

Illinois Fruit and Vegetable News

Vol. 9, No. 11, July 31, 2003

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 address above.

This issue's words of wisdom ... which usually means the jokes ... are at the end of newsletter ... check the last page.

In this issue ...

Crop Reports (from Elizabeth Wahle and Maurice Ogutu)

Degree-Day Accumulations

Vegetable Production and Pest Management (Phytophthora diseases, squash bug, corn earworm spray intervals, twospotted spider mites)

Fruit Production and Pest Management (quick notes on apple insecticides and grape insects)

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

Crop Reports

In the south, high temperatures and high humidity without the relief of rain are the current conditions. Daytime high temps have averaged 90 degrees F since the beginning of the month, with less than 2 inches of rainfall during that time. Although conditions have been uncomfortable for the workforce, crop reports are very good for both fruit and vegetables.

Producers are harvesting main season sweet corn and are reporting excellent quality and yield. Corn earworm continues to move north and east, with first large trap counts being recorded in the Mt Vernon area around the 25th of July. Summer squash and peas are in their second planting in the southernmost portion of the region. Reports of Phytophthora in cucurbit crops are coming in, especially in plantings that experienced saturated soils early in the season. Cucurbit insects in general have been manageable. Blossom end rot is evident in both tomato and cucurbit crops where calcium has not been supplemented. The seasonal switch from Arkansas-grown tomatoes to home-grown tomatoes has occurred in many markets. Netting is going on grapes for bird protection. Peaches are moving into freestone varieties, and reports continue to be good in terms of size and quality. Aside from a few reports of sunburn, blackberry yields are high.

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

In northern Illinois, day-time temperatures have been in the upper 70s to upper 80s and night-time lows have been in the upper 50s to lower 60s. Soil moisture is adequate to very high, as some counties such as Kankakee and south suburban Cook

recently received more than 8 inches of rainfall, while DuPage, Kane, DeKalb, and counties in the north and northwest of Chicago received 4-5 inches of rainfall during the same period. Some areas received more than 2 inches of rainfall in about one hour, causing flooding on many farms.

Fruit is clean in most orchards except for a few reports of scab on pears and apples. Orchardists continue with summer spray programs, and some scattered populations of Japanese beetles have been observed in some orchards. Grapes are sizing well, and bird deterrent devices are out in most vineyards. It has been wet for a long period of time in vineyards, so growers should continue to check for downy mildew on fruit bunches and the undersides of the leaves.

Sweet corn harvesting is going on in many counties to the north of Chicago, and lots of tomatoes will be ready for picking in about two to four days. Wet conditions that occurred during the last two weeks created a conducive environment for bacterial and fungal diseases in vegetable fields. Bacterial spot and bacterial speck has become more common in tomatoes, affecting mainly the newly developing fruit and older leaves. Mosaic viruses have been reported on some varieties of Jack-O-Lantern pumpkins. Insect pest pressure is low on most farms, but populations of aphids, both winged and young ones, are building up mainly in tomato fields. Cucumber beetles have been observed feeding on pumpkins, and squash bug eggs are present on pumpkin leaves.

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

Degree-Day Accumulations Since January 1, 2003

Data for the table below are taken from the Midwestern Climate Center web site (<http://mcc.sws.uiuc.edu/>). Degree days are calculated using a rectangular averaging method on a 50 degree Fahrenheit threshold, with the minimum temperature for calculations reset to 50 on days with highs above 50 and lows below 50.

Location	DD, Base 50 F, through July 21	DD, Base 50 F, through July 28	DD, Base 50 F, 40-yr average through July 28	DD, Base 50 F, projected through Aug 11
1. Carbondale	2218	2395	2495	2754
2. Belleville	2382	2573	2440	2926
3. Mt. Vernon	2022	2197	2363	2550
4. Springfield	1949	2107	2154	2448
5. Urbana	1910	2061	1995	2387
6. Peoria	1855	2008	2001	2341
7. Kankakee	1711	1853	1908	2164
8. Moline	1835	1993	1946	2317
9. St. Charles	1504	1638	1670	1912



Projections for degree day accumulations two weeks into the future are derived by adding historic averages for degree days for the next two weeks to the actual current total listed for each location.

