

PROJECT SUMMARY

Instructions:

The summary is limited to 250 words. The names and affiliated organizations of all Project Directors/Principal Investigators (PD/PI) should be listed in addition to the title of the project. The summary should be a self-contained, specific description of the activity to be undertaken and should focus on: overall project goal(s) and supporting objectives; plans to accomplish project goal(s); and relevance of the project to the goals of the program. The importance of a concise, informative Project Summary cannot be overemphasized.

Title: Biology, Ecology, and Management of Brown Marmorated Stink Bug in Orchard Crops, Small Fruit, Grapes, Vegetables, and Ornamentals

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The brown marmorated stink bug (BMSB), *Halyomorpha halys* (Stål) is an invasive insect native to China, Taiwan, Korea, and Japan that has emerged as pest of unprecedented importance to specialty crops in the United States. Currently, BMSB is well established throughout DE, MD, PA, NJ, VA and WV and has been officially detected in 28 states and the District of Columbia. BMSB is a polyphagous pest of numerous specialty crops in Asia. In 2010, BMSB populations increased dramatically and attacked many high-value specialty crops in the mid-Atlantic region. Damage in commercial orchard crops reached critical levels with some growers losing entire blocks of stone and pome fruit. In addition, extensive damage and crop losses were reported for peppers, tomatoes, sweet corn, caneberries and grapes. Damage to woody and herbaceous ornamentals also was severe. The risk to other specialty crops such as snap and lima beans is considered high, and questions of potential disease transmission and post-harvest issues continue to arise. As the threat to U.S. agriculture posed by spreading BMSB populations continues to increase, there is no established detection method, treatment threshold, or control strategy for BMSB in any cropping system. Therefore, we propose to: (1) establish biology and phenology of BMSB in specialty crops; (2) develop monitoring and management tools for BMSB; (3) establish effective management programs for BMSB in specialty crops; and (4) integrate stakeholder input and research findings to form and deliver practical outcomes.