

Management of BMSB in US Specialty Crops



a new SCRI pre-application

5 yr proposal, \$10 million budget

Project Directors:

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Current team



Project director (1);
co-Project directors (6);
co-Project Investigators (27+);
Institutions (19 universities, USDA-ARS);
Post docs (TBD),
Students (TBD)

More PIs will be added if we are invited to submit
a full proposal

Objectives and Hypotheses:

Objective 1. Predict risk from BMSB damage through enhanced understanding of agroecology and landscape ecology.

Hypothesis: The impact of near-crop sources of BMSB that invade at-risk specialty crops can be predicted from information on host suitability, dispersal triggers and biotic and abiotic landscape-level factors.



Objectives and Hypotheses:

Objective 2: Implement widespread biological control of BMSB with the exotic Asian parasitoid and native natural enemies.

Hypothesis: The presence of a well-adapted parasitoid such as *Trissolcus japonicus*, and a community of native natural enemies have the potential to reduce BMSB from an outbreak pest to an occasional pest.



Objectives and Hypotheses:

Objective 3: Develop management tools and strategies that are compatible with biological control and informed by risk from landscape factors.

Hypothesis: Using biological control as a foundation of IPM, all management strategies become more effective. Integration of IPM tactics such as sampling and threshold protocols will improve decision-making.



Objectives and Hypotheses:

Objective 4: Determine the economic consequences of BMSB damage, and how it is reduced by specific management strategies.

Hypothesis: Measuring economic impacts of classical biological control and IPM strategies and tactics will lead to the development and implementation of long-term cost-effective BMSB management programs.



Objectives and Hypotheses:

Objective 5: Educate stakeholders, develop resources and deliver new information on BMSB, and assess the effectiveness and impact of delivery information programs.

Hypothesis: An effective evaluation program will lead to high impact information delivery programs that alter stakeholder behavior and improve conditions.

