

College of Agricultural, Consumer, and Environmental Sciences

# Illinois Fruit and Vegetable News

Vol. 16, No. 5, May 28, 2010 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, <u>weinzier@illinois.edu</u>. The *Illinois Fruit and Vegetable News* is available on the web at: <u>http://www.ipm.illinois.edu/ifvn/index.html</u>. 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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## **Upcoming Programs**

- Illinois State Horticulture Society Summer Field Day. June 10, 2010. Broom Orchard, just south of Carlinville on Shipman Road. Registration opens at 8:00 a.m., program begins at 8:30. A registration form is included at the end of this newsletter. For more information, check the registration form or contact Don Naylor at 309-530-7678, 309-828-8929, or <u>ilsthortsoc@yahoo.com</u>. See more about Broom Orchard at www.broomorchard.com.
- Northern Region Grape Growers Meeting. June 12, 2010, 9:00 a.m. St. Charles Research Center, at the corner of IL Rt 38 and Peck Road, 1 mile west of Randall Road in St Charles, IL and 5.5 miles east of IL Rt 47. At the light at 38 & Peck Rd., turn north, and the Research Center is the first driveway on the left. Program includes a guided tour of the research that Bill Shoemaker and team are conducting, updates on the 2010 season, and opportunities for questions and discussions. Contact Bill Shoemaker at 630-584-7254; wshoemak@illinois.edu.
- Mississippi Valley Peach Orchard Tour. June 25, 2010. This year's tour will be a joint effort between Cates Orchard in Dudley, Missouri and Bader Farms in Campbell, Missouri. Check-in is at 9:00 a.m., and the tour begins with coffee and donuts at Cates Orchard at 9:30am. This is a smaller orchard with a U-pick atmosphere and a wide range of cultivars. The group will then move to Bader's, a larger operation that also produces vegetables and works with alternative marketing enterprises. We will have lunch and then tour the farm operation. Please preregister for lunch by e-mailing denklers@missouri.edu or calling Chris Waite at 573-686-8064 between 8 a.m. and 4 p.m. by Wednesday, June 23. If you have questions, contact Sarah Denkler at 573-686-8064 or denklers@missouri.edu. For the complete program, check: <a href="http://web.extension.illinois.edu/edwardsvillecenter/downloads/23093.pdf">http://web.extension.illinois.edu/edwardsvillecenter/downloads/23093.pdf</a>. Cates Orchard is at 13423 State Highway WW, Dudley, Missouri (573-421-6102 or 573-421-6103). Bader Farms is located at 38601 State Highway WW, Campbell, MO (573-246-2528.

- International Herb Association Annual Meeting. July 11-15, 2010. Collinsville, IL. For complete program details and registration, go to the following link: <u>http://web.extension.illinois.edu/edwardsvillecenter/downloads/23779.pdf</u>. For additional details or questions, contact Chuck Voigt at <u>cevoigt@illinois.edu</u> or (217) 333-1969.
- North American Fruit Explorers. August 19-21, 2010. Best Western Motel/Conference Center, Lafayette, IN. To view the program and registration form, check: <a href="http://web.extension.illinois.edu/edwardsvillecenter/foodcrophort3031.html">http://web.extension.illinois.edu/edwardsvillecenter/foodcrophort3031.html</a>. For additional details or
- questions: contact Ed Fackler at <u>cefackler@gmail.com</u> or 812-366-3181. **2010 Sustainable Agriculture Tours** 
  - June 18, Feeding Universities Sustainably, Farmer Brown's Production Company and Mulberry Hill Farm, Jackson County
  - o July 26, Illinois Berries, J & J Berry Farm, Jersey County
  - August 13, Romance Tour Flowers and Wine, Bright Flower Nursery and Famous Fossil Vineyard & Winery, Jo Daviess County and Stephenson County
  - September 15, Agritourism Farm Fresh Fun, Country Corner, Henry County

A fee of \$20 per person will be charged for each tour, which includes lunch. This year two adults pay \$30 when registered together and children under the age of 10 attend free. Registration at least one week in advance is required. Visit <u>http://web.extension.illinois.edu/smallfarm/ag\_tours.cfm</u> to register and for more details about each of the tours including a map and agenda. To register by phone, contact Donna Cray at 217-241-4644. For more information, contact Deborah Cavanaugh-Grant (217-968-5512; cvnghgrn@illinois.edu).

