



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@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

- **Southwestern IL twilight orchard meeting, May 15, 2008** ... beginning at 5:30 p.m., and hosted by Leonard (Butch) Fortschneider at his orchard, located halfway between Brussels and the Brussels Ferry landing in Calhoun County. From Brussels, go south on the Illinois River Road. Turn right (south) on Deer Plain Road (2159 Rd E). Look for a brick house on the left (Box 117). For more information contact Elizabeth Wahle at 618-692-9434 or wahle@uiuc.edu.
- **Mississippi Valley Peach Orchard Tour, May 22, 2008** ... at Rendleman Orchards (<http://www.rendlemanorchards.com/>), Route 127, Alto Pass IL. Rendleman's is located approximately 12.5 miles south of Murphysboro on Route 127. For growers coming from the south, Rendleman's is 2 miles north of Alto Pass, IL. Online registration (no charge) is requested for an accurate lunch count and is available at <http://web.extension.uiuc.edu/edwardsvillecenter/>. Sign-in begins at 9:00 a.m., with the tour beginning at 10:00. For more information, contact Elizabeth Wahle at 618-692-9434 or wahle@uiuc.edu.
- **Illinois State Horticulture Society Summer Horticulture Day, June 12, 2008** ... at Tanner's Orchard, Route 40, Speer IL. For more information contact Elizabeth Wahle at 618-692-9434 or wahle@uiuc.edu.
- **NCR Organic and Sustainable Ag Video Series, 2008**. The University of Illinois is joining Purdue University, Michigan State University, and The Ohio State University to offer an interactive video conference series presented by researchers, organic farmers, and extension educators. The series is sponsored by Cooperative Extension Services at the four contributing universities and by funding from USDA's NCR Sustainable Agriculture Research and Education Program. The following link provides information about the 2008 program as well as information about the 2007 series: <http://tristateorganic.info>.

Regional Updates

From southern and southwestern Illinois: I have to begin with this key topic ... University of Illinois Extension is facing sudden, massive budget cuts. On April 1, three-quarters of the way through the 2008 fiscal year that ends June 30, UI Extension was informed by the Illinois Department of Agriculture that about \$ 17.8 million in funding would be withheld due to the state's budget crisis. Included in the \$17.8 million is county board match for UI Extension county offices and \$5 million for the Cook County

Extension Initiative. As a result, many county offices will be going to minimal staffing, resulting in an estimated 450 jobs lost statewide. In addition to UI Extension, several other programs are facing serious cutbacks without receipt of any promised 2008 state dollars, including but not limited to the Soil & Water Conservation Districts, CFAR, AgrAbility, Ag Leadership Foundation, AgriFIRST Grants, and Partners for Conservation. Another loser is the grape industry; it expected to receive grant dollars through IDoA to support a state enologist, regional viticulturists, and field research at St. Charles Horticultural Research Center and Southern Illinois University.

As long as our (my) door is open, programming will continue. Making this all possible is the generous support of the growers themselves and the companies that supply services and products to the specialty crop industry. Thank you!

On the bright side, it's beautiful now in southern Illinois. Apples and strawberries are in bloom and fruit set is strong on peaches. Grapes have first leaves and are showing strong growth. Rain has been challenging this spring, falling every time fields start to dry down. It's going slow, but planting is progressing.

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

In northern Illinois, temps have been up and down, and plant growth has been slow. From April 17 to 24, warmer weather (daytime highs reached the 70s) brought some hope for plant growth and field work, but colder temps returned over the last few days, with record low temperatures below freezing on the night of April 28 into the morning of April 29. We also saw 1 to 2 inches of rain over the last week (and snow flurries on April 28).

Pruning of small and tree fruits is done in most orchards in the region; apple flower buds are at tight cluster, with a few flowers at pink. Some pear varieties are in full bloom, while others are still at green tip; peaches also are at green tip. Grape vines are still dormant. Field activity has been very limited by wet conditions, but some growers have managed to plant some cabbage, potatoes, and other cool-season crops. Tomato, pepper, cucumber, and melon seedlings have been started in greenhouses.

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

Notes from Chris Doll

Another bullet dodged on April 29 for most of the fruit crops ... my Edwardsville low was 32.2 degrees, but a report from Marthasville, Missouri, had 28 degrees in valleys there. The only damage that I see is on uncovered strawberry flowers and also some flowers that were in contact with a one-ounce row cover. The frost was rated only moderately heavy.

Peaches are beyond petal fall and a few varieties are showing fruit. Apples are past full bloom and into early petal fall, which will happen with some warm weather. Plums and apricots appear to have a decent fruit set, but sweet cherries did not pollinate well with all the cool, wet weather. Brambles are growing nicely and some early varieties are showing fruit buds.