Kelly Cook (217-333-6651; kcook8@uiuc.edu; Rick Weinzierl (217-333-6651; weinzier@uiuc.edu)

Vegetable Production and Pest Management

Phytophthora Blight of Vegetables

Phytophthora foliar blight and fruit rot, caused by *Phytophthora capsici*, has been observed in commercial fields and home garden plantings of cucumber, cantaloupe, pumpkin, squash, watermelon, zucchini, eggplant, bell pepper, and jalapeno pepper throughout Illinois. Due to frequent and heavy rainfalls, the disease is epidemic in some areas. To control Phytophthora foliar blight and fruit rot in cucurbit fields, the plants should be sprayed with Acrobat 50WP (dimethomorph) (<http://www.cdms.net/ldat/ld4ES001.pdf>) at the rate of 6.4 oz product (3.2 oz a.i.) per acre at the first sign of the disease. Continue applications on a 5-10 day spray schedule. Acrobat 50WP must be applied as a tank mix with another fungicide (copper, mancozeb). Cuprofix (<http://www.cdms.net/ldat/ld56F005.pdf>) is an effective copper compound against Phytophthora blight. Do not make more than two sequential application of Acrobat 50WP before alternating to another effective fungicide with a mode of action different from Acrobat 50 WP (copper, mancozeb, Bravo) for at least one application. Do not make more than 5 application of Acrobat 50WP per season, and do not exceed 32 oz per acre per growing season. Do not use less than 20 gallons of water per acre for ground application and 5 gallons per acre for aerial applications. Cucurbits may be harvested on the day of the application of Acrobat. Read and follow the label directions. Effective cultural practices will minimize damage caused by Phytophthora blight. For more information on Phytophthora blight of cucurbits, refer to the following website: <http://babadoost.cropsci.uiuc.edu/Vegetables/Main/vegetables.htm>.

Chemical control of Phytophthora blight of peppers has not been successful in Illinois. However, the results of our greenhouse and field trials in the past three years have shown that three cultivars (Paladin, Reinger, and Emerald Isle) are resistant to *P. capsici* isolates from Illinois. For the future, planting resistant cultivars and using effective cultural practices are recommended. Eggplants do not exhibit much blight, but severe fruit rot develops after rainfalls. Prevention of fruit contact with soil will reduce fruit rot of eggplants caused by *P. capsici*. For more information on Phytophthora blight of peppers, click on the following website: <http://www.ag.uiuc.edu/%7Evista/abstracts/a947.html>.

Mohammad Babadoost (217-333-1523; babadoos@uiuc.edu)



Update on Squash Bug

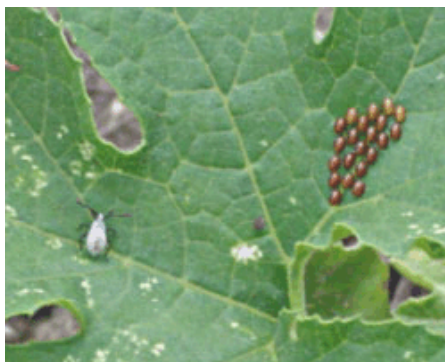
Squash bug damage is increasing in southern Illinois. A few reminders on its biology and control ...

The adult squash bug overwinters in plant debris, becoming active in the spring of the year. After a period of feeding, the adults mate and begin to lay bronze colored eggs. These eggs hatch in one to two weeks. Newly hatched nymphs are dark red, but they turn light gray as they grow. The squash bug feeds by piercing the plant tissue and sucking out plant fluids. Feeding can cause plants and leaves to wilt and in some cases die. It is also believed that squash bugs are responsible for spreading the bacterial disease known as yellow vine decline. Pumpkins, watermelon, and other melons are susceptible to this disease. Early infection by this bacterium can lead to serious yield losses. Early control of squash bugs is key to reducing damage due to the insect and the associated disease.

For gardeners and others who do not have a pesticide applicator's license and therefore cannot purchase restricted-use pesticides, homeowner formulations of products containing permethrin (Ace Garden Insect Killer, Eight Vegetable, Fruit, and Flower Spray, Ortho Bug-B-Gon Multipurpose Garden Dust, etc.) may be used to kill squash bugs. These insecticides will be most effective against young nymphs and much less effective against adults. Commercial vegetable growers who possess a pesticide applicator's license will find the restricted-use insecticide Capture to be most effective for squash bug control.



Squash bug female laying eggs.



Squash bug nymph and eggs.

Mark Hoard (618-242-9310; hoard@uiuc.edu)

Insecticide Application Frequency for Corn Earworm Control

Bill Hutchison, Extension Entomologist at the University of Minnesota, published the following tables in the July 25, 2003, issue of the Minnesota Vegetable IPM newsletter. These tables are worth repeating for Illinois growers to see as well, so here they are. I added Sevin to the second table, just because some small-acreage growers do use it.

Spray schedule for corn earworm control in sweet corn, based on the number of earworm moths caught in a pheromone-baited cone trap. (This table is based on counts from nylon traps; the full-sized conventional Hartstack wire trap catches more moths, so those of you operating the wire traps we've recommended for years can multiply the counts in the first column by 1.5 and be about right.)

Average Number of Moths Per Trap Per Day	Spray Frequency (when fresh silks are present)	
	Maximum Daily High Temperature Less Than 80 F	Maximum Daily High Temperature Greater Than 80 F
Less than 0.2	No Spray	No Spray
0.2-0.5	Every 6 days	Every 5 days
0.5-1.0	Every 5 days	Every 4 days
1.0-13	Every 4 days	Every 3 days
Greater than 13 (greater than 20 per day in a wire Hartstack trap)	Every 3 days	Every 2 days

Restrictions on insecticides used for corn earworm control.

