

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, 217-333-6651, weinzier@uiuc.edu. The *Illinois Fruit and Vegetable News* is available on the web at: <http://www.ipm.uiuc.edu/ifvn/index.html>. To receive email notification of new postings of this newsletter, call or write Rick Weinzierl at the number or address above.

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

Crop and Regional Reports

In southern and southwestern Illinois, conditions have moved from dry to wet. After months of struggling with heat and drought, much of the region received significant rainfall in the last two weeks, and more is underway with Rita's move into the area.

The major portion of the grape harvest is completed. Still to go will be late season varieties such as Norton and any fruit left purposefully on the vine for a late harvest, such as Vignole or Vidal blanc. Fortunately, Asian lady beetles have not been as problematic as in the past, but stinging insects such as yellow jackets and carpenter bees have been causing fruit damage and making it hazardous to harvest. I have had several reports of deer, opossum, and turkey feeding as well.

The summer-long hot, dry weather has made apples not treated with a stop-drop product very prone to drop, resulting in some varieties being harvested early. Finish looks good, especially for yellows. I have seen bitter rot more noticeable after this most recent rain. A reminder to growers using Topsin-M for sooty blotch/fly speck control: it is rated poor on bitter rot. Refer to the efficacy table on page 35 of the 2005 Tree Fruit Spray Guide for a list of fungicides such as Captan that are rated excellent on bitter rot. Varieties in harvest include Jonathan, Gala, Golden Delicious, and Firm Gold.

The vegetable season is still in full swing. In addition to the standards such as sweet corn, green beans, tomatoes, and peppers, sweet potatoes, greens, crowder peas, pumpkins, winter squash, and gourds are readily available. The pumpkin crop

looks surprising good considering the heat, drought, and widespread virus this growing season. In walking several pumpkin fields, I noticed plentiful male flowers throughout the season, but fewer female flowers compared to previous years. This always seems to be the trend during hot weather, since female flowers have a lower temperature requirement. Some growers reported a reduction in size for the larger pumpkin varieties due to drought, but overall most growers still have a crop.

As mentioned before, the crop specific production workshop normally tied to the Specialty Growers Crop Conference will focus on sweet corn and tomatoes this year. The workshop is scheduled for Thursday, January 19th, following directly after the Specialty Growers Crop Conference. Details as they become available will be posted at <http://www.specialtygrowers.org>.

Elizabeth Wahle (618-692-9434; wahle@uiuc.edu)

In northern Illinois, day temperatures have ranged from the upper 70s to low 90s, with night temperatures from the upper 40s to 60s. The region received about 2 inches of rainfall between September 15 and 23. Summer and fall apple picking is going on in many orchards. Fall raspberry picking is still going on as well. Apple fruit size has been a bit small this year due to drought, and Jonathan spot has been observed in one of the area's orchards. Pumpkin harvesting is going on in many farms. Pumpkins are a little smaller than last year because of prolonged dry weather this summer. Cucumber beetles and western corn rootworm beetles continue to feed on pumpkin fruits.

Maurice Ogutu (708-352-0109; ogutu@uiuc.edu)

Upcoming Meetings and Programs

December 1, 2005, Illinois-Iowa Fruit and Vegetable Conference

Iowa State University Scott County Extension Office, 875 Tanglefoot Lane, Bettendorf, IA. Details will be announced as the date approaches. Until then, contact Martha Smith at 309-836-3366 or smitha@uiuc.edu.

January 17-19, 2006, Illinois Specialty Crops Conference

Crowne Plaza, Springfield, Illinois. Details will follow in upcoming weeks. Until then, contact Diane Handley at the Illinois Specialty Growers Association, 309-557-2107 or handley@ifba.org.

Notes from Chris Doll

Fall is officially here and yet it does not feel like it. There has not been any good "apple weather" of cool nights and sunny days that make for colorful fruits and hungry customers. The 95 degree reading on 9/22 just missed being a record. Rainfall has been adequate to renew growth of many plants, so that southwestern Illinois is green (even capital GREEN) except for the corn and bean fields. Apple harvest is moving on with growers awaiting more color on Red Delicious. Jons colored OK but had major drop problems. Golden quality is pretty good.

