SUMMARY LOGIC MODELBiology, Ecology, and Management of Brown Marmorated Stink Bug (BMSB) in Orchard Crops, Small Fruit, Grapes, Vegetables, and Ornamentals					
SITUATION: The brown marmorated stink bug (BMSB), Halyomorpha halys (Stål) is an invasive insect native to Asia that is well established in the mid-Atlantic and has been officially detected in 28 states and D.C. In 2010, BMSB populations increased dramatically and attacked many high value specialty crops. Damage in commercial tree fruit orchards reached critical levels. Serious problems were detected in other specialty crops including peppers, tomatos, raspberries, grapes, and woody and herbaceous ornamentals. In addition, the risk to other specialty crops such as lima and snap beans is high, and questions of potential disease transmission and post-harvest issues continue to arise. While the threat posed by spreading BMSB populations to U.S. agriculture continues to increase, there is no established detection method, treatment threshold or control strategy for BMSB in any cropping system.					
PRIORITIES: Based on our Stakeholder Advisory Panel guidance and input and documented stakeholder concerns, input, and priorities captured by the BMSB Working Group (http://www.northeastipm.org/work bmsbpriority.cfm), we propose to: (1) assess biology and phenology of BMSB in specialty crops; (2) develop monitoring and management tools for BMSB; (3) establish effective management strategies for BMSB in specialty crops; and (4) integrate stakeholder input and research findings to form and deliver practical outcomes.					
INPUTS	ACTIVITIES	PARTICIPATION	SHORT	MEDIUM	LONG
 Stakeholder Advisory Panel Stakeholders and End-users Researchers Extension Personnel BMSB Working Group Regulators (APHIS, EPA) Time Financial Resources Intellectual Input Materials Equipment Technology Partnerships 	 Annual Meeting with Stakeholder Advisory Panel, PDs, co-PIs and NE IPM Center in conjunction with BMSB Working Group to evaluate existing and document new problems and to provide direct input into research and outreach Quarterly meetings with institutional co-PDs, NE IPM Center, and co-PIs Semi-Annual meetings with PD, Commodity Team Leaders and co-PIs (<i>orchard crops, small fruit, grape, vegetables, and ornamentals</i>) Coordinated, collaborative and integrated research and outreach efforts 	 BMSB Stakeholder Advisory Panel BMSB Working Group Membership Research and Extension Personnel USDA-ARS-AFRS, BARC, & BIIRU UMD RUTGERS PSU VA. TECH UDEL CORNELL NC STATE OREGON ST WA STATE NE IPM CTR 	 Establish BMSB biology, identify preferred hosts, overwintering sites and other risk factors Identify effective insecticides and evaluate indigenous and exotic natural enemies Develop monitoring tools and management tactics Measure impact on the specialty crop community and deliver research results and management recommendations to stakeholders 	 Establish effective mitigation strategies for BMSB management within specialty crops Integrate compatible monitoring and management tools into IPM programs within specialty crops Measure impact on the specialty crop community and deliver research results and management recommendations to stakeholders 	 Develop BMSB management practices compatible across multiple specialty crops under common management. Implement long- term solutions such as release of approved foreign biological control agents Measure impact on the specialty crop community and deliver research results and management recommendations to stakeholders

INPUTS _____

ENGAGEMENT

OUTCOMES AND IMPACTS

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