



# UNIVERSITY OF ILLINOIS EXTENSION

College of Agricultural, Consumer, and Environmental Sciences

## *Illinois Fruit and Vegetable News*

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*A newsletter for commercial growers of fruit and vegetable crops*

*"We are what we repeatedly do. Excellence, then, is not an act, but a habit." Aristotle*

Address any questions or comments regarding this newsletter to the individual authors listed after each article or to its editor, Rick Weinzierl, 217-244-2126, [weinzierl@illinois.edu](mailto:weinzierl@illinois.edu). The *Illinois Fruit and Vegetable News* is available on the web at: <http://www.ipm.illinois.edu/ifvn/index.html>. To receive email notification of new postings of this newsletter, call or write Rick Weinzierl at the number or email address above.

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**University of Illinois Extension Specialists in Fruit & Vegetable Production & Pest Management**

### ***Upcoming Programs***

- **Online GAP Produce Safety Course, Department of Food Sciences, Cornell University.** Tentative dates: October 20 – November 9, 2010; January 5 – 25, 2010; February 2 – 22, 2010; March 2 – 22, 2010. Check regularly online for registration to open soon at: <http://www.gaps.cornell.edu/eventscalendar.html>.
- **Season Extension and High Tunnel Webinar Series, November 1, 3, 8, 16, and 18, 2010.** This is an online "webinar" series sponsored by the Great Lakes Vegetable Working Group, University of Illinois Extension, and a NCR SARE PDP grant. There will be five 1- to 2-hour programs on the dates listed above. The first three webinars will focus on an introduction to pest management in various season extension systems, especially for tomatoes and winter crops. The last two webinars will be geared toward soil, water, and nutrient management, plus a summary of the Environmental Quality Incentive Program (EQIP) high tunnel pilot project initiated in 2010. Pre-registration is required at [http://www.surveymonkey.com/s/season\\_ext](http://www.surveymonkey.com/s/season_ext), and the cost is \$30 (for one or all five webinars). Each webinar will be recorded and available on several state IPM or vegetable oriented websites for viewing soon after its original airdate. For people who do not have a broadband connection, we are identifying several sites throughout each state to host the webinar series. For more information, contact: Martha Smith, University of Illinois Extension, 309-734-5161, or [smithma@illinois.edu](mailto:smithma@illinois.edu).
- **Illinois/Iowa Cucurbit School, November 19, 2010.** Scott County Extension Office, Bettendorf, IA. For more information, contact Maurice Ogutu ([ogutu@illinois.edu](mailto:ogutu@illinois.edu)).
- **Great Lakes Fruit, Vegetable, and Farm Market EXPO, December 7-9, 2010.** Grand Rapids, MI. Pre-register by November 12 to save money at: <http://www.glexpo.com/index.php>.
- **2011 Illinois Specialty Crops Conference, January 5-7, 2011.** Springfield, IL. Details will be included in future issues of this newsletter.
- **2011 Horseradish Growers Convention, January 27, 2011.** Gateway Conference Center, Collinsville, IL. For more information, contact Elizabeth Wahle, 618-692-9434; [wahle@illinois.edu](mailto:wahle@illinois.edu).
- **Southern Illinois Commercial Tree Fruit School, February 1, 2011.** Mt Vernon Holiday Inn, Mt. Vernon, IL. For more information, contact Elizabeth Wahle, 618-692-9434; [wahle@illinois.edu](mailto:wahle@illinois.edu).

- **Southwestern Illinois Commercial Tree Fruit School, February 2, 2011.** First Presbyterian Church, Hardin, IL. For more information, contact Elizabeth Wahle, 618-692-9434; [wahle@illinois.edu](mailto:wahle@illinois.edu).
- **Southern Illinois Commercial Vegetable School, February 9th, 2011.** Mt Vernon Holiday Inn, Mt. Vernon, IL. For more information, contact Elizabeth Wahle, 618-692-9434; [wahle@illinois.edu](mailto:wahle@illinois.edu).

## ***Regional Updates***

**In the south and southwest**, the harvest season is winding down, with late Fuji harvest starting late last week for many growers. The pumpkin market kicked into high gear, and the weather has been cooperating with agritourism operations. The northern portion of the region has finally dried down, but lawnmowers are still going, just not as frequently. Lawns and pastures in the southernmost parts look considerably browner, but the fall leaf color is moving into the dramatic range – a good time to tour the region and enjoy the beautiful fall colors. Temperatures have been well above normal, even hot like summer but just recently back down to more normal ranges.

