



United States Department of Agriculture

Office of the Secretary
Washington, D.C. 20250

NOV 10 2010

The Honorable Frank Wolf
U.S. House of Representatives
241 Cannon House Office Building
Washington, D.C. 20515

Dear Congressman Wolf:

Thank you for your letter of September 24, 2010, cosigned by your colleagues, requesting that the Department of Agriculture (USDA), address the brown marmorated stink bug (BMSB). I apologize for the delay in my response.

I understand that USDA officials recently met with you and the House Agriculture Committee staff to discuss the issues raised in your letter. As discussed at the meeting, the Agricultural Research Service (ARS) and Animal and Plant Health Inspection Service (APHIS) are mobilizing a coordinated effort to provide both short- and long-term solutions to the BMSB problem.

ARS has taken the lead in developing a coordinated research plan to strengthen the agency's capacity in BMSB studies. Recently, ARS developed a BMSB action plan in collaboration with Pennsylvania State University, Virginia Polytechnic Institute, Rutgers University, University of Maryland, and the University of Vermont. The action plan builds on ARS' existing biological control research in Newark, Delaware; efforts to develop pheromone attractants in Beltsville, Maryland; and studies on the biology and behavior of the insect in Kearneysville, West Virginia; as well as the research capabilities of each university partner.

Over the short term, our research will focus on devising a strategy for pesticide use to address the immediate need, while medium- and long-term efforts will seek to better understand the insect's basic biology and behavior, host range, geographic distribution, and natural enemies, in order to support development of effective integrated pest management strategies, including biological control agents. Please find attached a copy of the ARS action plan, which outlines the various components and contributing locations.

In addition, APHIS is working closely with the National Plant Board to monitor for the presence of BMSB and will also convene a New Pest Advisory Group to update its assessment of BMSB through consultation with global scientific experts.

The Honorable Frank Wolf
Page 2

Finally, the USDA Office of Pesticide Management Policy is taking the lead in coordinating an interagency effort with State partners to attain Section 18 clearance for emergency use of pesticides that are not currently available for use next spring to control BMSB in agricultural crops.

Again, thank you for writing. A similar letter is being sent to your colleagues.

Sincerely,

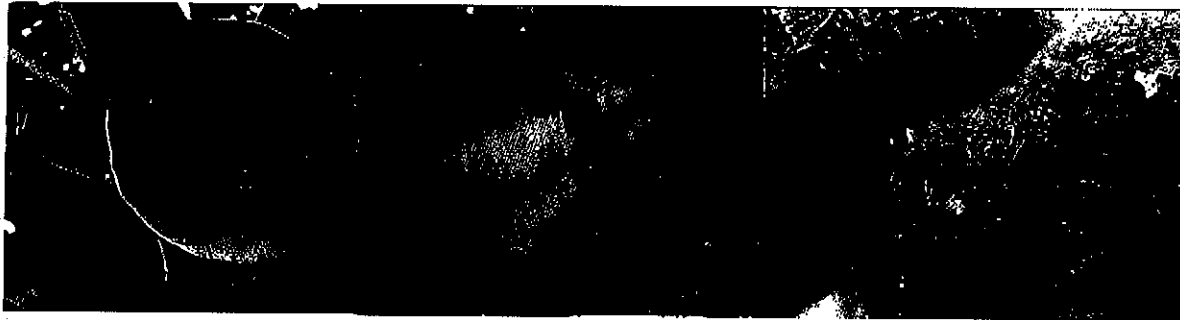


Thomas J. Vilsack
Secretary

Enclosure

**Agricultural Research Service
Action Plan
Brown Marmorated Stink Bug
September 2010**

NOV 12 2010



BACKGROUND

The brown marmorated stink bug (BMSB) (Hemiptera: Pentatomidae; *Halyomorpha halys*) was introduced from Asia into the mid-Atlantic region around Allentown, Pennsylvania, in the mid-1990s. It has a wide range of hosts, including large and small fruits, vegetables, ornamentals, and field crops such as corn and soybean. As a result of saliva injected into fruits through the bug's piercing and sucking mouthparts, fruits become streaked with brown and white and, thereby, spoiled and unsalable, especially in the fresh market.

The BMSB has become established in Delaware, Maryland, New Jersey, Pennsylvania, Virginia, and West Virginia and has been recorded in a total of 29 states. In 2010, the BMSB emerged as a severe pest of fruit and other crops across the region. In addition, this invasive species is a serious nuisance for homeowners and businesses, as it overwinters in residential houses, commercial buildings, and warehouses. Migration to these areas is expected over the next 2 to 3 weeks, at which point the public will take notice due to the insect's unpleasant odor and ability to produce aggregations of up to a million bugs.

The BMSB can be controlled by spraying pyrethroid insecticides; but, unfortunately, the effect is very short-lived, and there is evidence that the bug is developing resistance. Even where the insecticide is effective, the insect quickly repopulates sprayed areas by migrating from adjacent, nontreated fields or wooded areas. Additionally, pyrethroids and other insecticides being used (carbamates and neonicotinoids) are extremely disruptive to insect pest management (IPM) programs, eliminating many beneficial insects on which fruit growers rely to control other commercially important insects and mites.

