UNIVERSITY OF ILLINOIS EXTENSION
College of Agricultural, Consumer, and Environmental Sciences

Illinois Fruit and Vegetable News

Vol. 13, No. 11, August 10, 2007
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 email address above.

In this issue ...

Upcoming Programs

- **Three Rivers Community Farm Tour, Elsah, August 17, 2007.** 9 a.m. to 1 p.m., including a lunch featuring local, sustainably grown food. Three Rivers is a 12-acre farm near the small historic town of Elsah, just a 10-minute drive north from Alton on the River Road. Amy Cloud and her husband Segue Lara manage a 150-member Community Supported Agriculture (CSA) program at the farm. Check the web at http://web.extension.uiuc.edu/smallfarm/ag_tours.cfm for more information and to register. For more information on small farm workshops, contact http://web.extension.uiuc.edu/smallfarm/workshops.cfm.
- **Southern Illinois University Grape Program Open House, August 11, 2007.** Registration begins at 11:00 a.m. at the Muckelroy Auditorium; speakers include Tony Wolf, viticulturist at Virginia Tech, Brad Beam, enologist at the University of Illinois, Elizabeth Wahle, Horticulture specialist at the University of Illinois, and Bryan Young, Alan Walters, and Brad Taylor, weed science specialist, horticulture specialist, and viticulture research specialist, respectively, at Southern Illinois University. For information, contact Jackie Welch, (618) 536-7751 or jackiew@siu.edu. Directions to the Muckelroy auditorium: Turn south off IL Rt. 13 (Main or Walnut Streets) onto Oakland Avenue. Turn left onto Douglas Drive. Come to the stop sign and cross the street, driving directly into Lot 39, in front of the Agriculture Building. A parking permit is not needed on the weekends. (Sorry for the short notice, but I received this program information after issue 10 of this newsletter was posted, RW.)
- **University of Illinois St. Charles Horticulture Research Center Grape Open House, August 25, 2007.** For information, contact Bill Shoemaker at 630-584-7254 or wshoemak@inil.com.
- **Illinois Pumpkin Field Day at the University of Illinois St. Charles Horticulture Research Center, September 11, 2007.** For information, contact Bill Shoemaker at 630-584-7254 or wshoemak@inil.com.

Regional Updates

In southern and southwestern Illinois, the heat is on. Temperatures have soared with no rain for much of the region. For all but a few, drought conditions are widespread. A few stray storms gave relief to scattered areas late last week, some strong enough to cause some wind damage. Ponds and wells are being relied on heavily. Many in the region received less than an inch in rainfall throughout July, and the weather forecasters aren't giving much hope for relief. They did mention a cold front coming through early next week, and instead of the 100-plus degree F temperatures, it will only be in the mid to upper 90s. It's good to be an optimist. Surprisingly, as hot and dry as it seems now, last year was worse at this time.

Harvest continues despite the intense heat. Peach, apple, and blackberry picking continues, and grapes are just getting started. Those with late blueberries should have harvest wrapped up now. Heat lovers such as corn, melons, and tomatoes are still in full harvest. The heat coming off these crops is incredible – blackberries actually feel hot to the touch when harvesting. Rapid post-harvest chilling is a must for any level of self life. Despite heat concerns, flavor on all the crops has been outstanding.

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

From the Dixon Springs Ag Center … Plasticulture strawberry growers are beginning initial field preparation and spreading fertilizer. Tips will be rooted in the next week or two. Problems observed in the past couple of weeks in matted row strawberries include black root rot and strawberry rootworm beetles. The late spring frost and subsequent high volumes of water used in attempt to reduce injury likely is a contributing factor to the black root rot that is common in some southern Illinois strawberry fields. Current hot and dry conditions make it easy to observe that something is wrong with afflicted fields. Information on black root rot is available from OSU , PSU and OrSt . Growers noticing holes in strawberry leaves but not seeing the pest may need to inspect by flashlight to catch the strawberry rootworm beetles causing the feeding injury. Information on this pest can be found from UIUC and control mechanisms are discussed in the 2007 Commercial Small Fruit and Grape Spray Guide .

