



# Grant Writing 101

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**PennState**

College of Agricultural Sciences

# The Basic Approach



Identify a need/  
gap in knowledge



Build team &  
proposal outline



Aware of funding  
opportunities



Write & submit



Match needs to  
funding priorities



Review & revise  
(& resubmit)



Turning  
creative  
ideas into  
something  
real &  
funded!

# Addressing/ defining a need

## **Problem driven**

(gap in knowledge)

## **Scope of the problem**

(relevance to stakeholders)

## **How to respond?**

Research

Teaching/  
Training

Outreach/  
Extension

## **Scale?**

Single investigator

Small team

Multi-  
institutional  
Interdisciplinary

## **Approximate funding (\$) and duration**

Commodity

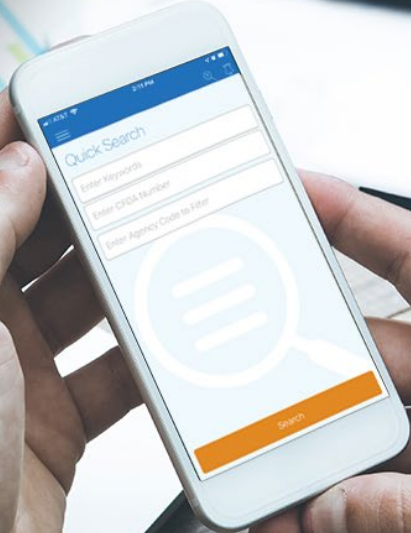
State

Regional

National



# Funding awareness



**Convenience Comes to Federal Grants**

Download the Grants.gov Mobile App to search and submit on the go.

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**Reminder:** Federal agencies do not publish personal financial assistance opportunities on Grants.gov. Federal funding opportunities published on Grants.gov are for organizations and entities supporting the development and management of government-funded programs and projects. For more information about personal financial assistance benefits, please visit [Benefits.gov](https://www.benefits.gov).

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## GRANTS LEARNING CENTER

The Grants Learning Center is your gateway to the federal grants world. Bookmark this page and participate in our growing communities on Blog.Grants.gov and Twitter (@grantsdotgov).

### Grant Topics

- Grants 101**  
Basics about the grant lifecycle & management
- Grant Policies**  
Laws & regulations for federal awards
- Grant Eligibility**  
Are you eligible to apply for grants?
- Grant Terms**  
Grant-related terminology and acronyms
- Grant Agencies**  
Federal grant-making agencies
- Grant Systems**  
Tools & apps to register & manage grants
- Grant Programs**  
Financial assistance & benefits

### Community Blog

Articles and resources that equip current and prospective members of the federal grant community with information, answers, and tools to make your job easier.

Read the latest in our "What is a Grant?" Blog Series

Read the latest in our Federal Grantwriting Tips Blog Series

**What to Expect During the Grants.gov Cloud Migration and Extended Downtime for September 2022**  
8/8/2022 7:19 PM  
Grants.gov is being migrated to the cloud. To ensure a smooth and successful transition, an extended period of downtime has been scheduled for Grants.gov. Although the transition is expected to be completely seamless to applicants, we have compiled the following Q&A to address the primary questions and concerns of applicants regarding the migration. Why is... [Continue reading What to Expect During the Grants.gov Cloud Migration and Extended Downtime for September 2022](#)

**How to Add a New Organization Profile on Grants.gov [Updated]**  
6/3/2022 10:36 PM  
Applicant users who are adding a new organization profile to their Grants.gov account must first ensure that they have a UEI (SAM) and that their organization is fully registered with the System for Award Management (SAM).

**How to Create a Grants.gov Account and Link to a Login.gov Account**  
5/4/2022 3:21 PM  
Learn the updated process of logging into Grants.gov and linking with Login.gov

### Community Questions

» What is a grant?  
» How do I apply for a grant?  
» What is the DATA Act?  
» What is the OMB Uniform Guidance?  
» What is Workspace?  
» Can I have a grant to repair my home?  
» Where can I find grant events & trainings?