Insecticide	Preharvest Interval (days)	Re-Entry Interval (hours)
Asana	1	12
Ambush / Pounce	1	12
Baythroid	0	12
Capture	1	12
Lannate	0-3	48
Mustang	3	12
Sevin	2	12
SpinTor	1	4
Warrior	1	24

The Minnesota newsletter article points out the same thing I frequently stress ... Warrior, Capture, and Baythroid provide the best control of corn earworm and European corn borer in sweet corn. Spray intervals of 3 days, even under heavy pressure and high temperatures, can be adequate for these three insecticides but not for the other materials in the table above.

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

Twospotted Spider Mite

The hot, dry conditions Elizabeth Wahle described in southern Illinois favor buildup of twospotted spider mites in several vegetable crops, particularly green beans, cucurbits (cukes, squash, pumpkins, and melons), tomatoes, and eggplant. Scout these crops and treat accordingly. Miticides registered for use on various vegetables are listed in the table below.

Crop	Products Registered for Mite Control
Beans	Capture, Dimethoate
Cucumbers	AgriMek, Capture, Kelthane
Melons	AgriMek, Capture, Kelthane, Dimethoate, Danitol
Pumpkins	AgriMek, Capture, Kelthane
Squash	AgriMek, Capture, Kelthane
Tomatoes	AgriMek, Capture, Kelthane, Dimethoate, Danitol
Eggplant	Capture, Danitol

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

Fruit Production and Pest Management

Apple Insecticides, a Note on Assail

A quick note on the insecticide evaluations I've conducted this year ... Assail has proven to be very effective in controlling codling moth populations that were difficult to control with organophosphates and selected other compounds last year. For growers who have had difficulty controlling codling moth so far this season, switching to Assail should be a good choice; its preharvest interval in apples is 7 days, and the total number of applications allowed per season is 4.

Grape Insects

Japanese beetles and stink bugs were present last week in a couple of vineyards that I scouted, and grape berry moth damage was apparent in one as well. Be sure to scout for these insects and consult the 2003 Midwest Commercial Small Fruit and Grape Spray Guide for insecticide recommendations.

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

This issue's words of wisdom ... Only in America ...

- Only in America.....can a pizza get to your house faster than an ambulance.
- Only in America.....are there handicap parking places in front of a skating rink.
- Only in America.....do drugstores make the sick walk all the way to the back of the store to get their prescriptions while healthy people can buy cigarettes at the front.
- Only in America.....do people order double cheese burgers, large fries, and a diet Coke.
- Only in America.....do banks leave both doors to the vault open and then chain the pens to the counters.
- Only in America.....do we leave cars worth thousands of dollars in the driveway and put our useless junk in the garage.
- Only in America.....do we use answering machines to screen calls and then have call waiting so we won't miss a call from someone we didn't want to talk to in the first place.
- Only in America.....do we buy hot dogs in packages of ten and buns in packages of eight.
- Only in America.....do we use the word 'politics' to describe the process so well: Poli' in Latin meaning 'many' and 'tics' meaning 'bloodsucking creatures'.
- Only in America.....do they have drive-up ATM machines with Braille lettering.

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

Extension Educators in Food Crop Horticulture		
Bill Shoemaker, St. Charles Res. Center	630/584-7254	wshoemak@inil.com
Maurice Ogutu, Countryside Ext Center	708-352-0109	ogutu@uiuc.edu.
Elizabeth Wahle, Edwardsville Center	618-692-9434	wahle@uiuc.edu
Extension Educators		
Mark Hoard, Mt. Vernon Center	618-242-9310	hoard@uiuc.edu
Suzanne Bissonnette, Champaign Center	217-333-4901	sbisson@uiuc.edu
George Czapar, Springfield Center	217-782-6515	gfc@uiuc.edu
Dave Feltes, Quad Cities Center	309-792-2500	dfeltes@uiuc.edu
Russel Higgins, Matteson Center	708-720-7520	rahiggin@uiuc.edu
Campus-based Specialists		
Mohammad Babadoost, Plant Pathology	217-333-1523	babadoos@uiuc.edu
Raymond Cloyd, Greenhouse insects	217-244-7218	rcloyd@uiuc.edu
Kelly Cook, Entomology	217-333-6651	kcook8@uiuc.edu
Imed Dami, Viticulture (So. Ill. Univ.)	618-453-2496	imeddami@siu.edu
Mosbah Kushad, Fruit & Veg Production	217-244-5691	kushad@uiuc.edu
John Masiunas, Weed Science	217-244-4469	masiunas@uiuc.edu
Chuck Voigt, Veg Production (& herbs)	217-333-1969	c-voigt@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