Because leaves are in the process of dropping, it is time to be thinking about sanitation measures to reduce the amount of overwintering apple scab pathogen. The fungus that causes apple scab overwinters on fallen leaves and develops fruiting bodies in the spring. The goal of sanitation is to speed decomposition of fallen leaves to prevent the apple scab fungus from successfully overwintering. This can be accomplished in a couple of ways. One is to mulch or flail mow in the fall or early spring (prior to green tip); keeping in mind that raking under the trees may be necessary to do a complete job. This method alone can significantly reduce the amount of overwintering pathogen. A second method is to apply a solution of 5% urea (by weight) to trees just before leaves fall or immediately after leaf fall to leaves on the ground to avoid any late-season stimulation of growth (even better if you mulch first, then apply the urea). To do a rough calculation, assume a gallon of water weighs 8.35 lbs; 5% of that is 0.42 lbs or 6.7 oz. So, for every 100 gal (835 lbs), you need to fill the tank with at least half of the volume (note that urea will dissolve in its own weight in water, but it becomes increasingly difficult to dissolve as the concentration increases), turn on agitation, add 42 lbs of urea to the tank, then bring up to the 100 gal volume mark.

Strawberry growers should secure an order of straw to cover their mulching needs. For the southern region, application may be a ways off, but start planning now. Strawberry leaves are still active well into late autumn, and applying mulch too early in the fall can reduce the plant's ability to produce and store reserves needed for winter survival. If the mulch is applied too soon, before plants are dormant, the mulch can cause rotting of the leaves and crowns. If mulch is delayed too late, low temperatures could damage crowns. The best time to apply mulch is after the strawberry plants have experienced several light frosts, but before temperatures drop to 20°F, at which point injury can occur. After several light frosts, the leaves attached to the crown should begin to flatten out, signaling the time to mulch. The mulch should be applied three to four inches deep over the plant rows. One bale of straw pulled apart should cover about 100 square feet.

Be sure to note the dates and mark your calendars for the programs listed at the beginning of this issue. The Great Lakes Fruit, Vegetable and Farm Market EXPO, one of the premier shows for fruit and vegetable growers and farm marketers, is set for December 7-9, 2010, in Grand Rapids, MI. The EXPO includes educational programming for fruit, vegetable, and greenhouse growers, and for farm marketers. Also not to be missed is the trade show with more than 300 exhibitors covering 4 acres of exhibit space in one hall. Pre-register by November 12 to save money at: <http://www.glexpo.com/index.php>.

The Department of Food Sciences at Cornell University houses the National Good Agricultural Practices (GAPs) Program, and they have developed an online GAP Produce Safety Course. The following are projected online course dates (registration information coming soon):

October 20 — November 9, 2010  
 January 5 — 25, 2010  
 February 2 — 22, 2010  
 March 2 — 22, 2010

Check their site regularly for online registration to open at: <http://www.gaps.cornell.edu/eventscalendar.html>

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**In the northern region**, early October has been warm, with highs in the 60s to low 80s and lows in the 30s to low 50s. It has been very dry in most of the region, with a few areas receiving less than 0.2 inches of rainfall. The first frost was reported in many parts of the region on the mornings of October 4 and 5, ending harvest of some tender crops such as tomato, peppers, and cucurbits at some locations.

Direct-market operations remain busy. Apples matured early this year, and picking is done at some u-pick orchards, but most of those have several varieties that are available already picked. Picking of fall-bearing raspberries and blackberries has ended. Multicolored Asian lady beetle has been a contaminant in a range of late fruits. In addition to apples, other fruits, and vegetables, some operations are selling corn stalks, ornamental corn, and gourds. Some corn mazes are open to the public while others will open this week.

Harvesting of cabbages, collards, mustard greens, beets, carrots, spinach, and other cool season vegetables continues. There is a good pumpkin crop in comparison with last year. Growers are urged to scout pumpkins because cucumber beetles are now feeding on pumpkin fruits.

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### ***Invasive Insects***

Two introduced and invasive insects pose new threats to Illinois fruit and vegetable growers in 2011 and the next few years. Now would be a good time for growers to learn more about these insects, begin to look for them, and plan for future management needs.

#### ***Brown Marmorated Stink Bug***



Female brown marmorated stink bug (Rutgers University).