## **Regional Updates**

**In southern Illinois,** rain has been hit or miss. The past few days have included microbursts of heavy rainfall, leaving others with just a promise of rain. Combined with rain last week, reports are coming in from scattered areas of flooded corn and soybean fields in need of replanting. The growth of sweet corn and field corn took quite a jump with the recent heat wave; a fanciful person could almost imagine seeing it grow before their eyes.

Grapes, depending on type and cultivar, range from full bloom to approximately pea-size fruit – still in the critical control period for fruit rot diseases. Sour cherries and strawberries are in harvest, and for some beginning to wind down. Blueberries are coloring and early cultivars should be ready any time. Peach thinning is finishing up and overall, peaches and apples are sizing well. Peach harvest is expected to begin in two to three weeks.

For those who provided heat, high tunnel tomatoes have been in harvest for a few weeks in the more southern part of the region. Sweet corn is on schedule to meet the all important 4<sup>th</sup> of July weekend. Lifting of horseradish has started for those growing #1 root while harvest of last year's crop is finishing up.

The International Herb Association Educational Conference and Meeting of Members will be held July 9 to 13, 2010 (Friday through Tuesday) at the Doubletree Hotel, Collinsville, Illinois. For complete program details and registration, go to the following link: <u>http://web.extension.illinois.edu/edwardsvillecenter/downloads/23779.pdf</u>. For additional details or questions; contact Chuck Voigt at <u>cevoigt@illinois.edu</u> or (217) 333-1969.

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

**In the northern region,** the last two weeks of May have seen sunny days with highs in the 60s to low 90s and lows in the upper 40s to low 70s during the period between May 14 and 28. May 23-26 was very warm, with highs in the 90s in many parts in the region. Rainfall totals have ranged from 1 to 3 inches.

Apple and pear fruits are about 1 inch in diameter. Thinning is underway in many orchards, but there are reports of some varieties such as McIntosh, Jonathan, and Empire having very low fruit set. Frosts that occurred in late April and early May damaged some early apple varieties, and sweet cherries were affected as well. Sour cherry and peach fruits are sizing well. Shoots of some varieties of grapes were damaged by frosts in late April, but most have come back, and some early phylloxera galls are evident. Picking has started for early-maturing June-bearing strawberries, and blackberries are in full bloom. There have been reports of peach leaf curl on peach leaves. Codling moth traps are up, and second cover sprays are going on in many orchards.

Harvest of early-planted cool-season vegetables such as spinach and leaf lettuce is underway, and harvest of asparagus and rhubarb is almost complete on many farms. Transplanting of tomatoes and peppers has started, and successive plantings of sweet corn continue. Direct seeding of pumpkins, summer squash, winter squash, cucumbers, and melons is also in progress.

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

## Notes from Chris Doll

We have been back to the lazy, hazy days of summer for this week, with temperatures into the 90's and high humidity. Scattered showers on the 26th gave some of us a refreshing rain to keep the grass and crops growing and the need for fungicidal sprays continuing. The season continues to be ahead of normal for fruit development. Strawberry season has been here for a while, and it will be renovation time before we know it. The black raspberries are showing first red color, and Prelude red raspberries will be picked after this is written. Triple Crown blackberries are passing through full bloom. Chemical thinning of apples is finished, as varieties such as Goldens and Honeycrisp are pushing the 25 mm size. Peach thinning continues, and the finish of this task can include hand removal of the smaller fruits and those with hail, insect, or wind damage. Last time I mentioned hand thinning of flat peaches, which defy knocking or shaking off, and I have noticed that split pits can be eliminated if looking up at the base of the fruit while working.

In the Back-40, pheromone traps remain ornamental, since no codling moth, Oriental fruit moth, San Jose Scale, or peach tree borer have been caught in the past two weeks, even with new lures. I will find out how many stink bugs are around when raspberry harvest begins. Grape bloom is done, and the spray program appears to be successful there.