As usual, new problems and potential problems crop up. For me, it is bitter rot on apples. For years, it has been an unknown disease to many growers, but I have been able to show it to seven of the eight orchardists I visited this month. It is not an epidemic other than a couple of hot spots, but why bitter rot and not white rot?

The apple crop problems follow a good peach season for most growers. Fruit size and quality was excellent, and the market conditions were quite favorable. One grower commented that it was quite a comedown from \$24 peaches to \$10-12 apples. Peach orchards in the area look good going into the fall. A couple of de-horned trees in the Back-40 have made 6-8 feet of new topgrowth in this dry year.

One of the problems of peach in the area this year was split pits. Normally the malady occurs on some of the early maturing varieties, but this year it continued into Cresthaven season.

Matted row strawberries that received nitrogen applications in mid-August have responded with some good growth and leaf color. If they still look weak, more could be applied. Both blackberries and black raspberries have made fantastic shoot growth in recent weeks. Their terminals are rooting as much as conditions permit, so unless a grower wants plants for transplanting, it is a good time to walk through and pull them out. Follow this with cutting back to prevent re-rooting.

Chris Doll

Vegetable Production and Pest Management

Harvesting and storage of Halloween pumpkins, winter squash, and gourds

Halloween pumpkins are harvested in September through October. It is important to note that pumpkin fruits can tolerate light frost that kills the vines only, but more fruit loss can occur if the frost causes injury on the fruit surface, as the damaged areas may act as avenues for fungal and bacterial fruit rot pathogens. Consequently, it is important to remove pumpkins from fields before a hard freeze (when the night temperatures are less than 27 °F). Not doing so may risk losing 80 to 90 percent of the crop.

Pumpkins are harvested when the fruit is uniformly orange and the rind is hard. Green, immature fruits may ripen during the curing process but not after the vines are killed by frost. Vines need to be dry when fruits are mature.

Handle pumpkins with care to avoid cuts and bruises. Harvest the fruit by cutting off the vine with a sharp knife or a pair of looping shears leaving 3-6 inches of the stem attached to the fruit. This makes the fruit look more attractive, and it is less likely to be attacked by fruit rot pathogens at the point of stem attachment. Do not carry the pumpkin fruit using the fruit stems because the fruit is very heavy and may lead to detachment of the stem. Wash pumpkins with soapy water containing one part of chlorine bleach to ten parts of water to remove the soil and kill the pathogens on the surface of the fruit. Make sure the fruits are well dried before setting in a shed to cure.

Pumpkin fruits are cured at 80-85 °F and 80-85% relative humidity for 10 days. This is done to prolong the post harvest life of the pumpkin fruit because during this process the fruit skin hardens, wounds heal, and immature fruit ripens

Store pumpkins in a cool dry place and in a single layer on wooden pallets with space between the fruits (the fruits should not touch each other). Do not place them on a concrete floor. Improve air circulation within the storage area by letting in cool air at night, and use fans to circulate air during daytime. Do not let in warm air from outside during the daytime.

Optimal storage conditions combine 50-55 °F temperature and a relative humidity of 50-70%. The relative humidity is very important within the 50-70% range because very high humidity leads to settling of moisture on fruit surfaces, which increases decay of the fruit, and low relative humidity may cause dehydration of the fruit. At optimum conditions, fruits maintain quality for about 2-3 months. Store pumpkins away from apples because apples produce ethylene gas as they ripen, and ethylene speeds up the ripening process in pumpkins and decreases shelf life. Check stored pumpkins regularly and remove the ones which are rotten to prevent the spread of pathogens.

Winter squash such as Butternut, Acorn, Hubbard, and other types are mature when the skin (rind) is hard and cannot be punctured by the thumbnail. Mature fruits have a dull and dry skin compared to the shiny, smooth skin of immature fruits. Remove stems completely from Hubbard types or leave only 1-inch long stump on the fruit. Stems longer than 1 inch tend to puncture adjacent fruits when in transit or storage. Butternut, Hubbard, and other squash types do not need to be cured, as the benefits are less compared to pumpkins, and curing can be very detrimental in Acorn types as it may lead to decline in quality. Acorn types have the shortest storage time of 5-8 weeks at 50 °F and relative humidity of 50-75%. Butternut, Turban, and Buttercup types can be stored at the same temperature and relative humidity as Acorn types but have a longer storage time of 2-3 months. Hubbard types can be stored much longer than the rest (5-6 months) at 50-55 °F and a relative humidity of 70-75%. Winter squash should be marketed or used immediately when taken out of storage to avoid development of fruit rot diseases.