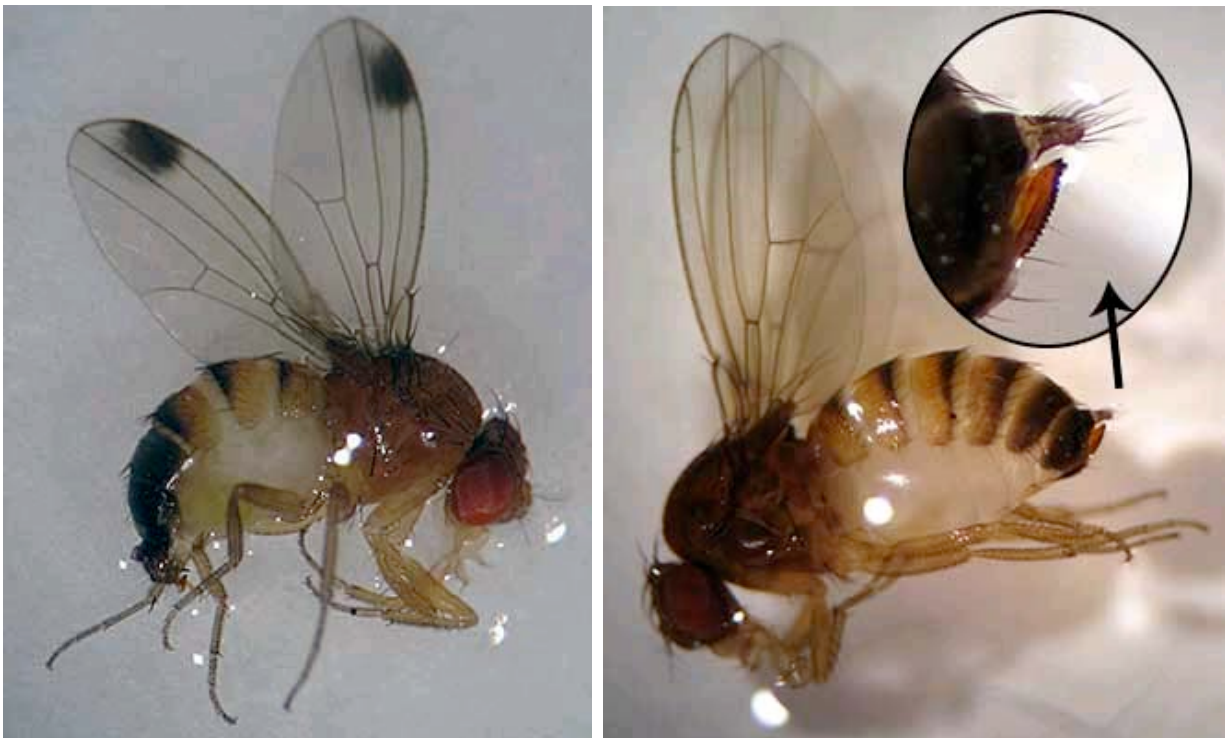
The brown marmorated stink bug (BMSB), *Halyomorpha halys* (Hemiptera: Pentatomidae), is an exotic insect first identified in fall 2001 in Allentown, PA; undetermined sightings in the eastern U.S. likely date as far back as 1996. In Asia, it has been reported as a significant pest of fruit trees and soybean. Asian hosts include pear, cherry, peach, apricot, apple, mulberry, fig, persimmon, and burdock. In the U.S., additional hosts have included Asian pear, empress tree, butterfly bush, *Catalpa* spp., beans, honeysuckle, Norway maple, grape, and raspberry. This year in Pennsylvania, West Virginia, and Maryland it has caused widespread and severe damage to a range of fruits, vegetables, and field crops. Brown marmorated stink bugs overwinter as adults and enter homes and other buildings to seek shelter in much the same way as multicolored Asian lady beetles do.

How far west is it? It appears that brown marmorated stink bug now occurs across much of Ohio and Kentucky. It has been detected in Missouri, Michigan, and Illinois, although detections in Illinois have been isolated individuals apparently moved by vehicles. It is quite possible that undetected infestations exist here.