Rainfall has been frequent, but not heavy. Since April 19, rain has fallen six of the 11 days, and the total amount here was 0.9 inch. Soils are still wet, and grass is growing vigorously. A report of blossom blight on an unsprayed Duchess pear has been received, but nothing has been seen in sprayed apple orchards. At this time, I show 248 DD base 50 F, which means it has been a cool spring. As a result, oriental fruit moth catches have been light, with a reported biofix date of April 20 in southern Illinois, but not here until the 29th. Codling moth trapping has been expected, but no one has reported over 2 per trap as of April 30.

The worrisome season of apple thinning is here. I believe that Phil Schwallier's suggestion of petal fall spraying at the Illinois Fruit Schools will be used by numerous growers. Until now, the temperatures have been too low for effectiveness. Sometimes it pays to exercise patience and wait for a warm day when the chemicals do what you want them to. But in all orchards, thinning for fruit removal to gain size and repeat bloom is well worth the effort. A huge crop of small worthless apples this year and no crop next year just is not profitable.

Lots of blossom-thinning of peaches was done, and from here on the little fruits are difficult to remove until near pit-hardening. There were plenty of flowers to remove. I counted blooms on three short spurs, and there were 7.9 flowers per inch of shoot. On two shoots, each 11 inches in length, there were 3.1 flowers per inch. I should have taken time to count the number of Spur Red Delicious on some of the full-flowered trees

Chris Doll

How Can the University of Illinois Plant Clinic Help You?

Consider the University of Illinois Plant Clinic when seeking help with plant problem diagnosis, especially nagging insect and disease problems. This service is available **beginning May 1, 2008**. The lab is seasonal, staying open through September.

The University of Illinois Plant Clinic provides a service to the general public, offering unbiased plant problem diagnosis and access to opinions of specialists in multiple disciplines, funneled through one location. There is a support fee for all plant samples. For information about the clinic, fees, location, and how to submit samples, visit the web site at <http://plantclinic.cropsci.uiuc.edu/>.

Why would you want to use this service? Possibly you have no idea what is causing a plant or plants to decline. Possibly you have been seeing a problem for one or more years and would like to get to the bottom of it. Often our clients have specific tests in mind, such as culturing to test for oak wilt, identifying a specific insect or weed, or testing for legume viruses. Check our web site and feel free to call with questions about our services.

The clinic is most helpful and can provide quickest turn-around time when a specific test is requested. As an example, some fruit growers need positive confirmation that fire blight is present and not just *Pseudomonas* blast. Bacterial exudate is immediately visible with a microscope. Culturing the pathogen on differential media may require 24-48 hours but will solidify the diagnosis. It helps considerably to call the clinic (217-333-0519) before sending the sample. Staff can prepare media or request additional supplies as needed before the sample arrives.



Legume tissue blot assay.

Many vegetable and fruit growers have growing concern for viruses present in their crops. The clinic has immunostrip tests for CMV, INSV, Ralstonia, Squash Mosaic Virus, TSWV, and Tobacco Mosaic Virus. We can purchase Acidovorax and Clavibacter tests as the need arises. In 2007, clinic staff helped process legume samples as part of a national legume virus survey. This will be repeated in 2008. The image shows the first step in the ELISA immunoblot method of testing snap bean leaves for four different viruses.

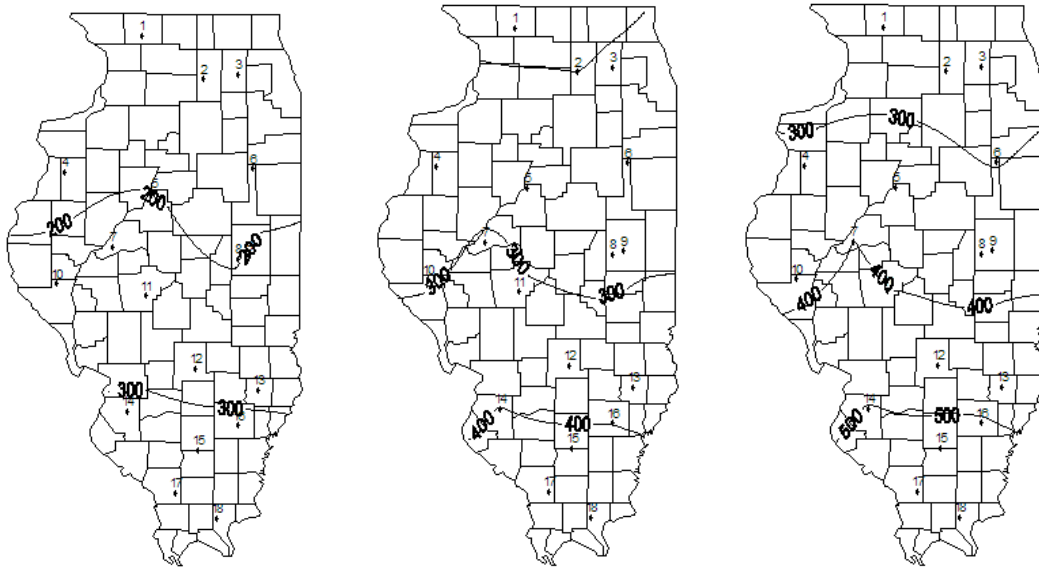
ELISA testing for *Phytophthora* species is now a regular part of the clinic's battery of tests. Nematode testing of soil, roots, or foliage is another common procedure at the Plant Clinic. Keep in mind that we can be most helpful when we are given detailed information and a fresh sample. Images of plants in the field are extremely helpful as well. The Plant Clinic processed 2318 plant samples in 2007. Samples were submitted from Extension sources (31%) or non-Extension sources (69%). In 2007, 78% of the plant samples were field crops while 17% were ornamental plants. Only a low number involved fruit and vegetables. We feel we have services to offer and invite you to use our resources. This year we have a graduate student with a particular interest in the vegetable industry.