From grower contact, it seems that pest control is fairly quiet too. I received two reports of light fire blight infections, but with all the vigorous growth that is minor, and we all hope it stays that way. One of the other state reports mentioned the need for blossom blight protection on newly planted dwarfed apples that are now blooming, and that could be a possibility. In fact, the only fireblight I have personally seen this year was on a flowering potted apple tree being grown for resale. Streptomycin could be used for prevention on trees with this development.

Heavy flowering on some of the dwarfing apple trees is more prominent now than in past years, as nurseries try to meet the demand for well-feathered trees for high-density plantings in order to get early production. The side effect of branch-inducing sprays is early flower initiation that you as growers can take advantage of for early fruiting as well as fighting blossom blight. Recently I saw a planting of 2nd leaf Jonagold that were the size on many 3rd leaf trees, with a full crop of fruit that required chemical thinning.

There are reports from elsewhere in the country that frosts and freezes have caused significant injury to apples, and some of them include reports of heavy fruit drop, both with and without chemical thinners. Red Delicious is mentioned most often as being over-thinned, which is hard to do unless some vagaries of nature occur.

In the last issue of this newsletter, I mentioned the fact that some peach trees had died from excessively wet soils for too long a time, most likely culminating with the 10 inches of rain in October. This situation is also showing up on wet soils in New Jersey, where Jerry Frecon used the term root asphyxiation, which can cause root death without any help from the normal diseases like collar rot and fireblight (on apple).

The ISHS Summer Orchard Day is scheduled pretty close to home this year, at the Broom Orchard at Carlinville, on June 10. I hope to see many of you there.

#### Chris Doll

## Fruit Production and Pest Management

#### Vineyards Entering Bloom in the North

Though it's early this year, grape growers in northern Illinois should be witnessing the blooming of their grapes by now. During this period the flowers are releasing pollen into the air, which is carried by air movement to the pistil, or female receptacle, on the flower. Unlike some fruit crops, grapes do not needs insects to move pollen for pollination to

take place. There are conditions during flowering which can minimize the effectiveness of pollination. Cool, cloudy weather or wet weather can reduce the effectiveness of pollen movement and fertilization. This often results in shot berries, or tiny green berries that never size up or ripen. Unusually hot weather can accelerate the flowering process and reduce the interval of time available for pollen to land on the pistil. This rush through pollination can result in lower rates of pollination and smaller clusters at the end of the season. Moderate, sunny weather with mild nights can result in longer pollination periods with more complete pollination of flowers. These conditions can result in fuller pollination of flowers, as well as larger berry and cluster size. Knowledge of these conditions and their impact on pollination may give the grower no tools for managing the conditions, but it may influence later canopy management and crop load management decisions.



Grape cluster in bloom.

Fortunately it appears that the bulk of pollination in northern Illinois will enjoy moderate, sunny weather for 2010. There are some vineyards that will have exceptionally long pollination periods because some primary shoots were injured by a late freeze. Secondary shoots replacing injured shoots will bloom later, introducing a longer period when flowers will be opening. But for those who escaped injury, bloom is very early this year. This results in a situation where there is the potential for a full season of fruit crop development. It may shift early varieties into even earlier harvest dates, which is not necessarily favorable. It may afford an opportunity for late maturing varieties to ripen during more favorable conditions and gain more heat units. For those who have really late maturing varieties, such as Norton, this may be a stellar season for ripening that crop.

While we have had good rainfall for our crop this season, we have not had the frequent wet, humid weather we experienced last year. This means fungal disease potential may not be as high as last season. However, there have been some incidents of conditions conducive to disease development. So if the varieties you are growing have susceptibility to certain fungal diseases, your strategy for disease management needs to be in place and working. For those who do not limit themselves by avoiding chemical fungicides, a mancozeb fungicide application prior to flowering would have been a good choice. Adding a sterol inhibitor fungicide such as Rally or Elite would make that a thorough package for disease control. Remember, mancozeb cannot be used after flowering unless you are confident you can wait at least 66 days before harvesting.

