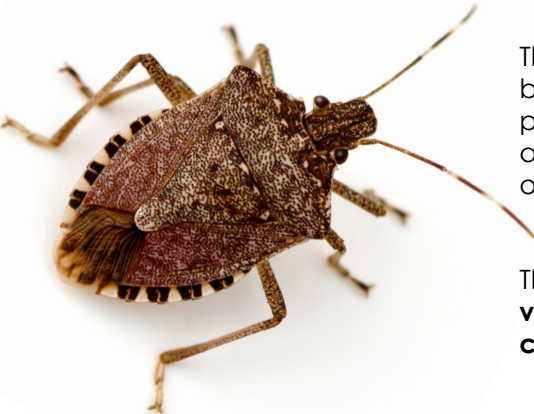


MANAGING STINK BUGS



The brown marmorated stink bug is a severe agricultural pest in the **mid-Atlantic U.S.** and a serious concern in other regions of the country.

These stink bugs damage **vegetables, tree fruits, field crops, and nursery plants.**

Few management options are available for farmers. Those that are have variable, limited, or short-lived effects or cause unintended outbreaks of other pests.

Stink bugs are also indoor nuisances. In the fall, stink bugs move from fields and trees into nearby buildings. It's hard to keep stink bugs out, and people often resort to illegal use of insecticides that pose human and environmental health risks.



In 2010, stink bugs caused **apple** yield losses worth **\$37 million** in the mid-Atlantic region. In Virginia and West Virginia, tree loss neared **90%**.

RESEARCHERS ARE TAKING ACTION

Researchers from **9+ land-grant universities and the USDA-ARS** are working with growers and other stakeholders to develop affordable, effective control options for stink bugs. Working together, researchers are able to share information, tools, and other resources and ensure solutions work in diverse settings. The activities listed below are a few examples of the contributions universities have made.

- **Virginia Tech** researchers are evaluating stink bug impacts on new crops, such as hemp.
- **Rutgers University** scientists are determining how landscape factors impact stink bugs.
- **Virginia Tech** scientists are looking at the distribution of stink bugs and their natural enemies in tree canopies.
- **Virginia Tech** researchers also identified factors that influence infestations in human dwellings.
- Researchers are testing trap designs and lure methods.
- **Ohio State** scientists are using traps to know when stink bug control is needed in sweet corn.
- **Penn State, Virginia Tech and Rutgers University** shed insights on trap placement.
- **USDA-ARS** scientists set research-based thresholds
- **Virginia Tech and Rutgers University** are developing a way to detect samurai wasps, which prey on stink bugs.
- **Delaware** researchers are figuring out whether parasites that feed on stink bug eggs could control populations.
- **Penn State and Virginia Tech** scientists are testing insecticide-treated netting.
- **Rutgers University and Virginia Tech** are monitoring stink bug resistance to insecticides.

IMPACTS

New knowledge and tools help farmers detect and monitor stink bugs and know when and how to cost-effectively control them. Controlling stink bugs helps ensure **HIGHER YIELDS OF CROPS AMERICANS RELY ON** for food and other uses. With alternatives available, farmers are making fewer or no insecticide applications, **SAVING MONEY** and **AVOIDING HUMAN AND ENVIRONMENTAL HEALTH RISKS** associated with chemical use.

PROJECT FUNDING & PARTICIPATION

This project, NEERA1306: Management of the Brown Marmorated Stink Bug (2013-2018), is funded in part by the Multistate Research Fund through the USDA-NIFA and by grants to project members at the following institutions: University of Arkansas, Louisiana State University, University of Minnesota, New Mexico State University, Ohio State University, Pennsylvania State University, Rutgers University, Virginia Polytechnic Institute and State, and West Virginia University. Learn more: bit.ly/BMSB-IPM and bit.ly/NEERA1306