



NORTH CENTRAL INTEGRATED PEST MANAGEMENT CENTER CRITICAL ISSUES



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Preparing the North Central Region Vegetable Industries for Tackling a New Invasive Insect Pest: The Brown Marmorated Stink Bug

When the North Central region of the United States was threatened with a new invasive insect pest for vegetables, the North Central Integrated Pest Management Center (NCIPMC) funded a critical issue project for research in Ohio, Michigan, Minnesota and Indiana. The vegetable industry in that region is valued at approximately \$500 million.

The research group's goal was to detect the brown marmorated stink bug's (BMSB) first appearance in these states and determine its range in different vegetables and then record damage and monitor population increase.

To conduct this research, the group used black light and pheromone traps in 30 locations in Ohio, five in Minnesota, six in Michigan and 13 in Indiana over a five-month period in 2011. No BMSB were trapped in three states while 166 were trapped in Ohio. The BMSB were trapped throughout the season with 80 caught in July, 30 in August, and 10 each in May, June and September in tomatoes and peppers. No BMSB were caught in sweet corn in this study.

Zsafia Szendrei, associate professor, Department of Entomology at Michigan State University, lead on the project, said one of the most important outcomes of the research was



James Jasinski

Yellow pyramid trap next to a vegetable field, baited with stink bug pheromone lure, set up to capture brown marmorated stink bugs.



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James Jasinski

Vegetable growers looking at a pyramid trap for capturing brown marmorated stink bugs.

networking and communicating across state lines on the effectiveness of the different types of traps and discussing possible refinements. The USDA is also working on a better lure for the traps.

Results were published on the webpage of the Michigan State vegetable site so producers could track the threshold throughout the growing season. The research group also educated growers on BMSB at vegetable schools plus two reports were published and two state-based scouting workshops were held.

Szendrei said, “Establishing the distribution in the early stages of invasion are critical to understanding the population dynamics. Once populations increase to economically damaging levels, information about cultural and chemical control will be critical to know and disseminate to growers via newsletters and other media outlets.” Perfecting traps and

lures will continue to be important.

She also noted that although the number of BMSB trapped were fairly low, it was important to determine the distribution of this invasive species in the North Central vegetable production areas. BMSB have no natural enemies or controls.

It’s important to properly identify the BMSB as opposed to beneficial native stink bugs. BMSB has white band on their antennae and alternating black and white bands along the abdomen with a little red mixed in.

This project also leveraged other funding from the Specialty Crop Block Grant Program through the Minnesota Department of Agriculture from 2012–2013 for \$79,295.00; Title: “Preparing Minnesota fruit and vegetable growers for the management of a new pest, the brown marmorated stink bug.”

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The Brown Marmorated Stink Bug**
www.ncipmc.org/partners/critical_issues/bmsb.php

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