



# 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*

- **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)).
- **2011 Illinois Specialty Crops Conference. January 5-7, 2011.** Springfield, IL. Details will be included in future issues of this newsletter.

### *Regional Updates*

**In the northern region**, mid-September highs ran the gamut from the upper 60s to low 90s, with night-time lows in the upper 40s to low 60s. The region received 1-3 inches of rain between September 8 and 23, with much greater amounts in the areas toward the central parts of the state. Apple picking continues in many u-pick operations in the region, with several varieties ready to pick including Honeycrisp, Jonathan, Cortland, Fuji, Liberty, Empire, Jonagold, Red

Delicious, and Golden Delicious. Picking of Asian pears is still going on in some orchards in the region. Fall bearing raspberry and blackberry picking is still going in the region.

Picking of sweet corn, peppers, tomatoes, melons, cucumbers, and squash continues. Pumpkin harvesting for the wholesale market is going on in many farms in the region. In pumpkins and squash, cucumber beetles, aphids, and squash bugs are present on leaves and fruits. I also received reports of bacterial spot, powdery mildew, mosaic virus, and fruits rots in pumpkins. Early blight and bacterial speck are problems on tomato fruits, along with tomato hornworm and tomato fruitworm. I have also observed imported cabbage worm adults flying in cabbage fields, cabbage looper larvae, and diamondback moth larvae on cabbage and related crucifers.

Maurice Ogutu (708-352-0109; [Ogutu@illinois.edu](mailto:Ogutu@illinois.edu))

## ***Information Resources***

### ***New Publications on Organic Food Production***

**What is Organic Food and Why Should I Care?** This publication explains USDA National Organic Program requirements in simplified terms. It also presents footnoted summaries of scientific studies about the health and environmental benefits of organic food and farming. The full publication is available at: <http://swroc.cfans.umn.edu/organic/whatisorganicfood.pdf>.

Deborah Cavanaugh-Grant (217-968-5512; [cvnghgrn@illinois.edu](mailto:cvnghgrn@illinois.edu))

**National Organic Program Guide.** This handbook provides guidance about national organic regulations for those who own, manage, or certify organic operations; it is available at <http://www.ams.usda.gov/NOPProgramHandbook>. It includes guidance on the allowance of green waste and approval of liquid fertilizers in organic production systems; certification of organic yeast; processed animal manures in organic crop production; reassessed inert ingredients; and the calculation of dry matter intake to verify compliance with the NOP's pasture requirements. It also includes instructions concerning organic certification, such as record-keeping, steps to certification, and organic certificates; accreditation procedures; compliance and enforcement measures; and appeals procedures for certified operations or accredited certification agents. The handbook also explains the difference between NOP regulations and guidance/instruction documents and outlines their purpose, legal effect, and the process by which the NOP authorizes, reviews, revises and disseminates them to the public.

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

### ***Mealybugs on Peaches***

Earlier this season I reported on mealybugs on peaches in a southern Illinois orchard. I've sent samples to specialists for identification, and the preliminary word is that the culprit is a species in the genus *Pseudococcus*. This genus includes the Comstock mealybug and the grape mealybug, two species whose distribution is recorded to include the lower Ohio and Mississippi river valleys. (This genus does NOT include the exotic and invasive pink hibiscus mealybug, *Maconellicoccus hirsutus*.)

Infestations of mealybugs on peaches or apples are NOT at all common in Illinois – I have not seen this over 20 years of working with tree fruit growers here. If anyone else has observed mealybugs on these crops in Illinois this season, please contact me so that we can begin to determine the circumstances that contribute to its presence and the steps that will be effective for its management.

Rick Weinzierl (217-244-2126; [weinzier@illinois.edu](mailto:weinzier@illinois.edu))



Mealybug symptoms on twig and fruit (left) and mealybug on twig (right).

## ***Vegetable Production and Pest Management***

### ***Aphids and Whiteflies in Late-Season Vegetables***

In September and October, aphids show up as late season “colonizers” or “passers through” in several vegetable crops, including tomatoes, peppers, cucurbits, and snap beans. In peppers and tomatoes, the colonizers usually are green peach aphid and potato aphid. In pumpkins, cucumbers, melons, and squash, the pest species that colonizes plants is generally the cotton-melon aphid.