Primocane fruiting blackberries are being harvested at the Ag Center, and harvest of tomatoes continues, while pepper harvest has been completed. It has been an outstanding year for fruit quality for both tomatoes and peppers. On the tobacco production front, what a difference a week makes (along with 1 inch of rain). Below are pictures of the tobacco taken on 8/2 and 8/8. Topping of the tobacco will occur next week, and spays for aphids and budworm continue. Good news: it appears deer don't chew tobacco!!! They probably are too heath conscience, hoping to live a long full life damaging peach trees and such.

During the field day at DSAC on August 2, about 70 people toured the tomato, pumpkin, soybean, and wheat plots in our traditional, best management, and organic production systems project. Other ongoing projects at DSAC include a sweet corn earworm insecticide trial. The corn has been silking for a little over a week now and earworm trap catches have been high enough we anticipate having substantial enough pressure for a good evaluation of the efficacy of the materials in the trial.

On a final note, anyone with suggestions for topics during the winter meetings: Illinois Specialty Crops Conference, Southern Illinois Vegetable Growers School, Illinois Small Fruit and Strawberry Schools, etc., please drop an email to Rick, Elizabeth or myself. We would sincerely appreciate your input!

Jeff Kindhart (618-695-2444; jkindhar@uiuc.edu)

In northern Illinois, clear sunny days prevailed during the first week of August, followed by cloudy, humid days during the period of August 4-8, with day temperatures in the upper 80s to low 90s. Night temperatures have been in the 60s to 70s. Rockford and other areas in the region recorded more than 5 inches of rainfall, with over 4 inches falling on the night of August 6. Soil moisture is adequate in most parts of the region.

Summer spray programs continue in orchards, and apples are sizing well. Picking of early-maturing varieties such as Lodi, Redfree, Jerseymac, Duchess, and Williams' Pride is ongoing. Peaches and pears will be ready for harvest very soon, but this varies from one orchard to another. Summer-bearing raspberry picking is over in most farms, and some fall-bearing raspberries will be ready for picking towards the end of this week. Some early grape varieties are in the veraison stage, and bird protection devices are already up

in vineyards. I observed Japanese beetles feeding on leaves of raspberries last week, San Jose scale on apple fruits, and anthracnose on raspberry leaves and canes. Orchardists need to be keen on their spray programs, as the wet and humid weather occurring in the region is very conducive for development of apple scab and other summer diseases of fruit trees such as sooty blotch and fly speck.