Nancy Pataky (217-333-0519; npataky@uiuc.edu)

Degree-day accumulations

Degree-day accumulations, base 50 degrees F, starting January 1.

| Station | County | Base 50F DD Jan 1 – April 29, Historic Average | Base 50F DD Jan 1–April 29, 2008 | Base 50F DD Jan 1–May 6, 2008 (Projected) | Base 50F DD Jan 1–May 13, 2008 (Projected) |
|-------------------|------------|--|--|---|--|
| 1. Freeport | Stephenson | 203 | 130 | 185 | 252 |
| 2. Dekalb | Dekalb | 232 | 140 | 199 | 273 |
| 3. St. Charles | Kane | 212 | 154 | 205 | 269 |
| 4. Monmouth | Warren | 270 | 167 | 231 | 310 |
| 5. Peoria | Peoria | 299 | 203 | 271 | 355 |
| 6. Stelle | Ford | 262 | 150 | 215 | 295 |
| 7. Kilbourne | Mason | 375 | 236 | 310 | 400 |
| 8. Bondville | Champaign | 313 | 190 | 257 | 342 |
| 9. Champaign | Champaign | 318 | 213 | 287 | 373 |
| 10. Perry | Pike | 360 | 223 | 291 | 377 |
| 11. Springfield | Sangamon | 349 | 230 | 306 | 400 |
| 12. Brownstown | Fayette | 411 | 276 | 357 | 454 |
| 13. Olney | Richland | 410 | 288 | 367 | 464 |
| 14. Belleville | St. Claire | 467 | 319 | 401 | 503 |
| 15. Rend Lake | Jefferson | 496 | 325 | 415 | 524 |
| 16. Fairfield | Wayne | 453 | 310 | 399 | 507 |
| 17. Carbondale | Jackson | 498 | 344 | 429 | 529 |
| 18. Dixon Springs | Pope | 531 | 375 | 465 | 572 |



Degree-day accumulations, base 50 F, January 1-April 29, 2008 (left), and projected through May 6 (center) and May 13 (right).

Degree-day accumulations summarized above for weather stations in the Illinois State Water Survey WARM data base have been summarized using the Degree-Day Calculator on the University of Illinois IPM site (<http://www.ipm.uiuc.edu/degreedays/index.html>). The list below includes only degree-day accumulations and projections based on a 50-degree F developmental threshold and a January 1 starting date, but other options that use different thresholds and specific biofix dates are available on the Degree-Day Calculator. The degree-day calculator is available as a result of a joint effort of current and former extension entomologists (primarily Kelly Cook) and Bob Scott of the Illinois State Water Survey. If you have questions about how to use the site, contact me or Bob Scott (rwscott1@uiuc.edu).

A quick comparison of the numbers through April 29 for the historic average and 2008 gives the specifics for what we all already knew ... it has a been a cold, slow spring. Note the comments below about biofix (first flight) dates for oriental fruit moth and codling moth in orchards to see just how different this year has been from 2007.

Rick Weinzierl (217-244-2126; weinzier@uiuc.edu)

Fruit Production and Pest Management

Other fruit newsletters

Just a quick reminder about newsletters available from other states ... New York, Michigan, New Jersey, and Pennsylvania newsletters on fruit production often contain great information for Illinois growers. We're proud of the work we do for you in Illinois, but these states have more professionals working in fruit research and extension, and often they are able to devote more time to specific crops or problems than we are. I encourage you to take a little time to read these newsletters whenever you can fit in the time. Web sites are ...

