, Funds are requested to support lodging for scholars. Scholars will spend 9 nights in-country (\$100/night/scholar). Meals – \$2,500 Funds are requested to support scholars’ meals during the program (\$50/scholar/day). In-Country Cultural excursions- \$3,000, Funds are requested to support in-country cultural experiences and visits to Amsterdam. (\$600/scholar)”

RFA Part V Data Management Plan

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.

Please see RFA for all required information for this section

Response Data Management Plan Example 1

Expected Data Types

“The project will generate primarily student research findings and written and poster compilations of research findings. Depending on the nature of a student’s project, biological materials and omics data (e.g., metabolite data and RNA-Seq data) may also be generated by

students. Biological materials may include gene expression vectors, engineered microbial strains, and seeds from breeding and biotechnological research.”

Data Format

“Student research findings will be documented in laboratory notebooks that will be provided to the students at the start of the project. Research finding datasets and measurements will be compiled in Excel spreadsheets. Research findings will be reported in Word and PowerPoint documents. If generated, the annotated relative metabolite content data derived from GC-MS analysis will be stored in mzTab-M format together with the analytical and sample metadata, which is required by Metabolomics Workbench, a public metabolomics database run by the National Institutes of Health. These results will be combined to create a spreadsheet that contains all information on genotypes, sample treatments, and quantitative results for all compounds and bioactivities. Sequencing data, if generated, will be obtained in FASTQ or BAM format, and the metadata will be archived in Sequence Read Archive (SRA) maintained by National Center for Biotechnology Information (NCBI) upon verification of the sequence and annotation quality (within six months) following guidelines of the Bermuda Principles/Ft. Lauderdale Agreement. Descriptive metadata will be stored in either Gene Expression Omnibus (GEO) metadata table format defined at National Center for Biotechnology Information (NCBI) or in the “Minimum Information about a high-throughput nucleotide Sequencing Experiment” (MINSEQE) standard format.”

Data Storage and Preservation

Student Research Findings: The PD and Co-PDs will ensure that basic research findings are thoroughly documented in lab notebooks that will be scanned into pdf format at the end of summer and stored on data servers, including UNL’s Microsoft OneDrive cloud storage, to ensure the integrity of the primary research data in cases of departure of key project personnel and emergencies and natural disasters.

Metabolomics Datasets: “The raw data from instruments will be stored in the computers associated with the equipment as well as the network-attached storage (NAS) drive. The chromatography data will be ~1GB/sample, and 1 TB for 1,000 analyses is reserved for this

project. The raw chromatogram and relative quantification results in mzTab-M format will be deposited to the Metabolomics Workbench repository for preservation.”

RNA-seq Datasets: “All sequences generated from this project, including all cDNA sequences (including all assemblies generated from this project) as well as transcriptomic expression data (Illumina short reads) will be submitted to GenBank and Sequence Read Archive (SRA) maintained by National Center for Biotechnology Information (NCBI) upon verification of the sequence and annotation quality (within 6 months) following the Bermuda/Ft. Lauderdale agreement. SRA accepts the raw data format directly from Illumina machines, which includes both sequence as well as quality data. Illumina short-read transcriptomic expression data will be submitted to Gene Expression Omnibus (GEO) also maintained by NCBI. GEO accepts MIAME compliant data.”

Biological materials: “Seeds generated from student projects will be maintained in the Institution Romeo and Juliet cold-storage for long-term viability. All USDA Animal and Plant Health Inspection Service rules and regulations will be followed in handling of regulated plant material. Plasmids and microbial strains will be maintained redundantly, as possible, in -80°C freezers for long-term storage.”

Data Sharing, Protection, and Public Access

“The student research findings will be disseminated in a project report and research posters. The research posters will initially be presented at the Kilo Institution Summer Research Program Conference during the last week of the REEU each summer. Students may also present posters at local, national and international conferences with approval from faculty mentors. Ideally, student research findings will also contribute to papers published in peer-reviewed scientific journals. Data incorporated into tables, figures, or images of published papers will be released either as main results or supplementary results associated with the paper itself. All raw data generated will be archived and retained for at least 5 years. Data will also be archived in the Kilo Institution Data Repository, which provides a secure site for storage of data collections, allowing stable retention for future use and sharing. It stores data and metadata outlining the importance and increasing its long-term usability. It is managed by the Kilo Libraries and campus IT. The Kilo Institution Dell Object Storage Platform is a server dedicated

to scalable data storage and provides backups, migration, remote access, and other security-based services ensuring the data are appropriately archived beyond the life of the project.

Non-proprietary biological materials generated by student projects will be available for public dissemination, during and after the lifetime of the project, upon request through Material Transfer Agreement (MTA) terms consistent with the Uniform Biological Material Transfer Agreement (UBMTA).”

Roles and Responsibilities

“The Data Management Plan will be implemented by the PD and Co-PDs. They will be responsible for ensuring that students receive training on best practices for research documentation and maintenance of data integrity.”

Intellectual Property Practices

“New intellectual property generated through student projects will be assigned inventorship, and patent applications will be filed using standard policies and procedures practiced at Institution. Any filing for intellectual property protection will not delay release of data or materials for more than 30 days. All material developed from this project will be made available to researchers on request. Materials subject to intellectual property protection will be provided under terms of institutional standard material transfer agreements.”

Response Data Management Plan Example 2

Expected data type

“In order to select students for this mentorship program, data will be collected about degree progress and courses taken. In order to assess the outcomes of our program, digital data will be generated and stored. Data will include the number of students enrolled in our program, degrees granted, retention, and mentorship training curricula. We will also track our program mentees to see if the program results in future careers within agriculture.”

Data format

“As there are only ten participants in the Lima Bravo College, data will be recorded digitally in Excel. This will enable future mentors and administrators to access data. Curriculum

and outreach files will all be generated in word documents, which will be readily accessible and usable for other members of the community.”

Data storage and preservation

“While data are being stores, files will be kept on a password-protected local network behind a firewall, accessible only by the study PD, co-PD, and key personnel. Datafiles will be de-identified and the coded identifiers will be kept separately and stored indefinitely.

De-identified data will be share with the Institution A Office of Lima Bravo University Diversity and Inclusion.”

Roles and Responsibilities

“The co-PD will ensure DMP implementation. The PD will serve in a contingency role. Our campus already uses OneDrive with password protection, and this is where data will be stored.”



Contact Technical Service Provider Support

REQUEST SUPPORT Must Register at: NEXTGEN Applicant/Proposal Intake	ACCESS ONLINE SUPPORT & KNOWLEDGE BASE: https://nextgen.extension.org/
Email: NEXTGEN@extension.org	

This guide does not replace and is superseded by the RFA found at [NIFA.USDA.gov/grants](https://www.nifa.usda.gov/grants) and [Grants.gov USDA-NIFA-ARPAED-009362](https://www.grants.gov/USDA-NIFA-ARPAED-009362). This guide is designed to increase understanding of the RFA and highlight important elements for the purposes of planning and submission. Any italicized text in this Application Toolkit reflects information directly quoted from the RFA.

This work is supported through an agreement between the USDA National Institute of Food and Agriculture (NIFA) and the Extension Foundation serving as the Technical Assistance Advisor for From Learning to Leading: Cultivating the Next Generation of Diverse Food and Agriculture Professionals (NEXTGEN). Any opinions, findings, conclusions, or recommendations expressed in this publication/website are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.