Twitter: @Grantsdotgov

Your source to find & apply for US federal #grants | Connecting the grant community | Follows & RTs ≠ Endorsements

**Grants.gov Retweeted**  
U.S. De...  
@... · Oct 12

**NEW:** We just launched an interactive map that shows where our current grantees are located + where to find nearby American Jobs Centers, apprenticeship providers and local workforce boards and more.

Explore grantees in your area [doi.gov/grants#map](https://doi.gov/grants#map)

### Community Videos

The [Introduction to Grants.gov Video Series](#) covers the complete Grants.gov application process, from registering and creating a Grants.gov account to finding funding opportunities and completing an application package.





# Funding awareness

**GRANTS.GOV™**  
FIND. APPLY. SUCCEED.™

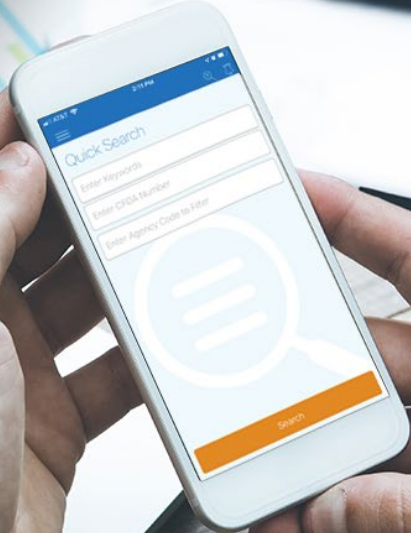
SEARCH: Grant Opportunities ▼ Enter Keyword

HOME LEARN GRANTS SEARCH GRANTS APPLICANTS GRANTORS SYSTEM-TO-SYSTEM FORMS CONNECT SUPPORT

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**Northeast Sustainable Agriculture Research and Education**

[GRANTS](#) [PROJECT REPORTS](#)

Northeast SARE offers the following competitive grant programs:



### Farmer Grant

For commercial farmers who want to test a new idea using a field trial, on-farm demonstration, marketing initiative, or other techniques.

**Deadline: Nov 15, 2022 5:00 PM (Eastern Time)**

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CLOSED

### Graduate Student Research Grant

For graduate students at any Northeast college, university, or veterinary school who want to conduct research on sustainable agriculture topics.

**Closed: Apr 19, 2022 5:00 PM (Eastern Time)**

[LEARN MORE](#) |

[Get notified when it opens](#)



# Matching needs to funding opportunities

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Does the topic align with funding program (priority areas)?

Is the scope of the program appropriate?

Is the funding level (\$) appropriate?

No secret message in the RFA



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## Search SARE Projects Results

Region: Northeast

Project type: Graduate Student

From: 2021

59 projects found

Projects per page: [10](#) [25](#) [50](#) [All](#)[1](#) [2](#) ... [5](#) [6](#) [Next »](#)[Export](#)

### [GNE22-297 - Controlling Salmonella on eggs using probiotics and postbiotics.](#)

Salmonella Enteritidis poses a significant threat to the egg safety. Therefore, the proposed study aims to investigate the efficacy of probiotics and postbiotics in wash water in reducing Salmonella on eggs and to develop effective, practical and user-friendly approaches to improve egg safety.

### [GNE22-277 - Investigating Lobster Byproducts as Soil Amendments for Disease Suppression and Soil Health Improvement in Potato Production](#)

We propose to utilize lobster shell meal, an industry byproduct, as a soil amendment to suppress soilborne diseases and increase yields in potato production systems. This is thought to occur by promoting beneficial microbes and consequently improving soil health.

### [GNE22-281 - Farmer Engagement with Regenerative Agriculture in New England: Understanding Barriers and Facilitators to Improve Services and Outreach](#)

The purpose of this project is to support the regenerative agriculture (RA) movement in New England through providing extension agencies, agricultural organizations, and policy makers with in-depth insight into the facilitators and barriers faced by farmers as they engage with RA at the farm level.

### [GNE22-283 - Cultivation of Native Productive Plants in Urban Agroforestry Systems in the U.S. Northeast: Perceptions and Barriers](#)

This project will analyze gardeners', farmers', and green industry professionals' perceptions of urban agroforestry systems

# Parts of preparing a proposal

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Background (be concise)

Rationale & significance (justification)

Objectives linked with outcomes (measurable impact)

Methods & outputs (actions) for each objective

Timeline of objectives (A+B=C) and key personnel

Access to resources required?