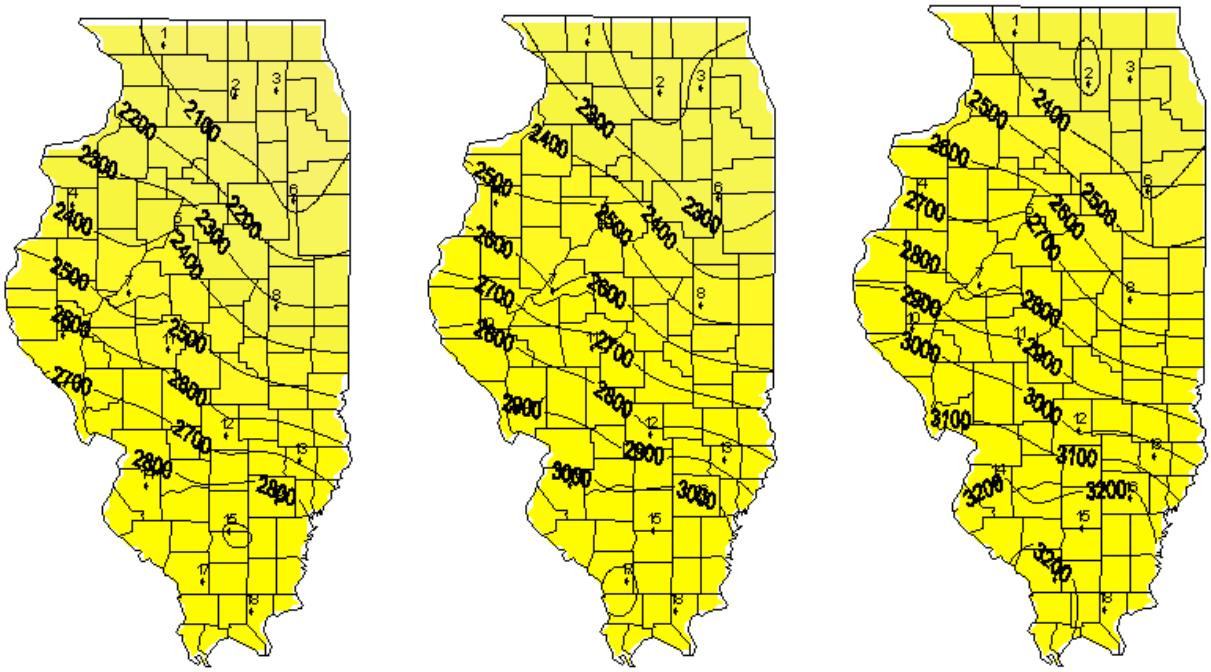
Harvesting of cucumbers, squash, sweet corn, early tomato varieties, and other vegetables continues on most farms. Muskmelon and watermelon harvesting is ongoing in the Kankakee area and will soon commence in other areas in the region. Corn borer and corn earworm moth counts are still very low in general, although one grower in the area reported corn earworm counts above 30 in one night. I observed powdery mildew on pumpkin vines and leaves in the research plots at the St. Charles Horticulture Research Center, and I also noted squash vine borer damage on pumpkins, squash bugs on pumpkin leaves, early blight on tomatoes, and bacterial spot on pepper leaves. In addition to the above, I received reports of pumpkin leaves turning yellow, premature ripening of pumpkin fruits, abortion of newly developing pumpkin fruits, smut on sweet corn ears, flea beetles on eggplants, and tomato hornworm larvae damaging tomato fruits. Western corn rootworm beetle and cucumber beetle population are also building.

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

Degree-day Accumulations

Degree-day accumulations listed below 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).

Rick Weinzierl (217-333-6651; weinzier@uiuc.edu)



Degree-days, base 50 F, January 1 through August 7, 2007 (left), and projected accumulations through August 14 (center) and August 21 (right).

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

Station	County	Base 50F DD Jan 1 – Aug 7, Historic Average	Base 50F DD Jan 1 – Aug 7, 2007	Base 50F DD Jan 1 – Aug 14 (Projected)	Base 50F DD Jan 1 – Aug 21 (Projected)
1. Freeport	Stephenson	1938	2075	2224	2371
2. Dekalb	Dekalb	1985	1992	2135	2275
3. St. Charles	Kane	1880	2088	2229	2369
4. Monmouth	Warren	2110	2372	2523	2674
5. Peoria	Peoria	2213	2404	2566	2729
6. Stelle	Ford	2083	2074	2230	2385
7. Kilbourne	Mason	2319	2435	2597	2762
8. Bondville	Champaign	2221	2309	2463	2617
9. Champaign	Champaign	2285	Missing	Missing	Missing
10. Perry	Pike	2255	2658	2824	2993
11. Springfield	Sangamon	2414	2557	2733	2911
12. Brownstown	Fayette	2519	2630	2810	2989
14. Belleville	St. Claire	2586	2860	3038	3216
15. Rend Lake	Jefferson	2690	2916	3102	3287
16. Fairfield	Wayne	2636	2873	3056	3239
17. Carbondale	Jackson	2600	2795	2973	3151
18. Dixon Springs	Pope	2660	2861	3042	3224

Fruit Production and Pest Management

Codling Moth Phenology

Developmental events for the codling moth based on degree-day accumulations are presented below. Remember that **"biofix" refers to the date of the first sustained capture of first-generation moths in traps**.