Flowering is traditionally the time we expect to see signs of foliar phylloxera in susceptible varieties. Many of the very hardy varieties, such as Frontenac and St Pepin, are susceptible to foliar phylloxera, with high levels of gall development on leaf tissue. Phylloxera pressure varies somewhat by area in northern Illinois, with the northwestern portion seeming to be at greater risk. This is probably due to the high population of wild grapes in timbered areas, which are more common there. Application of effective insecticides for controlling phylloxera needs to begin now. Because the season is off to a quick start, we may begin to see Japanese beetles emerge and congregate in vineyards within a few weeks. Grapes are a favorite target for this insect, so be prepared to address this problem and avoid serious defoliation. Defoliation beyond 15% of the canopy can impact the vitality of the plant, as its energy comes from photosynthesis, which requires a healthy vegetative canopy.

Bill Shoemaker (630-584-7254, <u>wshoemak@illinois.edu</u>)

## Vegetable Production and Pest Management

#### Corn Earworm Moth Flight

On May 24, Rick Foster, extension entomologist at Purdue University, posted the following bulletin on detection of corn earworm moth flight in Indiana ...

"Last week we caught a few corn earworm moths in blacklight traps and over the weekend of May 21-23 (3 nights) we caught an average of over 20 moths per trap in our traps here in Lafayette. The average number of moths per night per trap (6.8) is less than the usual threshold of 10 moths per night that we use to recommend treatment. However, since early maturing sweet corn is so much more attractive to egg-laying corn earworm moths than other crops in the vicinity, I think it is appropriate to lower that threshold at this time of the season. It is my recommendation that growers who have sweet corn that is silking now should be spraying appropriate insecticides at a 3- to 5-day intervals until the silks turn brown. Growers who have not yet put their pheromone traps up should do so as soon as possible. We have no idea how long this flight will last, so the only way to know is by using pheromone traps.

I still think the best insecticides for use against corn earworms are the pyrethroids, primarily Brigade, Mustang Max, and Warrior. We have consistently gotten good results with those products over the years. The resistance problems that we feared a few years ago have not materialized, although we will continue to monitor the situation. There are several fairly new insecticides with alternative modes of action available, such as Belt, Coragen, and Radiant."

We just started getting traps out at several locations in Illinois, so I cannot add any information on the status of flights in different areas. I urge growers with early sweet corn that is silking or will begin silking soon to get traps up and baited as soon as possible. The next issue of this newsletter will provide updates for a few Illinois locations.

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

### Cucumber beetles



A. Striped cucumber beetle. B. Spotted cucumber beetle. (Purdue University)

Striped cucumber beetles are active at least as far north as central Illinois, and spotted cucumber beetles are active at least in the south, so a quick review of their life cycles and control seems warranted. Spotted cucumber beetle and striped cucumber beetle are common pests of all cucurbits throughout the Midwest. Spotted cucumber beetles are about \_-inch long, with yellow-green forewings marked with 12 black spots. Striped cucumber beetles are similar in size with two black stripes that run the length of each forewing (the inner stripes of the left and right wings are adjacent when the beetles are at rest, so they appear to have 3 stripes, not 4). Western corn rootworms resemble striped cucumber beetles, but the underside of the abdomen of the striped cucumber beetle is black, whereas the abdomen of the western corn

rootworm is yellow. Larvae are whitish, \_- to \_-inch long, with dark brown heads and 3 pairs of short legs on the thorax.

Adults of both species overwinter in wooded areas and in plant debris and become active as temperatures rise in spring, as early as April or May in southern Illinois. They feed on pollen and flower petals of many plant species until cucurbits are planted, then they feed on the foliage and later the fruit of pumpkins, squash, cucumbers, and melons. Adults lay eggs in the soil at the base of cucurbits and other plants (including corn for the spotted cucumber beetle, also known as the southern corn rootworm), and larvae feed for 2 to 3 weeks on roots. In southern Illinois, two generations of larvae may develop each season, producing midsummer and late summer broods of adults; only one generation develops in northern Illinois in most seasons.