# Writing and submitting

Think like a reviewer...what would you like to see?

- Quality science
- Well organized “doable” project
- A compelling story that is easy to read

Focused, critical project plan of realistic scope

- Original ideas with high impact that build on current research
- Sound rationale
- Subject knowledge and technical expertise
- Future directions

# Writing and submitting

## Text-dense proposals are difficult to read

- Format uniformly – consider use of white space, bold font
- Use figures, diagrams to emphasize key points
- Follow the section organization in the RFA using headings and subheadings provided

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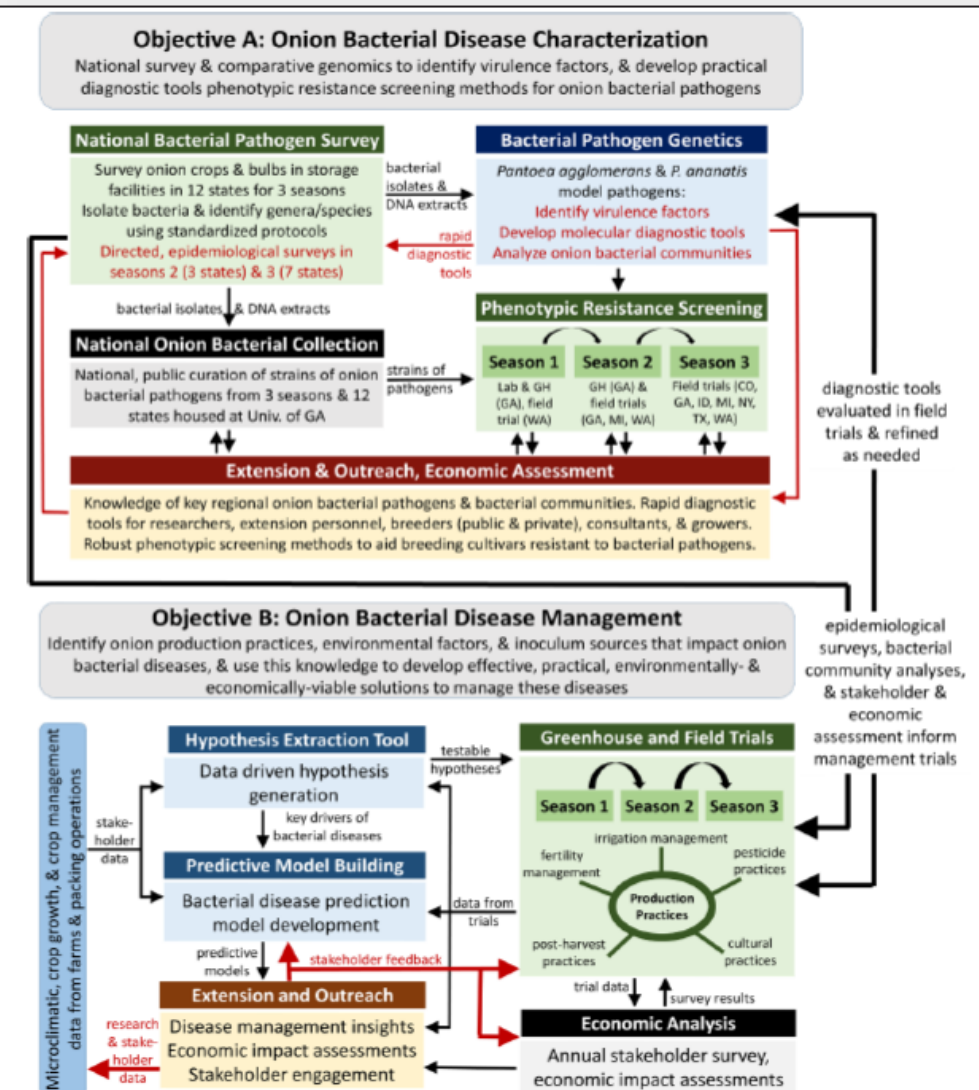


Fig. 2. An iterative, systems approach to understanding and managing bacterial diseases of onion in the U.S. This approach considers all components in relation to the overall goal of onion production. Long-term, highly effective solutions will be achieved by enhancing our understanding of bacterial pathogens of onions in the diverse regions of production across the USA (Objective A), and using that knowledge in an iterative manner to develop management programs that engage the complex interactions of the crops, pathogens, grower production and storage practices, economic assessments, and stakeholder priorities, expertise, and feedback (Objective B).

