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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, weinzierl@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 email address above.

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

Upcoming Programs

- **Illinois Nut Grower Association Fall Meeting.** October 21 at the Madison County Farm Bureau Building, 900 Hillsboro Avenue, Edwardsville, IL. For details contact Elizabeth Wahle at wahle@uiuc.edu or 618-692-9434.
- **Consider Farming Organically: Tools for Success. November 15, 2007, 1:30 p.m. to 4:30 p.m., in the McDonough County 4-H Auditorium** at the University of Illinois Extension Office, 3022 West Jackson, Macomb, Illinois. Registration fee: \$5.00. Immediately following this workshop, participants are invited to attend the final Tri-State Organic Video Conference televised live from Purdue University from 5:00 to 7:30 p.m. This interactive video conference will discuss organic certification. Registration for the evening portion of this program is an additional \$10.00 and includes a box meal and CD of the conference. This video conference will be held across the street at the Macomb Extension Center at 480 Deer Road in Macomb. Pre-registration is required for both parts of this program by Monday, November 12th. Please call the University of Illinois Extension Office in McDonough County at (309) 837-3939 for more information and to register for both of these programs. Continuing Education Units for Certified Crop Advisors will be available.
- **More to come on these programs, but mark the dates on your calendar ...**
 - November 29, 2007: Illinois-Iowa Fruit and Vegetable Conference, Quad Cities
 - December 4-6, 2007: Great Lakes Fruit, Vegetable, and Farm Market EXPO, Grand Rapids, MI
 - January 3, 2008: Illiana Vegetable School, Schererville, IN
 - January 9-11: 2008, Illinois Specialty Crops and Agritourism Conference, Springfield, IL
 - January 12, 2008: Buy Local, Eat Healthy, Springfield, IL
 - January 17-18, 2008: Midwest Organics Conference, Urbana, IL
 - January 19, 2008: Herb Day, Champaign-Urbana, IL
 - January 24, 2008: Illinois Horseradish School, Collinsville, IL
 - February 5, 2008: Southwestern Illinois Tree Fruit School, Hardin, IL
 - February 6, 2008: Southern Illinois Tree Fruit School, Mt. Vernon, IL
 - February 13, 2008: Southern Illinois Vegetable School, Mt. Vernon, IL
 - February 15, 2008: Illinois-Wisconsin Fruit and Vegetable Conference, location to be announced
 - February 19, 2008: Western Illinois Fruit and Vegetable School, Quincy, IL
 - February 20, 2008: Kankakee Area Vegetable School, Kankakee, IL
 - February 21-23, 2008: Illinois Grape Growers and Vintners Association Annual Meeting, location to be announced
 - March 4-5, 2008: Illinois Small Fruit and Strawberry School, Mt. Vernon, IL

Regional Updates

In the south and southwest, it's still dry, but temperatures have come down a bit to make it more tolerable. Several areas are still in a heavy drought and could stand to receive several inches of rainfall in order to recharge soil and surrounding ponds. For those planning to plant grape vines next spring, this is the time to do deep ripping on soils that have a fragipan or hard pan within reach of the soil surface. Most of the grape and apple harvest is finished in the southern region, with growers in the northern growing areas in the region expecting to finish around October 10. Pumpkin harvest continues, and tomatoes, peppers and sweet corn are winding down. Sweet potato harvest has started, and harvest of crops such as okra, greens, butter beans, and crowder peas continues. Farm stands have started to close for the season, and the overall landscape is beginning to have the feel of autumn, even though it is still pretty warm.

Expect to see more than normal tree injury from squirrel feeding beginning now and until usual food sources are again available. With the absence of an adequate nut crop this season, squirrels have started feeding on the cambial layer of younger shoots. The feeding can girdle a stem or branch and result in its death.

A note of "get well" to Tom Ringhausen who recently had shoulder surgery for a torn rotator cup.

If you plan to attend the Great Lakes Fruit, Vegetable and Farm Market EXPO that takes place December 4-6 in Grand Rapids, Michigan, I recommend making hotel reservations now. The first announcement for the EXPO just came out in the September Fruit Growers News, so hotels will start filling up fast. Online registration for the event itself should be available later this month at <http://www.glexpo.com/index.php>

The Illinois Nut Grower Association will have their fall meeting on Sunday, October 21st at the Madison County Farm Bureau, located at 900 Hillsboro Avenue in Edwardsville.

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

In northern Illinois, the last couple of weeks have been characterized by sunny days with temperatures in the low 60s to low 90s and night temperatures in the mid 30s to low 70s, and it has been very dry (finally, after way too much rain in August). Apple harvest continues, with such as Honey Crisp, Jonathan, Cortland, Fuji, and Liberty ready in recent days. Fall-bearing raspberry harvest is ongoing as well.