Adult cucumber beetles injure cucurbits by chewing holes in foliage and feeding directly on fruits. They spread squash mosaic virus within plantings, and they also transmit the bacterial pathogen that causes bacterial wilt of cucurbits, a serious disease in muskmelons, cantaloupe, cucumbers, processing pumpkins, and Hubbard and butternut squash. Bacterial wilt rarely affects jack-o-lantern type pumpkins or watermelons.

Seed treated with thiamethoxam provides systemic control of cucumber beetles feeding on foliage for 2 to 3 weeks after emergence. Alternatively, Admire Pro may be used as a soil-applied systemic insecticide, and it too provides systemic control of cucumber beetles feeding on foliage for 2 to 3 weeks after emergence. See the <u>Midwest Vegetable</u> <u>Production Guide</u> and the product label for rates and restrictions. Begin scouting for adult beetles as soon as seedlings emerge or transplants are set. If transmission of bacterial wilt is a concern, use foliar applications of insecticides to control cucumber beetles if populations exceed 1 per 10 plants at the seedling stage or 1 per plant after flowering. On jack-o-lantern pumpkins, use foliar insecticides if populations exceed 5 per plant or if beetles (including the related western corn rootworm beetle) are feeding directly on fruits and causing excessive cosmetic damage. Insecticides can reduce spread of squash mosaic virus but NOT aphid-transmitted mosaic viruses.

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

#### **Rhubarb** Curculio

I received a couple of calls last week about rhubarb curculio infestations in east-central Illinois. As I noted a couple of years ago when this insect occurred at damaging levels, a good fact sheet on it is available from Cornell University at <u>http://www.entomology.cornell.edu/cals/entomology/extension/idl/upload/Rhubarb-Curculio.pdf</u>. Here is some of the text from that fact sheet, with slight revisions and abbreviations ...

"Rhubarb is a hardy perennial that is not usually seriously affected by insect pests, however, occasionally attacks of the rhubarb curculio do occur. The leaf stalks of the rhubarb may show exuding sap and partial decay from late-May through early summer due to feeding and egg laying punctures. Feeding injury appears as notches in the stem and on the leaf edges. Sap exudes from wounds of either type and collects as glistening drops of gum when fresh. Eggs of this insect do not hatch when deposited in rhubarb.

The rhubarb curculio is a large (about 1/2 inch) dark snout beetle with a yellow powdery material dusted on its back. The yellowish covering easily rubs off when the insect is handled. The head bears a curved snout, at the end of which are the mandibles, the chewing mouth parts. The eggs are oblong and yellow-white, while the mature larva is a legless grub about 3/4 inch long with a brown head.

The curculio overwinters as an adult in protected places near the rhubarb plantings. In about mid-May the adults appear and are seen resting on the stalks and leaves of rhubarb, dock, thistle or sunflower. Eggs are deposited singly in cavities about 1/8 inch deep in the stalks, and hatching occurs in 7-10 days in all plants but rhubarb. The rhubarb curculio survives in weeds in or near the garden. Eggs deposited in rhubarb are killed by the actively growing plant tissue which crushes them. In other hosts the newly hatched larva begins burrowing its way down through the stalk so that when it reaches maturity in eight to nine weeks, it has reached the bottom of the stalk just below the soil surface. Pupation occurs in a cavity at the base of the host plant, and within a few weeks the adult beetles emerge. Adults feed for a short time and then seek out protected places to pass the winter. There is one generation per year.

The only direct method of control is to handpick the beetles from plants during early summer and destroy them. When the beetles first emerge they are easily picked from the vegetation on which they are resting. Their large size aids in finding them and helps make them easy to handle. The removal of all wild plants in which the beetles breed (dock, thistle, and sunflower) growing in or near the planting during July while the curculio larvae are still in them will also be helpful.



Rhubarb curculio (Cornell University).

