Maine Apple Newsletter
Monday, January 10, 2011 Vol. 19 No. 2

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Spotted wing drosophila fly
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Other news

Upcoming Events
THIS WEDNESDAY
1) Maine State Pomological Society meeting
   January 12, 2011. 9am - 12pm; Maine Agricultural Trade Show
   Augusta Civic Center, Androscoggin room
   Agenda
   9-11am, Business Meeting
      Committee reports.
      Discussion of current and potential legislation that impacts apple growers.
      Computer tool for locating neighbors within contact zone.
      Update on Clean Water Act.
      Market Promotion.
      Other Business.
      NRCS Programs.
   11-11:30am, Renae Moran, UMaine Extension.
      Weed management and disease incidence in an organically managed apple
      orchard, Honeycrisp storage studies, Zinc nutrition in new apple plantings,
      Plum variety trial.
   11:30am-12pm, Glen Koehler, UMaine Extension.
      Herbicide overview, Brown marmorated stinkbug.
   Attending the meeting qualifies for two pesticide applicator recertification credits.

Uninvited Guest #1
The Spotted Wing Drosophila (Drosophila suzukii) is a small 2-3mm long vinegar fly first found in
the United States in California in 2008. Since then it has been found in other western states. In 2010, it
was detected in Florida and the Carolinas. The adults are weak fliers, so spread to other states is probably
on infested material carried by people rather than by natural dispersion.
There has not been a formal monitoring program for SWD in Maine, and no reports of its presence here. Its natural habitat is Southeast Asia, and its ability to overwinter in Maine is unknown. Vinegar flies are often referred to as “fruit flies”, but that name actually refers to the Tephritid family of larger flies that includes apple maggot fly. Vinegar flies are commonly found in kitchens or food storage areas where there is a food source for the larvae that feed on fermenting, liquefying fruit and vegetables. Overripe tomatoes and bananas, rotting potatoes and onions, and accumulated organic material in drains are common food sources. Damaged or rotting apples are also a food source.

Other vinegar flies are not a common problem in fruit production because they only feed on previously damaged fruit. However, SWD is different in that the females cut the skin of otherwise undamaged fruit to lay eggs. It is difficult to detect fruit in which eggs have been laid, meaning that fruit damaged before harvest can be in customers hands before infestation is obvious. After a few days, eggs hatch into maggots that feed on fruit tissue causing it to discolor and collapse, and introduce other rot organisms.

Apples are included on the list of host crops (apple, apricot, cherry, mulberry, nectarine, peach, persimmons, plum, pluot; blackberry, blueberry, grapes, raspberry, strawberry; melons, tomato.) SWD are more likely to be a problem on the softer fleshed stone fruit and berry crops.

In addition to acting as direct pests, compared to apple maggot, SWD has multiple generations per year and a higher reproductive capacity. At 77 degrees F, development from egg to adult can occur in only 8.5 days. As an introduced species, it is probably less subject to natural control by diseases, parasites, and predators. If SWD did become established in Maine, it might require more frequent insecticide applications during the summer months, especially as harvest neared.

At this point, this pest is not a known threat in Maine, but it something to be aware of and to report if you think you have an infestation of small flies causing damage to otherwise sound fruit. If you find small flies hovering among fruit that are overripe or have other damage that exposes moist sugary tissue to opportunistic egg laying females, then the problem is almost certainly common vineygar flies, in which case no report is needed, and the cure is sanitation to deny them a food source.


**Brown Marmorated Stink Bug**

Brown marmorated stink bug (BMSB) is another introduced fruit pest. It was first detected in Pennsylvania in 1998 and it has been spreading to numerous other eastern states since then. While it has been found in Maine, that report was from trailers imported from out of state. There are no reported established field infestations in Maine.
Adults are the typical shield shaped stink bugs, brown on both top and bottom, about an 3/4 inch long (nymphs are similar but smaller) with light bands on the antenna and a pattern of alternating light and dark areas around the outside edge of the wings. Damage on apples is similar to other stink bug damage – dark colored depressions on the outside which when cut, reveal corky dead tissue underneath.


Its natural range is northeastern Asia, including China, South Korea, and Japan where it is known as an agricultural pest of many crops. This species has an exceptionally wide host range, including cherry, peach, apricot, cherry; apple, pear; raspberry, blackberry, grapes; sweet corn, field corn, tomatoes and green peppers. It also a household pest because it builds up large populations that congregate and enter houses in fall as they look for overwintering sites. Its ability to overwinter in Maine is unknown, but there is a better chance that BMSB can survive Maine winters than spotted wing drosophil.a

While it became a household nuisance, BMSB had not been much an agricultural pest in the Mid-Atlantic states until 2009 when there was late season damage to peaches and apples. In 2010, Dr. Tracy Lesky and associates conducted damage surveys. They found extensive damage to peach, apple, and Asia pear crops in Pennsylvania, Maryland, and West Virginia. Also new in 2010 was early season damage. An average of 62% of fruit were injured in the apple orchards surveyed, and an average of 52% in peach orchards. Most of these sites had received moderate to aggressive control programs based on pyrethroid insecticide applications targeted at BMSB. Some sites had large overwintered BMSB populations from the previous year, but others did not.

Additional information:
Identification http://njaes.rutgers.edu/stinkbug/identify.asp
2010 Damage Survey http://anr.ext.wvu.edu/r/download/74527
1) The Massachusetts Department of Agricultural Resources has a branding program for local farm products called Commonwealth Quality. Participating growers must meet a set of certification requirements based on best management practices.
   Description of Commonwealth Quality program:
   [http://www.mass.gov/agr/markets/commonwealth_quality.htm](http://www.mass.gov/agr/markets/commonwealth_quality.htm)
   Best Management Practices for Orchards:
   [http://www.umass.edu/fruitadvisor/tfbmp/index.html](http://www.umass.edu/fruitadvisor/tfbmp/index.html)

2) New York Times article on vintage apples. Click on the poster image at bottom of the article to see a larger version.
   [http://online.wsj.com/article_email/SB10001424052702303467004575574262924513410-lMyQjAxMTAwMDIwNzEyNDcyWj.html](http://online.wsj.com/article_email/SB10001424052702303467004575574262924513410-lMyQjAxMTAwMDIwNzEyNDcyWj.html)

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