We'll cover this insect in some detail during winter programs, but now is a good time for growers and others to be on the look-out for it as it moves into houses. It is a fairly large stink bug, about the size of the green stink bug often seen in soybeans (and orchards). It is marbled brown, with alternating dark and white bands along the sides of the abdomen when viewed from above. Its antennae and legs also have white bands not seen on other brownish stink bugs here. The front edge of its prothorax (its "shoulder") is smooth, not sawtoothed as in some other large, brown stink bugs. If you find stink bugs in homes (or elsewhere) that you think might be brown marmorated stink bug, be sure to send them to me for identification (1102 South Goodwin Avenue, Urbana, IL 61801). Fact sheets on brown marmorated stink bug are available online at [http://www.ncipmc.org/alerts/stinkbug\\_alert.pdf](http://www.ncipmc.org/alerts/stinkbug_alert.pdf), <http://ento.psu.edu/extension/factsheets/brown-marmorated-stink-bug>, and [http://ohioline.osu.edu/hyg-fact/pdf/FS\\_3824\\_08.pdf](http://ohioline.osu.edu/hyg-fact/pdf/FS_3824_08.pdf).

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### **Spotted-Wing Drosophila**



Left: Male spotted wing Drosophila. Right: Ovipositor (egg-laying organ) of female spotted wing Drosophila. Photo Credit: Sheila Fitzpatrick, Agriculture & Agri-Food Canada, Pacific Agri-Food Research Centre, Agassiz.

Spotted wing drosophila, *Drosophila suzukii* (Matsumura) (Diptera: Drosophilidae) was first identified in the western U.S. in 2008. In 2009 it was found in California, Florida, Oregon, Washington, and British Columbia. This is a temperate-zone fruit fly, native to Southeast Asia, that prefers temperatures of 68-86 °F. Many species of fruit flies are present in late summer; most of them normally infest overripe, fallen, decaying fruit and are not crop-limiting pests. However, a spotted wing drosophila female lays her eggs inside sound fruit before harvest with her saw-like ovipositor, and larvae contaminate fruit at harvest, causing it to become soft and unmarketable. It is known to infest thin-skinned fruit.

Spotted wing drosophila overwinters in the adult stage. Flies become active in spring, mate, and lay eggs in thin-skinned fruit. Multiple overlapping generations develop each year where this insect overwinters successfully. At a constant temperature of about 77°F, generation time (development from egg to adult) is 8.5 days.

Spotted wing drosophila adults can be blown by wind to nearby locations, but more importantly, long-distance dispersal is likely with transportation of infested fruit to new regions. Surveillance programs are underway in several states and will be initiated in Illinois in 2011.

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## ***Fruit Production and Pest Management***

### ***One More Note on Mealybugs on Peaches ... with an identification***

In August I reported on an infestation of mealybugs on peaches in southern Illinois. Trunks, branches, twigs, and fruit were infested. Dr. Gregory Evans, USDA APHIS PPQ Systematic Entomology Laboratory, has identified specimens as the **Comstock mealybug**, *Pseudococcus comstocki* (Kuwana) (Hemiptera: Pseudococcidae). To my knowledge, this is the first record of Comstock mealybug on peaches in Illinois. Management practices and conditions that contributed to this infestation are unclear, and surveys are planned for 2011. Fact sheets on Comstock mealybug are available from Cornell (<http://www.nysipm.cornell.edu/factsheets/treefruit/pests/cmb/cmb.asp>) and the University of California (<http://www.ipm.ucdavis.edu/PMG/r107300511.html>).



See: <http://ipm.illinois.edu/mealybugs/>

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## *Less Seriously ...*

From Lee Rife ...

From our previous issue, ... a paraprosdokian (from Greek "παρα-", meaning "beyond" and "προσδοκία", meaning "expectation") is a figure of speech in which the latter part of a sentence or phrase is surprising or unexpected in a way that causes the reader or listener to reframe the first part. It is frequently used for humorous or dramatic effect, sometimes producing an anticlimax. For this reason, it is extremely popular among comedians and satirists.

A few more ...

We never really grow up, we only learn how to act in public.

Evening news is where they begin with "Good evening," and then proceed to tell you why it isn't.

A bus station is where a bus stops. A train station is where a train stops. On my desk, I have a workstation.

I thought I wanted a career; turns out I just wanted paychecks.

Whenever I fill out an application, in the part that says IN AN EMERGENCY, NOTIFY: I put *DOCTOR*.

I didn't say it was your fault, I said I was blaming you.

Why does someone believe you when you say there are four billion stars, but check when you say the paint is wet?

Why do Americans choose from just two people to run for president and 50 for Miss America?

When tempted to fight fire with fire, remember that the Fire Department usually uses water.

You're never too old to learn something stupid.

To be sure of hitting the target, shoot first and call whatever you hit the target.

Nostalgia isn't what it used to be.

Some people hear voices. Some see invisible people. Others have no imagination whatsoever.

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