Integrating Pollinator Protection and Pest Management for Sustainable Agriculture

CURRENT RESEARCH

Understanding the chemical ecology and behavior of pollinators and pests to improve agricultural production management

Pest insects can be detrimental to the health of agricultural crops and plants. However, widely spraying insecticides can have harmful unintended repercussions for farmers and pollinating insects. Dr. Christelle Guédot, Assistant Professor of Entomology at University of Wisconsin-Madison (UW) studies the biology, behavior, and chemical ecology of both pests and pollinators in order to improve overall agricultural production management strategies for fruit growers. She integrates these insects as an ecosystem in order to target specific pests, while protecting pollinators that are important in agriculture.

Dr. Guédot is working to improve pest management while protecting pollinators in sustainable agriculture and ecosystems. As an ecologist of both managed and wild pollinators, she simultaneously works with pest insects—including perennial and invasive species—and identifies their interaction with fruit crops. Her research looks at insects' chemical and visual cues used to locate their host or food, identifying which chemicals trigger responses in insects and affect their behavior toward plants.

Dr. Guédot's multidisciplinary team includes a postdoctoral student, a technician, graduate students, and part-time student helpers. Together, they collaborate with colleagues from UW and researchers in the U.S., France, and Canada, providing improved, sustainable, and ecologically sound management strategies for farmers to grow their crops, while protecting pollinators.

Current research includes:

- Host Plant Resistance for Perennial Pests - Dr. Guédot and her team are identifying host plant resistance variables to known pests. They're looking at varieties of...

Read More at benefunder.com/

AFFILIATION

University of Wisconsin-Madison

EDUCATION

- Ph.D. in Biology 2004,Utah State University

AWARDS

- Recipient of the Henry and Sylvia Richardson Research Grant by Entomological Foundation, Entomological Society of America, 2011

RESEARCH AREAS

Environment, Chemical, Ecology

FUNDING REQUEST

Your contributions will help fund Dr. Guédot's continued research in integrating pollinators and pests. Costs largely include personnel: $50K/year for a graduate student, $70K/year for a postdoctoral student, $60K/year for a lab manager, and up to $10K/year for an hourly student. Supplies for individual projects cost up to $10K, and a gas chromatograph and mass spectrometer amounts to $100K. Play a role in improving insect management and pollinator protection for sustainable agriculture; fund Dr. Guédot.