

> **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 (A11

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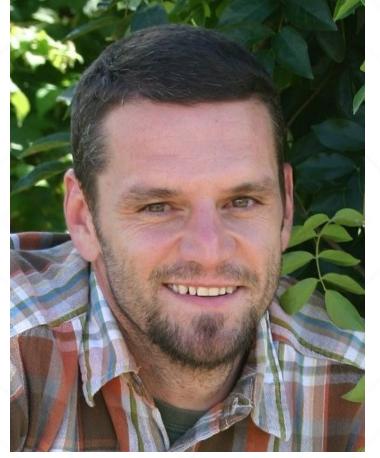
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The Current Pests and Beneficials Team



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) **Contacts:** Erica Kistner-Thomas <u>erica.kistnerthomas@usda.gov</u> Christopher Philips christopher.philips@usda.gov Logan Appenfeller logan.appenfeller@usda.gov



Goals:

AFRI: Pests and Beneficial Species in Agricultural Production Systems (Plant Health and Production & Plant Products Program Area)

- 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

- 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





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: <u>https://nifa.usda.gov/sites/default/files/resource/FASE-New-Investigator-FAQ-07282020.p</u>
- AFRI FASE and EPSCor Program Overview: <u>https://nifa.usda.gov/afri-fase-epscor-program</u>
- Volunteer to be a NIFA Panel Reviewer: <u>https://prs.nifa.usda.gov/prs/volunteerPrep.do</u>
- Sign up for our NIFA Update Newsletter: <u>https://public.govdelivery.com/accounts/USDANIFA/subscriber/new?qsp=USDANIFA_2</u>

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Consult the RFA and Contact

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