



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@illinois.edu. The *Illinois Fruit and Vegetable News* is available on the web at: <http://www.ipm.illinois.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

- **Orchard twilight meeting. April 22, 2010.** Joe Ringhausen Orchards at 24748 Reddish Road, Fieldon, IL. The meeting will begin at 6:00 p.m. and include discussions led by Elizabeth Wahle, Rick Weinzierl, and Mohammad Babadoost on early season insect and disease management in fruit crops. Traveling west from Fieldon on IL 16, travel just over 1 mile, then turn right (north) on Reddish Road (see Ringhausen Orchard sign on left). Travel just under 2 miles, following the curves of Reddish Road, until you arrive at Ringhausen Orchards on the right. For additional details or questions, contact Elizabeth Wahle at wahle@illinois.edu or 618-692-9434 x-21.
- **Grape grower workshop. May 15, 2010.** Lazy L Grape Ranch, near Mechanicsburg, IL. Brad Taylor, Southern Illinois University, and Elizabeth Wahle, UI Extension, will demonstrate and discuss major practices, including shoot thinning, positioning, cluster thinning, and leaf removal. The meeting will begin at 10:00 a.m., with registration at 9:30 a.m. The vineyard, owned by Brad Lindquist, is located east of Springfield, just south of Mechanicsburg. From I-72, take the Mechanicsburg Exit (#114) into Mechanicsburg; turn left (east) onto W. Main Street, then right onto S. Church Street, which turns into Roby Road. Continue south past Darnell Road and turn left (east) onto Moomey Road. The vineyard will be on the right (south) and visible from the road. Please contact Elizabeth Wahle if you plan to attend (for an accurate lunch count). Registration is \$25.00 per person at the door and includes lunch. For further details, contact Elizabeth Wahle at wahle@illinois.edu or 618-692-9434.
- **Illinois State Horticulture Society Summer Field Day. June 10, 2010.** Broom Orchard, which is located just south of Carlinville on the Shipman Road ... mark your calendars now, and as details become available, they will be posted in future newsletters.
- **Mississippi Valley Peach Orchard Tour. June 29, 2010.** Bader Farms, 5 miles north of Campbell, MO on Hwy WW. As details become available, they will be posted in future newsletters.
- **International Herb Association Annual Meeting. July 11-15, 2010.** Collinsville, IL. (More details in future issues of this newsletter.)
- **North American Fruit Explorers. August 19-21, 2010.** Best Western Motel/Conference Center, Lafayette, IN. To view the program and registration form, check:

<http://web.extension.illinois.edu/edwardsvillecenter/foodcrophort3031.html>. For additional details or questions: contact Ed Fackler at cefackler@gmail.com or 812-366-3181.

- **2010 Sustainable Agriculture Tours**
 - **May 27, The Business of Vermiculture**, Wilken Farms, Iroquois County
 - **June 18, Feeding Universities Sustainably**, Farmer Brown's Production Company and Mulberry Hill Farm, Jackson County
 - **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 http://web.extension.illinois.edu/smallfarm/ag_tours.cfm 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 the southern region, things are popping. If not for a rather stiff breeze, the last few days could have been deemed perfect – low 80's, blue sky, fluffy white clouds, and no rain. I have already seen a sea of black plastic laid in preparation for vegetable transplants. Fields are being prepped all over, as evidenced by the number of tractors and anhydrous rigs on the roadways. Based on my fruit plantings (St. Louis Metro East), apricots are in full bloom, peaches are half-inch green to pink, cherries are bud burst to green tip, apples are half-inch green, and pears are at white-bud. Grapes aren't showing any significant bud swell yet, but pruning cuts are "bleeding." Strawberries have been uncovered and are showing good leaf development. Blueberry fruit buds are close to breaking and brambles are showing new primocane and leaf development. The more uncommon fruits such as medlar, shipova, quince, Chinese haw, and azarole are in similar development stages to the more common tree fruit, but che, persimmon, pawpaw, and mayhaw have yet to break bud in my location. The fruiting Cornelian cherry dogwoods are in full bloom. Of the nut crops, pecan and walnut aren't quite to bud break, but the hazelnuts finished flowering last week and the catkins are starting to wither.

