VegNet

The Ohio State University Extension Vegetable Crops
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In This Issue

Ohio farmers need to be on the lookout for the new invasive stink bug– Jim Jasinski, Celeste Welty

The Brown Marmorated Stink Bug, *Halyomorpha halys*, is a new exotic pest from Asia that is rapidly spreading through North America. As of this month, it has been reported from 33 U.S. states and Ontario. It was initially detected in the U.S. in Allentown, PA in 2001, and first detected in Ohio in Columbus in November 2007. To date, it has been reported in many counties in Ohio as a nuisance pest to home and business owners, but has not been confirmed as the cause of any crop damage in the state.

In 2010, some fruit growers in the mid-Atlantic states (PA, MD, WV, VA, NJ) saw up to 90% of their apple and peach crop damaged by this insect, and some growers saw high losses in their vegetable crops as well. Peppers, tomatoes, sweet corn, and beans were among the most damaged crops. For the fields and orchards affected by this pest, control by any means, cultural, physical, or chemical, has been difficult. Organic growers were particularly concerned because of their lack of effective insecticides for this pest. Management options and chemical efficacy will be the subject of a future VegNet article.

Although stink bugs generally resemble each other by having a large shield-like plate over their body, the Brown Marmorated Stink Bug (BMSB) can be separated from the others by its large size, nearly ¾ inch long, brownish and gray speckles on top of the insect body, dark and light bands at the edge of the abdomen, and two white bands on the antennae, and faint light bands on the legs (Figure 1).

Figure 1. Top and bottom views of the Brown Marmorated Stink Bug, with white bands on antennae and abdomen banding highlighted with red arrows (credit Dave Shetlar).

Growers need to be aware that the BMSB has a very wide host range, and the resulting feeding damage on fruits and vegetables can be quite significant and noticeable, both on and beneath the peel, rendering most produce unsalable (Figure 2). This insect, with its large piercing mouthpart, can readily feed on field corn, soybeans, apples, pears, peaches, plums, cherries, sweet corn, peppers, tomatoes, beans, brambles, strawberries, ornamental and landscape plants, to name a few key crops. Several of its preferred hosts in the wild are *Paulownia* trees, the Tree of Heaven (*Ailanthus altissima)*, and wild cherry.

Figure 2. Damage caused by Brown Marmorated Stink Bug on peach, apple, pepper, tomato, and sweet corn. Photos credited to Gary Bernon and Gerry Brust.

To reiterate, damage of this scale or anything approaching this scale has not been documented in Ohio to date. To determine the spread in Ohio, we are currently monitoring 24 sweet corn, pepper, tomato, and raspberry sites (6 of each) across the state with pheromone traps and blacklight traps (Figure 3). The optimal trap type for this new species is not yet known, but several models are under evaluation. The pheromone is an aggregation pheromone (not a sex pheromone) of another stink bug species that has shown cross-attraction to BMSB. The traps are more likely to capture BMSB in mid- to late-summer than in early summer, even in areas where the species is established. To date, no BMSB have been captured in any pheromone traps in Ohio, but 18 BMSB have been captured in the Columbus blacklight trap between 30 May and 26 June. With this large network of monitoring locations, we are hoping to determine the distribution and possibly density of this pest across the state in various crops.

Figure 3. Black and yellow pheromone baited pyramid traps. Photo credit Jim Jasinski.

We are currently working on a webpage where growers and homeowners can report sightings of this insect. In the mean time, if you find an insect that appears to be a BMSB and want to report your finding for positive identification (no processing fee), please place your contact information and the **dead** insect(s) in a leak-proof, crush-proof container (e.g., plastic medicine bottle or film canister) and mail the sample to:
Attn: BMSB Reports
C. Wayne Ellett Plant and Pest Diagnostic Clinic
The Ohio State University
8995 E. Main Street, Bldg. 23
Reynoldsburg, OH 43068-3399

Cucurbit downy mildew (CDM)

Found: Cucurbit downy mildew has been confirmed on cucumber in near Vineland, NJ, Cumberland county. This is the first report of cucurbit downy mildew in the mid-Atlantic region this year.
Crop(s) at risk: all cucurbit crops in New Jersey.
Potential impact: Significant losses will occur if not controlled properly
What growers should do:
Control of downy mildew begins with regular scouting, recognizing symptoms and weekly protectant fungicide when detected in your region.
Tracking CDM
To track the progress of cucurbit downy mildew in the eastern US and to keep up with reports of Downy mildew from other states please visit North Carolina State University's Cucurbit Downy Mildew Forecasting Center at: http://cdm.ipmpipe.org/
Click on Current Forecast in the left hand column to see if conditions are at high or low risk for your area.

Cucurbit Downy Mildew Forecasts - June 29, 2011

***** Epidemic Update - 29 June: First report from NJ. CDM has been confirmed on cucumber in a commercial field in Cumberland County, NJ. Please see the Epidemic History for details. *****

*** **Epidemic Update** - 24 June: **New report from NC**. CDM has been confirmed on **cucumber** in a small field in **Alamance County, NC**. Please see the Epidemic History for details. ***

Regional Weather: Eastern / Southern U.S.

Dry mid-Atlantic / southern Plains; scattered showers Southeast / central Gulf Coast. Urged by high pressure building into the eastern U.S., a cold front is exiting the East Coast. It will remain nearly stationary over the South, from where it extends into the central Plains. Scattered showers will occur in the Southeast and central Gulf Coast areas with mostly dry weather elsewhere. **Newly-formed Tropical Storm Arlene**, now located in the Bay of Campeche, will bring some showers to deep South TX. Highs in the 70s and 80s Northeast transitioning to 90s and 100s over the South. Lows ranging from the 50s and 60s Northeast / mid-Atlantic to 70s and 80s in the South.

OUTLOOK: Overview: Favorable conditions continue in FL; mixed conditions southern TX and parts of Carolinas (Wednesday). Long-range transport and deposition are not expected for most Wednesday and Thursday events. Some epidemic spread is possible in eastern SC / southeast NC. **Localized to short-range**

spread is expected in FL and perhaps in deep South TX.

Late Blight in the East

Late blight has been confirmed on potato in DE and the eastern shore of Virginia and on tomato on Long Island, NY.
Crop(s) at risk: All tomato and potato crops.
What growers should do: All potato and tomato growers should consider adding Late blight specific fungicides into their weekly fungicide maintenance programs. To date, no Late blight has been reported in Ohio. The hot weather (>90o) ﷺforecastedﷺ for later this week should help reduce the threat.

Crop Report from June 28, 2011 Brad Bergefurd

Sweet corn harvest is getting into swing, however fear there will be harvest gaps due to the wet spring and delayed plantings, supply is tight and demand is high, some worm damage being reported. Harvest of high tunnel tomato and peppers continue with great demand, prices, yield and quality. Harvest of field grown cabbage, broccoli, beans, peas, red beets, new potatoes, onions, greens, chard, radishes and garlic continues with great demand and quality. Melons are about the size of a softball.

Planting of all vegetable crops in fields continues. Transplanting of tomatoes in high tunnels has begun for the fall harvest. Over 2 inches of rain fell with some areas receiving over 4 inches last week. So far this week 2 plus inches fell around Brown and Adams counties with tornadoes reported with little damage in some areas. Sunshine and warmer temperatures are drying fields out should make for good field conditions going into the holiday weekend so the last of the pumpkins, winter squash and gourds can be planted.

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