Why do aphids “pass through” vegetable crops in the fall? Most aphids that winter successfully in most of Illinois have separate winter and summer hosts. Eggs overwinter on a woody plant, and the aphids that hatch from those eggs usually cycle through a few generations on that woody host in the spring and early summer. When “the time is right,” a generation of winged adults is formed, and these “alates” (aphids with wings) migrate to a summer host, usually an annual plant. Rosy apple aphid winters as eggs on apple trees and related species, then moves to narrow-leaf plantain in the summer; soybean aphid winters on buckthorn, then moves to soybeans in the summer. As the summer ends and annual plants begin to dry down, winged adults fly back to their winter host to lay eggs. This life cycle pattern results in lots of aphids moving from place to place in the spring and early summer and again (in even greater numbers) in the late summer and fall. (Not all aphids that are pests of Illinois crops winter here; some are carried here on high-level winds from the south ... the corn leaf aphid is one common example of a pest species that reaches us in this way.) So aphids can be a problem in vegetables when they actually colonize plants (settling on the plants, reproducing, and building up numbers) or when they simply pass through weedy areas and then fields, making feeding probes along the way, picking up and transmitting viruses as they do so. In peppers and cucurbits, virus transmission by several aphid species may threaten yields and crop quality when the aphid vectors pass through and feed in the crop earlier in the season, but virus transmission in these situations is NOT really preventable by insecticide applications. However, when colonies of aphids build on plants in late summer and fall, controlling them to prevent yield and quality losses that result directly from feeding can be worth doing.

In cucurbits, Endosulfan and Brigade (bifenthrin) give some control, but thorough coverage of upper and lower leaf surfaces is essential (as it is for all insecticides used for aphid control except for systemic products). Dimethoate is labeled for use on melons for aphid (and mite) control, but its use on other cucurbits is not legal. Malathion, Diazinon, and Lannate are somewhat effective. Newer insecticides labeled for aphid control in cucurbits include Fulfill

(pymetrozine) and Actara (thiamethoxam). In peppers and tomatoes, Assail, Danitol (tomatoes only), Orthene (peppers only), Dimethoate, Endosulfan, and Provado are labeled for aphid control; all are fairly to very effective. Platinum and Fulfill are newer products registered for aphid control in peppers. For organic growers, insecticidal soaps such as M-Pede are the best bet, though thorough coverage of leaves is especially important for soaps.



Left: green peach aphid colony (photo from Colorado State University). Right: greenhouse whiteflies.

Whiteflies don't winter well in the Midwest, but by late season the combined processes of migration, import on transplants, and local population increases produce populations great enough to warrant control in several vegetable crops. In recent years, the "players" have included a banded-winged species, the greenhouse whitefly, and the sweet potato or silverleaf whitefly. The crops most often infested are green beans, cucurbits, eggplant, peppers, and tomatoes.

The effectiveness of insecticides labeled for whitefly control varies considerably among locations, depending on the insecticide resistance characteristics of local populations. In some instances, a pyrethroid (Warrior, Baythroid, Mustang-Max, Brigade, Asana, or others, depending on the specific crop) may be effective; in other instances the local population may be resistant and go uncontrolled. Provado and Assail are effective alternatives in some of these crops, as are Lannate, Dimethoate, and Endosulfan. Actara, Knack, and Fulfill are labeled for whitefly control in peppers; Fulfill is labeled for use on cucurbits as well. Insecticidal soaps (M-Pede) and neem products provide some control for organic growers.

The key is to scout at least weekly to detect building infestations and to evaluate any insecticide treatments a couple of days after application. If a particular product fails to provide control, shift to an unrelated insecticide if another treatment is necessary. Check the [2010 Midwest Vegetable Production Guide](#) for listings of registered products for specific crops and for preharvest intervals (PHIs) that must elapse between application and legal harvest for each crop and insecticide combination.

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### ***Less Seriously ...***

From Lee Rife ...

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.

I asked God for a bike, but I know God doesn't work that way. So I stole a bike and asked for forgiveness.  
Do not argue with an idiot. He will drag you down to his level and beat you with experience.  
The last thing I want to do is hurt you. But it's still on the list.  
Light travels faster than sound. This is why some people appear bright until you hear them speak.  
If I agreed with you, we'd both be wrong.

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