Primary apple scab control begins at green tip. Remember that captan (or other sulfur containing compounds) should not be used within 14 days of an oil application to avoid phytotoxicity. For complete spray details for scab control and fungicide resistance management, see the 2010 Midwest Tree Fruit Spray Guide <http://www.extension.iastate.edu/Publications/PM1282.pdf>.

Reminder that the best timing for dormant liquid lime sulfur/Sulforix sprays to grapes and blueberries is just prior to bud break – with the amount of anthracnose and Phomopsis last year, this application is a must in order to reduce inoculum if plants (grapes and blueberries) aren't to bud break yet.

Be sure to check the list of upcoming programs at the beginning of this issue. An orchard twilight meeting and a grape growers workshop are coming soon.

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

In the northern region, day temperatures have been mostly in the upper 40s to low 60s and night temperatures in the mid 20s to low 40s. It has been extremely warm during the middle of this week, particularly on March 31 and April 1 when the day temperatures were in the upper 70s to low 80s. Some parts of northern Illinois recorded day temperatures above 83 °F, which is one of the highest temperature recorded on April 1 during the last 60 years. The area recorded trace amounts of rainfall between March 22 and April 2. Pruning and training of non-bearing trees is still going on in some orchards. Apple leaf bud development is still at dormant, as is leaf bud development in grapes and raspberries. Dormant oil applications are underway in some orchards, and fertilizer and herbicide applications are continuing as

well. Growers with greenhouses have started vegetable seedlings indoors that will be ready for transplanting outdoors in May.

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

Budbreak in Northern Illinois Grapes: How are your grapes? If you're in northern Illinois like me, they came through the winter in great condition. However, like my grapes, your grapes just came through a tough previous season. Last year we had enormous disease pressure, very low heat units and low sunlight levels. This likely resulted in lower-than-normal bud quality. The crop potential is partly pre-determined by the quality of the bud developed the previous year. I'm not expecting the best out of my vines this year. But at least we are starting out in good health. And it's nice to have good working weather ... or is it?

The recent spell of exceptionally warm weather has grape growers nervous, including me. It's too early to safely enjoy budbreak, but this warm weather is pushing the vines. I was working on young vines in the breeding nursery on Thursday. Some of the young wood at the base of plants was showing bud-swell. They are always early and they can be sacrificed. But the other buds aren't far along. We need the temperatures to moderate, get cool, stay cool for a couple of weeks. Early budbreak means early shoot growth and subsequent risk of freeze on the tender shoots. IF that happens, the vines will push secondary or even tertiary buds. What does that mean?

Grapes have compound buds, which means that within each bud are multiple buds, usually 3. These are called primary, secondary and tertiary. They are named so because the primary is the strongest, most productive bud and it emerges first if the compound bud is healthy and fully viable. If the primary bud is not viable, the secondary bud will emerge. These are smaller and generally less productive. If neither the primary bud nor the secondary bud are healthy, the tertiary bud will emerge. Tertiary buds are unproductive on most varieties. Grapes are resilient because of this feature of compound buds. If weather damages the buds, the grapes have a back-up.

In the event of a spring freeze damaging shoots, the compound bud will produce a back-up shoot. This is usually the secondary. If this happens, the crop will be smaller, and clusters will be smaller. This can be exacerbated by the previous season if growing conditions were poor. They were poor in northern Illinois last year, so if we lose our primaries, the crop will probably be half of a normal crop, more-or-less. This will depend on the variety, the management quality in the previous season, and the particular challenges of the specific vineyard. In the end, it should lower expectations of the vineyard.

And we need to be careful not to push the vines too hard this year. Be mindful of pruning weights and what they mean for the vine. Mine are pretty low this year, so I need to keep my crop loads down. I want these vines to be productive long into the future. I need to make sure the vine builds its strength this year.

For now, growers should plan on a modest crop. But it may be a spring where we face different challenges. Be prepared!

Bill Shoemaker (630-584-7254; wshoemak@illinois.edu)

Notes from Chris Doll

Spring is springing or has sprung this week. A couple of warm days will be followed with a couple of warmer days into the 80's, so that major growth changes are occurring rapidly. As of Wednesday morning, apricots are near full bloom, peaches at half-inch green, apples at tight cluster, plums at green cluster, brambles at 1/2 to 3/4 inch green, and strawberries are showing new growth after straw was pulled last Saturday. Soil conditions remain very wet following last weekend's rain, but the month's total is only 2.0 inches.