# Writing and submitting

## Clearly label objectives, methods & deliverables

- **Who** will work on **what** objectives and **when** (Gannett chart)

# Writing and

## Clearly I

- Who will

**Table 1.** Timeline for proposed research and extension activities to address onion bacterial diseases in the U.S.

Objective	Year 1 (2018-2019)				Year 2 (2019-2020)				Year 3 (2020-2021)				Year 4 (2021-2022)			
	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep
	----- Field season 1 -----				----- Field season 2 -----				----- Field season 3 -----							
A1. Onion field & storage surveys	GA, CA+NM+TX				GA, CA+NM+TX				GA, CA+NM+TX							
A1. National onion bacterial strain collection	7 Regional Labs isolate, clean, PCR assay, & sequence bacteria; ship isolates to GA				7 Regional Labs isolate, clean, PCR assay, & sequence bacteria; ship isolates to GA				7 Regional Labs isolate, clean, PCR assay, & sequence bacteria; ship isolates to GA				Publish survey results (2-3 journal articles)			
A2 & A3. Pathogenomics, diagnostic tools	Whole genome sequencing of <i>P. ananatis</i> & <i>P. agglomerans</i> strains				Identify onion virulence factors, design molecular diagnostic tools; bacterial community analyses				Field test molecular diagnostic tools; onion bacterial community analyses				Write genotypic journal publications (2-3)			
A4. Onion phenotypic screening	Lab, GH phenotypic screening methods tested in GA				Lab & GH phenotypic screening in GA				Write lab/GH phenotypic screening journal article, extension article				Write journal publications (2-3)			
B1-B5. Core management practices	Regional lab, GH, & field trials on production practices: irrigation, fertility, pesticides, cultural practices, postharvest treatments				Regional lab, GH, & field trials modified based on results, SAP feedback from Season 1, economic assessment, & modeling				Regional lab, GH, & field trials modified, SAP feedback from Season 2, economic assessment, & modeling; write journal articles				Journal publications (5-8), integrate economics, develop management strategies (SAP guidance)			
B6. Disease modeling	Collect microclimate & disease data		Analyze microclimate & disease data, model disease risk		Share results, collect more crop microclimate & disease data		Analyze data for risk prediction & modeling in different regions		Write model/risk prediction journal papers (2-3)							
Economic assessments	Survey growers & packers		Economic evaluation of season 1 trials, incl. Stakeholder Advisory Panel (SAP) input		Economic evaluation of season 2 trials, including SAP input		Economic survey of season 3, SAP input, adoption survey		Economic impact evaluation; publications (3)							
Extension & outreach	Alliumnet website; journal & extension review articles on management		Onion Field Day, grower meetings in each state with stakeholders		Field, lab & GH results reported, Alliumnet; extension bulletins drafted		Onion Field Day, grower meetings in each state with stakeholders		Field, lab & GH results reported, Alliumnet; bulletins on 2 years of trials		Onion Field Day, grower meetings in each state with stakeholders		Field, lab & GH results, Alliumnet; bulletins on 3 years of trials		Extension publications, meetings, Alliumnet, videos	
Travel	Team wkshop in GA		NOA, W3008, or NARC meeting with SAP		NOA, W3008, or NARC meeting with SAP		NOA, W3008, or NARC meeting with SAP		NOA, W3008, or NARC meeting with SAP							
	PD to Washington DC (date TBD)				PD to Washington DC (date TBD)				PD to Washington DC (date TBD)							