Due to the recent trend of insecticide registrations by crop group, there is now a long list of insecticides that are registered for use on rhubarb because it is a member of the Leafy Vegetable crop group. The following insecticides are among those registered for use on "leafy vegetables" and likely to be effective against rhubarb curculio, but their use is very rarely justified: acetamiprid (Assail), indoxacarb (Avaunt), malathion, and permethrin (Pounce). For information on rates and pre-harvest intervals, see product labels.

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

## Less seriously ...

Why ...

... 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?

- ... do banks leave vault doors open and then chain the pens to the counters?
- ... do they have drive-up ATM machines with Braille lettering?
- ... can't women put on mascara with their mouth closed?
- ... don't you ever see the headline 'Psychic Wins Lottery'?
- ... is lemon juice made with artificial flavor, and dishwashing liquid made with real lemons?
- ... is the man who invests all your money called a broker?
- ... is the time of day with the slowest traffic called rush hour?
- ... isn't there mouse-flavored cat food?
- ... do they sterilize the needle for lethal injections?
- ... don't sheep shrink when it rains?

# The Illinois State Horticultural Society Summer Horticulture Field Day, Thursday, June 10, 2010, at Broom Orchard, Carlinville, IL.

Jeff and Lisa Broom, owners of Broom Orchard, invite growers and all interested people to the 2010 Summer Field Day. Broom Orchard consists of 50 acres of apples with 22 varieties, 20 acres of peaches (8 varieties), 6 acres of pumpkins, and 1 acre of strawberries. Nectarines, plums, and pears complete the fruit available for sale. The market opens in July and closes in December. Broom Orchard hosts two festivals, an Apple Festival (the 26<sup>th</sup> to be held in September) and a Pumpkin Festival (the 20<sup>th</sup> to be held in October). The retail farm market sells several kinds of fruit, along with preserves, honey, apple-butter, popcorn, no-sugar items, and other specialty items. Broom's have been using flash pasteurization for Cider since 1994. See more at www.broomorchard.com.

For more information and/or reservations, call Don Naylor, Executive Secretary at 309/828-8929 (cell), email at <u>ilsthortsoc@yahoo.com</u>, or mail a check for \$25 per person for advance reservations to: I.S.H.S., 15962 Old Orchard Rd, Bloomington, IL 61705. Advance reservation deadline is the June 8. Registration at door is \$30.

#### Tentative Agenda

 8:00 A.M.
 Registration

 8:30 A.M.
 Welcome

 8:45–11:30 AA.M.
 Field Tours (Walking-Wagon Tours)

 Speakers:
 Jeff Broom.

 Mohammad Babadoost, Rick Weinzierl, Mosbah Kushad, Elizabeth Wahle, Maurice Ogutu, and Chris Doll, Alan Walters, Brad Taylor.

 Crops:
 Apples, Pears, Peaches, Plumes, Strawberries, and Pumpkins

#### 12:00 – 2:000 p.m. Lunch and Presentations

Exhibitor IntroductionsDon NaylorPresident's CommentsCraig TannerGood Agricultural Practices (GAP)Elizabeth Wahle and Mosbah Kushad

**Registration:** Pre-registration is \$25 per person, \$30 at the door. Pre-registrations accepted by phone at 309/530-7678 (cell) or 309/828-8929, and at <u>ilsthortsoc@yahoo.com</u>, with payment upon arrival. Advance reservations are appreciated. Please pre-register by June 9. On-site registration begins at 8:00 a.m. Children are free.

Directions: From SW side of Carlinville on State Route 108, turn onto Alton Road (at RR tracks).

**Sponsored by:** The Illinois State Horticultural Society, the University of Illinois, Southern Illinois University, and the Illinois Specialty Growers Association.

#### Advance Registration:

for \_\_\_\_\_ for \_\_\_\_\_ reservations for the field day at \$25/person. (On site will be \$30) Children are free.

Name of Orchard:

Names Attending Field Day: \_\_\_\_\_\_, \_\_\_\_\_,

# children \_\_\_\_\_

Address: Email:,	Address:	F	Email:,
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Send mail in reservations to: I.S.H.S., 15962 Old Orchard Rd., Bloomington, IL 61705 to arrive by June 8.

Extension Educators in Food Crop Horticulture							
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