Crop potential of all the above fruits looks good, based on flower bud development. Some loss from freezing was noted on thornless and Prime Jim blackberries, a few red raspberry varieties, and a couple of peach varieties. Pruning at this time makes it easy to judge the extent of pruning needed on these crops. I was late in pruning and tying thornless blackberries and learned how easily new bud growth breaks off. The same is true for grape buds that have developed.

There has been some publicity about bee losses this winter, and for the first time, my hive was killed. A report from a Missouri fruit grower indicated a 75 percent loss of bee colonies too. Check with your bee man about availability this spring. This might be a year that reducing the competition of dandelion bloom with apples might be more important, and if the dandelion spray was not applied last fall, there is a little time to do it now, if the orchard floor is cleaned of prunings, etc. Amine 2,4-D can be used at 1 quart per acre, and should be applied before pink

As apple blossom time approaches, you will note that boron at 2.0 pounds of Solubor per acre is suggested at pink to strengthen the flower, and also at petal fall. If blossom sprays are needed, it can be added then also. Also in the pink spray, feed-grade urea at 3 pounds per acre can be added to foster larger leaves on the fruit spurs. This need varies from orchard to orchard, depending on fertility levels, tree age, and growth. It is a fairly common recommendation that in theory should help leaves injured by frost or freeze, but these leaves may have lost much of the absorptive area to make it most effective.

Fireblight was a serious problem in some orchards last year, but I did not see major injury in orchards with a good Apogee program coupled with streptomycin. The first application should be made at full bloom to early petal fall. This timing sometimes develops very rapidly, and it seems to be easy to be late in application.

It has only been three years since the disastrous Easter Sunday freeze of April 7, 2007. In sorting through some old records, I found some notes that included words describing the situation as an adversity that was anguishing, calamitous, depressing, desponding, disastrous, distressing, dire, doleful, dreadful, dolurus, and miserable to name a few. I hope that 2010 is much better for the fruit industry.

Chris Doll

Fruit Production and Pest Management

Cane and crown borers in brambles

We're nearing the end of the time period when drenching application of Brigade 2EC might be used for raspberry crown borer control in brambles, but it may still be a good time to review the life cycles of this insect and two other common borers in brambles and plan ahead.

Raspberry crown borer is a "clear-winged" moth and its larval stage is a caterpillar with fleshy abdominal prolegs that bear hook-like "crochets." It has a 2-year life cycle. Moths fly from August through September and lay their eggs on the undersides of leaves; eggs hatch in September and October and move down the canes to the crown. In their first fall, larvae form a hibernaculum below the soil line, then larvae girdle canes and crowns the next summer before wintering in the roots. They finish development and pupate in the second summer.



Raspberry crown borer adult, larva, and eggs.

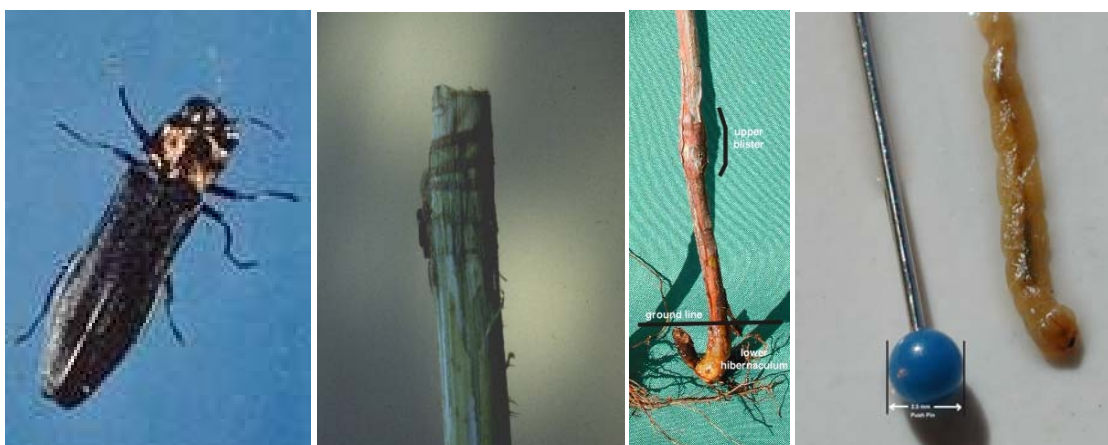
Raspberry cane borer is a longhorned beetle; the larval stage is known as a round-headed wood borer. It also has a 2-year life cycle. Beetles feed on canes from June through August, and they lay eggs between rings of punctures on

canes. Larvae tunnel to the base of canes by fall. They feed in crowns during their second summer, then pupate the following spring; adults emerge from June through August.