RESEARCH NEEDS AND OBJECTIVES

Currently, growers have no viable strategies for management of BMSB in agroecosystems, and homeowners and businesses also are contending with the lack of a reasonable control strategy. Since 2005, the Department of Agriculture's Agricultural Research Service BMSB research has focused on biological control (Newark, Delaware), development of pheromones (Beltsville, Maryland), and studies on the biology and behavior of the insect (Kearneysville, West Virginia). To strengthen this program in response to the outbreaks, ARS-Kearneysville scientists have

taken the lead to increase all areas of research under a coordinated research plan, working with Pennsylvania State University (PSU), Virginia Polytechnical Institute (Virginia Tech), Rutgers University, University of Maryland (UMD), and the University of Vermont. At present, the plan focuses on determining critical aspects of basic biology, host range phenology, and behavior (including isolation of pheromones); developing monitoring tools; and developing mitigation strategies such as the use of pesticides in the short term and biological control and trap-and-kill strategies in the long term.

Short-Term: Define a rational chemically based management strategy first as an immediate emergency stop-gap rescue strategy, and second as part of a sustainable pest management plan.

At the present time, growers are applying pesticides belonging to one or two chemical classes, namely the pyrethroids and carbamates, in an attempt to save their crops. Chemical control is not considered desirable over the long-term due to expected crop resistance to these chemicals and disruptions to IPM programs, but will play an immediate role in salvaging crop production and a limited ongoing role in more sustainable management programs. Accordingly, researchers will seek to define an appropriate short-term chemical control strategy for the 2011 season as researchers carry out the medium- and long-term research needed to develop a more sustainable approach.

Contributing Locations: ARS-Kearneysville; PSU; Rutgers; Virginia Tech; and UMD.

Short-Term: Determine if presence of BMSB is a feeding deterrent for cattle.

Because BMSB are present in high numbers in forage crops and likely release defensive compounds when crushed, their presence in silage and other harvested cattle food sources could deter cattle from feeding. Scientists at the Beltsville Agricultural Research Center (BARC) and UMD will conduct feeding trials to determine if the presence of BMSB affects cattle feeding behavior.

Contributing Locations: ARS-BARC and UMD

Medium-Term: Define the basic biology, phenology, and behavior of BMSB in agroecosystems, urban landscapes, and in native unmanaged habitats.

Currently, the biology, phenology, and behavior of BMSB in agroecosystems and native habitats are poorly understood, with even the number of generations per year not well defined. In order to develop a management plan, researchers will quantify and verify the basic biology of BMSB throughout the region. It is critical that the basic biology and behavior be well understood in order for researchers to be better positioned to develop effective and appropriate monitoring tools and management strategies.

Contributing Locations: ARS-Kearneysville, Beltsville, and Newark; PSU; Virginia Tech; Rutgers; and UMD.

Medium-Term: Establish the host range and preference of BMSB for both cultivated and wild hosts as well as susceptibility of cultivated hosts.

Until very recently, it was not known that BMSB could have such a devastating impact on tree fruit crops, as well as many other crops. Therefore, scientists will work to define the host range of BMSB with regard to both cultivated crops and wild crops. These efforts are expected to lead to novel approaches for BMSB control.

Contributing Locations: ARS-Kearneysville, Beltsville, and Newark; PSU; Virginia Tech; Rutgers; and UMD.

Medium-Term: Assess and survey BMSB populations to establish geographic distribution, population density, and potential spread.

BMSB is highly transient and has already been found in 29 states. Scientists' efforts to monitor this spread will be critical to determining the presence, establishment, abundance, and activity of BMSB in order to inform regional management decisions.

Contributing Locations: ARS-Kearneysville, Beltsville, and Newark; PSU; Virginia Tech; Rutgers; UMD; and University of Vermont.

Medium-Term: Develop an effective stimulus-based monitoring tool for BMSB.

Scientists are working to identify aggregation and mating chemicals that can be used to monitor BMSB. These efforts will, ultimately, underpin successful management strategies, detection programs, and biological control efforts.

Contributing Locations: ARS-Kearneysville and Beltsville; Virginia Tech; and Rutgers.

Medium-Term: Develop an effective attract-and-kill management strategy for BMSB.

Behaviorally active stimuli for BMSB will be manipulated to attract and retain BMSB within particular locations within agricultural and urban settings to allow for implementation of spatially precise control strategies, thereby reducing insecticide inputs and production costs, increasing sustainability and promoting ecological benefits

Contributing Locations: ARS-Kearneysville and Beltsville; Virginia Tech; PSU; UMD; and Rutgers.

Long-Term: Establish biological control efforts.

BMSB is an invasive species that operates at a landscape level, utilizing numerous wild and cultivated plants, throughout the spring and summer. In addition, adults aggregate in large groups during particular periods of the year. A biological control agent, whether parasitoid, predator, or pathogen, could reduce or eliminate this insect as a pest of agricultural and urban settings. The identification and development of such an agent is the ultimate long-term goal of research efforts.

Contributing Locations: ARS-Kearneysville, Beltsville and Newark; PSU; Virginia Tech; Rutgers; UMD; and University of Vermont.

FUTURE NEEDS

Although ARS has reallocated some existing funds to BMSB research, additional funding will be needed to meet several immediate and critical needs: determining the BMSB life cycle, evaluating pesticides for effectiveness and compatibility with IPM programs, importing and testing natural enemies from Asia, and isolating and testing pheromones and trap design.

CURRENT ARS FUNDING FOR BMSB:

<u>LOCATION</u>	<u>FY 2010 ESTIMATE</u>
Newark, DE	\$120,300
Beltsville, MD	272,300
Kearneysville, WV	396,700
Montpellier, France	<u>10,500</u>
TOTAL	<u><u>\$799,800</u></u>