Harvesting of sweet corn, peppers, tomatoes, melons, cucumbers, squash, and other vegetables also continues. Mosaic virus and powdery mildew are problems in pumpkins and squash. Squash bugs, cucumber beetles, and western corn rootworm beetles are feeding on pumpkin fruits. Fruit rots are causing losses in pumpkins and summer squash, particularly in fields that were flooded in August. Pumpkin harvesting has commenced on farms, particularly for the wholesale market, and I observed grubs feeding on the surface of pumpkin fruits lying directly on the ground.

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

Fruit Production and Pest Management

Fruit Russet

I noticed a few of our Golden Delicious fruits have quite a bit of russet, so I would like to share you the following information about this disorder. Fruit russet is a condition in which the peel becomes corky due to untimely divisions of the epidermal cells. It develops as a result of healing of the tissue from the injury. Several factors have been shown to cause russet, including genetics, tree health, cultural practices, diseases, insects, yeasts, chemicals, and environmental conditions. Some apple varieties such as Golden Russet, Golden Delicious, Cox Orange Pippin, spur type Delicious, and Bosc pear are more prone to heavy russet. Fruits from trees on subdwarfing rootstocks like M.27, and P.22 and extremely vigorous trees are also more susceptible to russet than fruit from moderately growing trees. Tree health is also important in that diseased and poorly pruned trees are more likely to have russeted fruits than healthy ones. Fruit growth stage at the time of injury is also important; fruits are most susceptible to russet between petal fall and three weeks later than at any other time during development, although hail and heavy rain may cause fruit russet later on in the season in some cultivars. Russet damage occurs early during the fruit growth, but symptoms may not become visible until several weeks later when the corky tissue dries out.

Other types of injuries that have been shown to cause russet include powdery mildew, mite damage, and crop protection products such as surfactants and carbamates. Sevin in particular can cause russet when used as a thinner in cold weather. Some combinations of chemicals may increase russet incidence, so read the label and try any new combinations on a small scale first. Weather is probably the most critical factor in russet development. I noticed more russet on lateral than on terminal fruits and on exposed than on shaded fruits. In 1980, L. L. Creasy from the Department of Pomology at Cornell University in New York looked at the correlation between weather conditions and russet development in Golden Delicious. He found that humidity, and to a lesser extent rainfall, correlated very well with russet development. He found that the most sensitive time is between petal fall and 16 to 20 days after full bloom. Prolonged fruit wetness in general can increase the chances of russet and for this reason it is best to spray pesticides during times of quick drying, to avoid using wetting agents, and to use concentrate rather than dilute spray during the critical periods. Water quality may also be important in russet development. High iron and calcium water have been suspected to increase russet incidence. For this reason water quality should be monitored and also avoid spraying micronutrients during two weeks after petal fall.



Russet symptoms. Note the clear lines of russet and that it is on the blush side of the fruit, suggesting it formed as a result of severe cold weather immediately after petal fall.



More russet symptoms. Note the lopsidedness of the fruit on the russetted side. This suggests that russetting occurred early in fruit development.

In conclusion, russet can be serious in some years when the weather is bad early in the growing season or when the fruit is injured or exposed to prolonged wetting periods. Other than cosmetic appearance, russet has no effect on the quality of the fruit and it does not penetrate deep into the tissue.

Mosbah Kushad (217-244-5691; kushad@uiuc.edu)

University of Illinois Extension Specialists in Fruit Production and Pest Management

Extension Educators in Food Crop Horticulture		
Bill Shoemaker, St. Charles Res. Center	630/584-7254	wshoemak@inil.com
Maurice Ogutu, Countryside Extension Center	708-352-0109	ogutu@uiuc.edu .
Elizabeth Wahle, Edwardsville Extension Center	618-692-9434	wahle@uiuc.edu
Bronwyn Aly, Dixon Springs Agricultural Center	618-695-2444	baly@uiuc.edu
Jeff Kindhart, Dixon Springs Agricultural Center	618-695-2444	jkindhar@uiuc.edu
Extension Educators in IPM		
Suzanne Bissonnette, Champaign Extension Center	217-333-4901	sbisson@uiuc.edu
George Czapar, Springfield Extension Center	217-782-6515	gfc@uiuc.edu
Doug Jones, Mt. Vernon Extension Center	618-242-9310	jonesd@uiuc.edu
Dave Feltes, Quad Cities Extension Center	309-792-2500	dfeltes@uiuc.edu
Russell Higgins, Matteson Extension Center	708-720-7520	rahiggin@uiuc.edu
Campus-based Specialists		
Mohammad Babadoost, Plant Pathology	217-333-1523	babadoos@uiuc.edu
Mosbah Kushad, Fruit & Vegetable Production	217-244-5691	kushad@uiuc.edu
John Masiunas, Weed Science	217-244-4469	masiunas@uiuc.edu
Chuck Voigt, Vegetable Production (& herbs)	217-333-1969	cevoigt@uiuc.edu
Rick Weinzierl, Entomology	217-333-6651	weinzier@uiuc.edu

Return Address:

Rick Weinzierl
 Department of Crop Sciences
 University of Illinois
 1102 South Goodwin Ave.
 Urbana, IL 61801