Gourds are of different flower colors (yellow, white), shapes and sizes. They should be harvested before frost when fruit is mature. As gourds mature, stems turn brown and become dry. Don't use the "thumbnail" test on gourds, as it can cause dents on the shell of unripe gourds and lower their quality. Harvest the fruit by using a sharp knife or shears to cut the stem from vine and leaving a few inches of the stem attached to fruit. Do not handle gourds by the stem, because the stem can easily detach from the fruit and lower its decorative value. If gourds are dirty, wash them in soapy water to remove soil, and rinse them in clean water with household bleach at 1 part to 10 parts water to kill soil-borne pathogens. Then dry each fruit with a soft cloth. Spread the fruits so that they do not touch each other on shelves lined with newspapers in a well-aerated shed. Turn the gourds daily and change damp newspapers every week. The outer skin will harden during this time, and surface color will develop. Gourds need to be wiped with damp cloth soaked in household disinfectant and placed in a warm, dry dark area for 3-4 weeks for further curing. The decorative gourd can stay in its natural state for 3-4 months or even as long as 6 months with a protective coat of paint or wax on the surface.

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Using Yellow Stick Traps to Monitor Cucumber Beetle Populations in Melons



Striped cucumber beetles

Photo credit: Clemson University - USDA Cooperative Extension Slide Series, www.ipmimages.org

The September, 2005, issue of Vegetable Growers News included an article on research done over the last few years by Frankie Lam at the Southwest-Purdue Agricultural Center at Vincennes. Now may not seem to be the time for thinking about spring scouting for cucumber beetles, but for growers who might want to implement some of the findings from the Vincennes work, a little fall and winter planning is in order.

Lam and coworkers used 10 yellow Pherocon AM sticky traps per 20-acre field and compared the counts of cucumber beetles on traps to counts of beetles on plants. They found that 20 striped or spotted cucumber beetles per trap over a 48-hour period corresponded to 1 beetle per plant – the threshold for treating melons and cucumbers to prevent excessive loss caused by bacterial wilt, a disease carried by the cucumber beetles. Although some similar beetles (including corn rootworm beetles and bean leaf beetles) also are captured on the traps, identifying and counting only striped and spotted cucumber beetles on traps is easier than identifying and counting them while they are moving about on plants. Lam suggested that growers might find traps easier to use or be more confident in their counts of beetles on traps than they would be in trying to count beetles on plants.

For more information, check Purdue's Vegetable Crops Hotline issues from March 18, 2005, (<http://www.entm.purdue.edu/Entomology/ext/targets/vegcrop/VCH2005/VCH445.pdf>) and April 8, 2005 (<http://www.entm.purdue.edu/Entomology/ext/targets/vegcrop/VCH2005/VCH446.pdf>). Pherocon AM traps are available from Trece – 918-785-3061 or <http://www.trece.com>.

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Fruit Production and Pest Management

Phase-out of Guthion Uses on Several Fruit Crops

In August the US Environmental Protection Agency announced the termination of several label uses of Guthion. Specifically, Guthion will no longer be labeled for use on peaches, nectarines, brambles (canberries), and cranberries. Existing supplies labeled for uses on these crops may be used until September 30, 2006. Use of Guthion on apples is not affected by this ruling.

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This issue's words of wisdom (well, not always wisdom, and usually not true) ...

Higher thinking?

A grad student, a post-doc, and a professor are walking through a city park and they find an antique oil lamp. They rub it and a genie comes out in a puff of smoke.

The genie says, "I usually only grant three wishes, so I'll give each of you just one."

"Me first! Me first!" says the grad student. "I want to be in the Bahamas, driving a speedboat with a gorgeous woman." Poof! He's gone.

"Me next! Me next!" says the post-doc. "I want to be in Hawaii, relaxing on the beach with a professional hula dancer on one side and a Mai Tai on the other." Poof! He's gone.

"You're next," the genie says to the professor.

The professor says, "I want those guys back in the lab after lunch."

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