



National Institute of Food and Agriculture

U.S. DEPARTMENT OF AGRICULTURE

BIOENERGY, CLIMATE, AND ENVIRONMENT  
FOOD PRODUCTION AND SUSTAINABILITY  
YOUTH, FAMILY, AND COMMUNITY  
FOOD SAFETY AND NUTRITION  
INTERNATIONAL PROGRAMS

# AFRI's Pests and Beneficials Species in Agricultural Production Systems (A1112)

# NIFA

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## The Current Pests and Beneficials Team



**Dr. Erica Kistner-Thomas**  
**National Program Leader**



**Dr. Christopher Philips**  
**National Program Leader**



**Logan Appenfeller**  
**Program Specialist**



## **AFRI's Foundational and Applied Science Program: Pests and Beneficial Species in Agricultural Production Systems**

**Program Area Priority Code:** A1112

**Proposed Budget Requests:** Not to exceed \$750,000 per project (2-5 years)

**Project Types:** Research-only and Integrated Projects (Research and Extension)

**Grant Types:** Standard, Conference, and FASE (Strengthening Standard, New Investigator, Strengthening Conference, Seed, Equipment, and Sabbatical)

**Application Deadline:** August 25, 2022 (5:00pm EST)

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# **AFRI: Pests and Beneficial Species in Agricultural Production Systems**

## **(Plant Health and Production & Plant Products Program Area)**

### **Goals:**

- Advance knowledge of invasive or established plant pests and associated beneficial species
- Development of innovative biologically-based strategies to manage pests

**Subject Matter:** **Weeds**, insects, plant pathogens, slugs, nematodes

### **History:**

- Pests and Beneficial Species programming began 2017
- To date, funded 109 projects including 16 science weed projects
- Total funding 2017-2021: \$44 million
- FY20: 114 applications, Funded 16 projects at \$6.8 million
- FY21: 116 applications, Funded 17 projects at \$7.5 million

## **A1112 Applications must address one or more of the following:**

- Biotic and abiotic factors affecting the abundance or spread of agriculturally-important plant pests, disease vectors, or beneficial species relevant to pest management;
- Behavioral attributes of pests and beneficial species, including intra- or interspecies interactions and/or communication systems relevant to pest management;
- Factors that contribute to invasiveness including (but not limited to) studies using population genetics/genomic approaches or models to predict, prevent or manage outbreaks, or to pinpoint geographic distribution or origin;
- Movement or dispersal dynamics of pests or beneficial organisms;
- Mechanisms of pest resistance to pesticides or toxins in genetically-modified plants and development of strategies to mitigate resistance and/or crop failure;
- Use of indigenous traditional ecological knowledge in pest and disease control ; or
- Conference applications that bring together experts in weed biology, plant genomics, herbicide resistance, and data science to better understand how genomic information could lead to novel solutions to manage weeds



# AFRI New Investigator (NI) SEED Grants

- NI is defined as < 5 years postgraduate career-track experience
  - Has not yet received a large competitive federal research grant as the lead PD
  - Postdoc or Graduate fellowships, Co-PD status on any grant award, or being the lead PD on a conference grant award do not count against NI status
- Seed grant funds preliminary data collection needed to submit a full AFRI grant
- Ranked separately from Standard Research Grants (Note: NI seed applications compete with seed grant applications from strengthening institutions)

## Conference Grant Guidelines for A1112

- A Letter of Intent must be sent to National Program Leaders (me and Chris Philips) at least 195 days before the conference start date
  - \$25,000 awards are standard practice
  - \$50,000 budget requests should be discussed with NPLs beforehand
- Submit Full application on Grants.gov at least 150 days before conference start date
  - NOTIFY NPLs that you have submitted your conference grant via email!
- Conferences are peer reviewed by at least 3 ad-hoc reviewers
- Fund ~2-3 per year



INTERNATIONAL WEED  
GENOMICS CONSORTIUM



## GENETIC AND PHENOTYPIC VARIABILITY IN GIANT RAGWEED: INFLUENCE ON REGIONAL VARIATION IN INVASIVENESS AND THE ORIGIN OF PEST CROP POPULATIONS (2021-67013-33575)

- Giant ragweed is a severe native weed of row crops in the Midwest, Invasive in Europe and Asia
- Multiple populations are now resistant to glyphosate
- Ohio State researchers aim to uncover mechanisms driving ragweed invasions pathways as well the adaptive capacity of this widespread weed
- To date, 130,000 seeds collected from 31 distinct populations and 440 maternal plants to be used in common garden experiments in OH and NE





## Helpful Resources

- AFRI New Investigator FAQ: <https://nifa.usda.gov/sites/default/files/resource/FASE-New-Investigator-FAQ-07282020.p>
- AFRI FASE and EPSCor Program Overview: <https://nifa.usda.gov/afri-fase-epscor-program>
- Volunteer to be a NIFA Panel Reviewer: <https://prs.nifa.usda.gov/prs/volunteerPrep.do>
- Sign up for our NIFA Update Newsletter:  
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## Consult the RFA and Contact

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