Codling moth development:

50 percent of second generation eggs hatched	~1580 DD_{50} after biofix
First moths of third generation emerge	~1920 DD_{50} after biofix
99 percent of second generation eggs hatched	~2100 DD_{50} after biofix
Beginning of third generation egg hatch	~2160 DD_{50} after biofix
*First moths of fourth generation emerge	~2900-3000 DD_{50} after biofix
*Beginning of fourth generation egg hatch	~3200 DD_{50} after biofix

(Table based on ***Orchard Pest Management*** by Beers et al., published by Good Fruit Grower, Yakima, WA.)

* Extrapolated from the model presented by Beers et al.

*Degree-day updates and codling moth comments from south to north, for select locations in Illinois***:**

See previous issues of this newsletter for the names of specific orchards where biofix dates were observed and reported. All degree-day accumulations and predictions are based on nearest weather station data; temperatures recorded within your orchard provide more accurate data; use the numbers from the table below as approximations only.

For codling moth:

Orchard Location	Weather Station	CM Biofix Date	DD_{50} Aug 8, 2007	DD_{50} projected Aug 15, 2007	DD_{50} projected Aug22, 2007
Murphysboro	Carbondale	18 April	2468	2646	2824
Belleville	Belleville	23 April	2533	2712	2890
Edwardsville	Belleville	29 April	2443	2621	2799
Brussels	Brownstown	27 April	2259	2439	2618
Urbana	Champaign	30 April	2376	2543	2709
Speer	Peoria	07 May	1994	2156	2320
Harvard	Freeport	10 May	1779	1927	2075

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Raspberry Crown Borer

Flights of raspberry crown borer, a clearwing moth, are underway in southern Illinois, but now is not the best time for treatments aimed at reducing damage from larvae feeding in crowns and roots. Research published by Jacquelyn McKern, Donn Johnson, and Barbara Lewis at the University of Arkansas (***Journal of Economic Entomology*** 100 (2): 398-404, April, 2007) found that late fall was the best time for application of Capture to the base of canes because small larvae are located just beneath the cambium in the lower canes then and are vulnerable to the insecticide at that time. Although the timing of events in the life cycle of raspberry crown borer differs from southern to northern portions of its range, small larvae are located just inside the cane at the base of the plant through the fall and winter in Illinois as well. Where Capture is used to control this insect, apply 6.4 fluid ounces per acre in at least 50 gallons of water per acre, with sprays directed to the lower few inches of plants; make applications in October or November (or very early in the spring).

Rick Weinzierl (217-333-6651; weinzier@uiuc.edu)

Brief Notes on Vegetable Insects

- For flea beetle control on eggplant, several insecticides are effective (including Asana, Capture, Mustang, Pounce, and Sevin). The key is the same as it is for flea beetles in most crops … be sure to scout again at least weekly after treatment to detect reinfestations and retreat only as necessary.

- European corn borer and corn earworm flights have increased in most areas of the state. Sweet corn growers who operate a pheromone trap for corn earworm should base their decisions on counts from their own traps. Everyone else has to assume there is potential for severe damage and move to a shortened spray schedule (no greater than 3-day intervals for fresh-market growers whose markets demand worm-free corn) on all but Bt sweet corn hybrids.

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Words of Wisdom

- When they're judged to have failed in their professions, ministers are defrocked and lawyers are debarred. Does this mean that …
    - electricians should be delighted?
    - musicians should be denoted?
    - models should be deposed?
    - dry cleaners should be depressed?
    - cowboys should be deranged?
- I bought a blank CD and played full blast for hours last night … the mime next door went nuts.

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