Assessing the Extent and Nature of Feeding Injury to Peppers by Brown Marmorated Stink Bug and Development of Monitoring Methods for Brown Marmorated Stink Bug in Peppers

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The brown marmorated stink bug, *Halyomorpha halys* (Stål), is an exotic stink bug (Heteroptera: Pentatomidae) that was introduced into the United States in the mid 1990's. Since its initial establishment in Allentown, PA, it has spread to over 25 states. In 2009 the brown marmorated stink bug became an agricultural problem for the first time in large portions of WV and VA. In 2010, brown marmorated stink bug populations exploded throughout the eastern US causing severe damage in fruit and vegetables with growers experiencing up to 75% damage in some areas.

Farmers are desperate to find ways to prevent BMSB from causing damage. Current control measures include the use of carbamate, organophosphate and pyrethroid insecticides, which are either not highly effective or disrupt current IPM programs because of their toxicity to natural enemies.

To react to this situation, researchers in the northeast are attempting to develop IPM programs targeting brown marmorated stink bug. However, little data is available to do so for vegetables such as peppers. This project will help answer questions about the damage caused by BMSB in Paladin bell peppers and how to best monitor its populations.

During 2011, due to the low to non-existent populations present in our plot and throughout the northern portion of New Jersey, little data was collected for this project resulting in inconclusive results in terms of the development of monitoring techniques. Despite this, fruit damage was observed late in August with injury rates approaching 35% of the fruit sampled.