Scaffolds, from New York: <http://www.nysaes.cornell.edu/ent/scaffolds/2008/index.html>

CAT Alerts, from Michigan (Crop Advisory Teams, not felines): <http://www.ipm.msu.edu/aboutcat.htm>

Plant and Pest Advisory, from Rutgers, in New Jersey: <http://njaes.rutgers.edu/pubs/plantandpestadvisory/default.asp>

Fruit Times, from Penn State: <http://fruittimes.cas.psu.edu/>

Closer to home, Indiana's newsletter on fruit production provides insights and observations from locations where plant and pest phenology are very similar to Illinois. The web sites for Indiana's (Purdue's) fruit newsletter is:

Facts for Fancy Fruit, from Purdue University in Indiana: <http://www.hort.purdue.edu/fff/fff.html>

Fruit Insect Management Considerations

Oriental fruit moth and codling moth updates

Biofix dates for oriental fruit moth so far range from April 20 at Echo Valley Orchard south of Murphysboro to April 25 at the University of Illinois orchard sites near Urbana. Chris Doll reported first capture of oriental fruit moth at Edwardsville on April 29. In comparison, in 2007, OFM biofix in Calhoun County occurred on March 20, more than a month earlier than for the same area this year. The difference of only 5 days in biofix dates for far southern Illinois and Urbana is notable; usually Champaign-Urbana is further "behind" in such observations. The degree-day table above shows that in 2008 the April 29 DD total for Champaign is 162 less than the total for Dixon Springs (213 vs. 375); the historic averages for the two locations differ by 213 DD (318 vs. 531). So ... we're colder everywhere, and differences from north to south are not as great as they usually are, either for the date or for the phenological development of plants and insects.

Key timings for sprays aimed at controlling oriental fruit moth are:

- First generation: first application at 175 DD base 45 F after biofix; second application after another 175 DD base 45
- Second generation: 850-950 and 1150-1250 DD base 45 after biofix
- Third generation: 1800-1900 and 2100-2200 DD base 45 after biofix
- Fourth and fifth generations: Threshold = 6 to 8 moths per trap per week; make sprays at 175 and 350 DD base 45F following captures that exceed this threshold

Codling moth captures have been very light and inconsistent at most locations so far. I'll include biofix dates in the next issue of this newsletter and later as they become available.

Rick Weinzierl (217-244-2126; weinzier@uiuc.edu)

Vegetable Production and Pest Management

Vegetable insect updates

Cold weather so far has meant little to write about insect development or problems. Some creatures to be on the lookout for as temps rise and planting and transplanting finally ramp up include seed and root maggots in cool soils, asparagus beetle and cutworms on asparagus spears, Colorado potato beetle on potatoes and other nightshades, and several flea beetle species on a variety of vegetable crops. Background information on these insects is available by "googling" them on the web and in the book ***Vegetable Insect Management***, edited by Rick Foster and Brian Flood (Meister Media, Willoughby, OH; <http://www.meisterpro.com/vim/>). Brief sampling and threshold information, along with listings of insecticides registered for the control of these insects, are presented in the

Midwest Vegetable Production Guide, available on-line at <http://bny.purdue.edu/Pubs/ID/ID-56/>. Illustrations of a few of the insects mentioned above (and credits to their sources):



Left: Seedcorn maggot larva and damage (from E.A. Heinrichs et al., *Maize Insect Pests in North America*, at ipmworld.umn.edu/chapters/maize.htm); right: seedcorn maggot adult flies (photo by Jeff Hahn at www.extension.umn.edu/.../YGLN-June1502.html).



Left to right: asparagus beetle (Clemson Univ.) larvae, and damage to spear (Jeff Hahn, Univ. of Minnesota; <http://www.extension.umn.edu/distribution/horticulture/M1199.html>).



Left to right: Colorado potato beetle adult (Ric Bessin, Univ. of Kentucky; <http://www.ca.uky.edu/entomology/entfacts/ef304.asp>), eggs (Univ. of Massachusetts; www.umassvegetable.org/soil_crop_pest_mgt/ins...), and larvae (Univ. of Idaho; <http://info.ag.uidaho.edu/keys/plates/plate36.htm>).

Less seriously ...

... well, maybe “less” seriously. Illinois readers will probably have a name or two in mind for the anonymous politician in these quips and quotes ...

- The cheaper the politician, the more he costs the country.
- Sometimes it’s hard to tell which is thicker, a politician’s skin or his skull.
- A politician’s talent for making promises is surpassed only by his talent for not keeping them.
- Politicians are bought, not made.
- Every politician has his price, especially those that are worthless.

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