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Timeline: Activity (Objective)	Year 1 (Sep '21-Aug '22)				Year 2 (Sep '22-Sep 23)				Year 3 (Sep '23-Sep 24)			
Quarter	1	2	3	4	1	2	3	4	1	2	3	4
Soil collection and testing for HT soilborne diseases in OH, PA, and VA (1) <i>Milestone:</i> Growers notified of soilborne disease risk and management recommendations provided.												
On-station trials to evaluate ASD impacts on soil fertility (2) <i>Milestone:</i> ASD fertility trials established and evaluated.												
ASD MBTs (3 & 4) <i>Milestone:</i> Growers learn to apply ASD -ASD trials installed and completed												
Plant/soil health evaluations after ASD (3) <i>Milestone:</i> Determine how ASD affects yield and disease in tomato in three regions												
Outcome Mapping (4) <i>Milestone:</i> Track changes in participants' behaviors and actions												
Extension outreach in OH, PA and VA (4)												

Publish survey  
results (2-3  
final articles)Isolates  
available  
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nal publica-  
ons (2-3)ite journal  
blications  
(2-3)ations (5-8),  
onomics,  
nagement  
P guidance)

nal papers

economic  
impact  
valuation;  
lications (3)extension  
blications,  
meetings,  
lliumnet,  
videos

C

# Writing and submitting

## Review evaluation criteria

- What criteria are being used to evaluate your proposal?
- How are the criteria weighted?



# Writing and submitting

United States  
Department of  
AgricultureNational Institute  
of Food  
and Agriculturewww.nifa.usda.gov  
@USDA\_NIFA

NIFA

ria

ate your proposal?

## B. Evaluation Criteria

NIFA will use the following criteria to evaluate Applied Research and Development Program applications responding to this RFA:

### Applied Research (single function) Project Applications

#### 1. Technical Merit of Applied Research (single function) (45 points)

This criterion will be used to assess and advance goals of the CPPM ARDP.

- a. The description and documentation of the applied research problem.
- b. When model systems are used, systems to organisms of importance.
- c. The conceptual soundness of hypotheses.
- d. The description of the suitability approach, procedures, and methods.
- e. Preliminary data submitted for proposed research.
- f. The level of scientific originality and probability of project success.
- g. Description of the suitability of the project to the CPPM ARDP.

#### 2. Qualifications of Project Personnel, Adequacy of Facilities, and Project Management (20 points)

This criterion relates to the adequacy of the number and qualifications of key personnel who will plan and carry out the proposed project as well as the institution(s) capability to perform the project. Elements include:

- a. Qualifications of applicants (individual or team), performance record, and potential to conduct the proposed project and achieve research objectives.

#### 3. Project Relevance (35 points)

This criterion will be used to assess the likelihood that the proposal will advance goals of the CPPM ARDP program. Elements include:

- a. Adequate documentation that the proposal is directed toward specific research program area priorities identified in this RFA.
- b. The description and documentation of identified stakeholder needs for the proposed work.



# Writing and submitting

**Give a near-final draft to a colleague for review**

- Do not underestimate how long the mechanics will take
- Start with due date to your Office of Grants and Contracts and work backwards to set a timeline

# **Review reviews, revise, resubmit!**

---

**~ 10 to 20%  
applications  
are funded  
(see RFA)**

**First-time  
applications =  
lower success  
rates**

**“Reviewers  
didn’t get it”  
syndrome**

**Use reviews to  
improve idea,  
improve  
communication,  
address theme**

**Consistently  
bad  
reviews?  
  
Change is  
needed**



## CoAS Proposal review criteria (rubric)

- ➔ Background information that frames the context of the proposal
- ➔ Clarity of hypothesis or statement of problem
- ➔ Whether the procedure/methodology addresses the objectives of the proposal
- ➔ Clarity of expression – writing style and proposal organization

Low  
Medium  
High

Overall score  
10 = definitely fund  
to 1 = do not fund

## **Best practices**

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- ➡ Read the RFP multiple times – highlight important info
- ➡ Follow the rules & contact program admin with questions
- ➡ Be informative but concise; educated layperson reviewer
- ➡ Justify budget and be realistic (don't over promise)
- ➡ Allow plenty of time
- ➡ If not funded, study reviews and be persistent!



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Questions?  
[graded@psu.edu](mailto:graded@psu.edu)



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