Raspberry cane borer adult, girdling and egg-laying puncture, wilted cane, and larva.

Rednecked cane borer is also a beetle, and the adult stage is known as a metallic wood boring beetle; larvae are called flat-headed wood borers. This insect has 1-year life cycle. Beetles feed on leaf margins from May through August and lay eggs in bark of new growth, usually within 10 inches of the base of canes. Larvae tunnel through canes and reach full size by fall. They pupate in the spring, and adults emerge in May. Damage is characterized by tunnels that spiral around the cane and by symmetrical swellings 1-4 feet above the soil line.



Rednecked cane borer adult, tunneling around cane, swelling of cane, and larva (third and fourth photos by Carl Lask).

Raspberry crown borer can be controlled by soil-drench applications of Brigade 2EC in October or early November or in March. Biological control by application of insect-pathogenic nematodes (*Steinernema feltiae*) also is possible. Removing infested crowns is also recommended. To control raspberry cane borer, prune out and destroy infested canes, beginning in July. Foliar sprays of insecticides labeled against other bramble pests (including Brigade and Sevin) give some control of adults from late May until mid July, but applications must be timed to avoid bee kill. Pruning out and destroying galled canes is also recommended for rednecked cane borer control. If more than 5% of canes are galled, postbloom application of Admire Pro to soil for systemic uptake and control may be warranted. Do not apply Admire Pro prebloom or during bloom. Brigade applied to the base of canes when adults are active will give some adult control ... again, remember to avoid bee kill.

For more information on these insects, check the Midwest Small Fruit Pest Management Handbook (<http://ohioline.osu.edu/b861/>) and the 2010 Midwest Small Fruit and Grape Spray Guide (<http://www.ag.purdue.edu/hla/Hort/Documents/ID-169-2010.pdf>).

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

Notes on prebloom and petal fall insecticides in apples and peaches

A few key reminders on prebloom and petal-fall sprays in apples and peaches:

- The main targets of delayed dormant oil applications are rosy apple aphid eggs, European red mite eggs, and immature San Jose scales under their protective scale-like covering. In apples, applying oil earlier in this period (green tip) is best if San Jose scale is the main target; waiting until half-inch green or pink is best if European red mites or rosy apple aphids are the primary targets. (And of course, when the weather gets warm all at once, there's very little time delay from green tip to pink anyway.) See page 7 of the 2010 Midwest Tree Fruit Spray Guide (<http://www.extension.iastate.edu/publications/pm1282.pdf>).
- We've seen VERY little trouble with spotted tentiform leafminer in Illinois in recent years. If this pest has been a problem, see page 7 of the spray guide.
- Where rosy apple aphid has been a serious problem (and remember this is not the same insect as woolly apple aphid), using an insecticide at pink is recommended. Lorsban has been a long-term standard at this time ... see page 9 of the spray guide for additional alternatives.
- Pink and petal fall are key times for controlling plant bugs and stink bugs in apples and peaches. A number of pyrethroids are recommended for this use in peaches – see page 32 of the spray guide. Using pyrethroids in apples, especially at petal fall and later, usually triggers mite outbreaks. Among alternatives that are not as toxic to predaceous mites and therefore not as likely to trigger red mite outbreaks is Endosulfan (Thionex).
- A key target for petal fall sprays in apples is plum curculio. In addition to the old standards Guthion and Imidan, Avaunt also is effective against this insect. For organic growers repeated applications of Surround plus Pyganic provide some control.

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

Less seriously ...

Old Farmer's Advice:

Keep skunks and bankers at a distance.

A bumble bee is considerably faster than a John Deere tractor.

Words that soak into your ears are whispered ... not yelled.

Forgive your enemies; it messes up their heads.

Do not corner something that you know is meaner than you.

You cannot unsay a cruel word.

Don't judge folks by their relatives.

Remember that silence is sometimes the best answer.

Good judgment comes from experience, and a lotta that comes from bad judgment.

If you get to thinking you're a person of some influence, try ordering somebody else's dog around.

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