

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, 217-333-6651, 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.

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

Crop Reports

In northern Illinois, cloudy days with highs in the upper 70s to low 80s and overnight lows in the low to mid 60s have been the norm. Since the beginning of August, rainfall of about 1.2 inches has been the average for the region. Soil moisture is still adequate in some areas, but growers have been irrigating in dryer areas.

Summer cover spray programs continue in orchards, and I have observed only scattered occurrences of apple scab, sooty blotch and flyspeck. Early varieties such as Red Free, William's Pride, and Prima will be ready for picking by weekend (August 15-16).

Harvesting of sweet corn, tomatoes, and other vegetables continues on most farms. No corn borer or corn earworm problems have been reported in sweet corn. Bacterial spot and speck problems have been reported in tomatoes, even on farms that have been spraying the recommended fungicides on a weekly basis. Reports of problems have centered on western corn rootworm beetle feeding on pumpkin leaves and sweet corn leaves and silks, flea beetles and aphids feeding on leafy vegetables, and mosaic virus on pumpkin and squash leaves. A few imported cabbageworm and diamondback moths are flying around in cabbage and broccoli patches.

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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 Aug 4	DD, Base 50 F, through Aug 11	DD, Base 50 F, 40-yr average through Aug 11	DD, Base 50 F, projected through Aug 11
1. Carbondale	2585	2761	2844	3104
2. Belleville	2759	2930	2793	3266
3. Mt. Vernon	2366	2534	2716	2874
4. Springfield	2262	2418	2488	2718
5. Urbana	2218	2379	2321	2688
6. Peoria	2167	2328	2335	2643
7. Kankakee	2000	2150	2217	2450
8. Moline	2153	2321	2270	2627
9. St. Charles	1786	1933	1945	2210



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.

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Notes from Chris Doll

There have been lots of changes in the fruit world since I last wrote, and most of them good ... such as lots of peaches harvested and sold, lots of sizing of those peaches left on the tree, great sizing of apples in the area, and livable weather. It has been one of the coolest summers on record, with no 90-degree days here yet in August. Peach picking has never been like this! And I have never seen the apples as large as they are now--doesn't make much difference by variety, as Gala, Jons, Golden Supreme, Goldens and Reds are generally about 25 percent larger than normally at harvest. In other words, lots of 3 inch apples.

By the calendar, crop maturity is ahead of normal, and almost the same as 2002 by my records for apple and peach harvest. In the Back-40, Gala apples are ripe and the first picking of Loring peach is ready. Cresthaven harvest has started in Southern Illinois, and Honeycrisp apples are pushing for picking in the same area. There are quite a few Chester blackberries still on the vine, and the cooler weather has allowed for a good harvest of red raspberries. Reliance grapes are also ripe, and many other varieties are at the veraison stage.

Pest-wise, peaches have been pretty clean, with major growers reporting no insect or disease problems. However, reports of some Oriental fruit moth injury, scab, and brown rot have been received. Bacterial spot of peach is down considerably from last year. However, all these problems were all seen in a small unsprayed orchard this week, and 50 percent of the fruits were wormy. In an abandoned peach orchard in Southern Illinois (second year), a full crop of peaches was nearly 100 percent scabby before becoming 100 percent rotten. An apple orchard in the same area does not have as great an infestation of codling moth as a nearby commercial orchard, but has nearly all the other problems that apples can get. Sooty blotch is now running but has not been seen in commercial blocks.

Codling moth continues to be prevalent, having been found in all the orchards I work in this area, plus central and northern Illinois. Trapping for moths has been erratic for some of us except for one local orchard that averaged 63 moths per trap for the last week of July and 35 per trap for last week. Some new entries were found this week, and larvae are in all stages. Other insects are quiet in the area.

The first white rot was found on Goldenes on the 12th and bitter rot has been around for several weeks and was found on Gala as well as Jons. Dr. Babadoost indicates that we have had plenty of wetting hours for sooty blotch and flyspeck, but nothing has been seen except in the unsprayed orchards. Necrotic leaf blotch can be found on Golden trees that were not sprayed with an EBDC fungicide. Cork pitting of Reds is present but fairly minimal at this time.

The season has moved so fast for some of us that took time off for fishing that the timing for Retain for delaying maturity of some varieties has come and gone. The label says 30 days before maturity, so that rules out Jonathan for this area and south. There is time to use Ethrel for speeding up maturity for many growers, but I advise everyone to read the discussion of these products in the Spray Guide before using them. Some Jons are suffering from push-offs, but it won't be long before some stop-drop sprays are needed if the dry conditions continue and hot weather returns.

It is also time to prepare for ground cover seeding in orchards that need it, and for prepping the ground for new plantings for 2004, whether it be berries or trees. It is also about the end of the season for collecting leaf samples for analysis. By the way, analysis of grapes is via the petioles, and my lab questioned me on why I had petioles instead of the leaf. This must mean that very few vineyards are being sampled.

Peach variety evaluations have been published by Jerry Frecon in the Rutgers Fruit Newsletter. I will try to summarize some of this at a later time. But in any discussion of varieties, Loring is usually mentioned and by some in unfavorable terms. But when properly grown and harvested, as some that I saw today, it is difficult to knock Loring when \$17.95 a peck is the price for the largest size.

Back to the negative--Japanese beetles are still feeding in this area. I saw blackberries today that were just sprayed to prevent continued damage and irritation, and the Back-40 had to have the grapes and *Prunus* spp. sprayed on Sunday to save the foliage. Other than that, it is a great life with all the great fruit to eat.

Chris Doll

Vegetable Production and Pest Management

Aphids and Whiteflies in Fall Vegetables

This is the time of year that aphids show up as “colonizers” or “passers through” in several vegetable crops, including tomatoes, peppers, cucurbits, and snap beans. In peppers and tomatoes, the culprits usually are green peach aphid and potato aphid. In pumpkins, cucumbers, melons, and squash, the pest species that colonizes plants is generally the cotton-melon aphid. Late season snap beans are vulnerable to soybean aphid infestation.

Understanding the seasonal biology of aphids helps in understanding the nature of species that simply “pass through” vegetable crops. Most aphids that winter successfully in Illinois have separate winter and summer hosts. Eggs overwinter on a woody plant, and the aphids that hatch from those eggs usually cycle through a few generations on that woody host in the spring and early summer. When “the time is right,” a generation of winged adults is formed, and these “alates” (aphids with wings) migrate to a summer host, usually an annual plant. Rosy apple aphid winters as eggs on apple trees and related species, then moves to narrow-leaf plantain in the summer; soybean aphid winters on buckthorn, then moves to soybeans (and snap beans) in the summer. As the summer ends and annual plants begin to dry down, winged adults fly back to their winter host to lay eggs. This life cycle pattern results in lots of aphids moving from place to place in the spring and early summer and again in the late summer and fall. (Not all aphids that are pests of Illinois crops winter here; some are carried here on high-level winds from the south ... the corn leaf aphid is one common example of a pest species that reaches us in this way.)

So aphids can be a problem in vegetables when they actually colonize plants (settling on the plants, reproducing, and building up numbers) or when they simply pass through weedy areas and then fields, making feeding probes along the way, picking up and transmitting viruses as they do so. In peppers and cucurbits, virus transmission by several aphid species may threaten yields and crop quality when the aphid vectors pass through and feed in the crop earlier in the season, but virus transmission in these situations is NOT really preventable by insecticide applications. However, when colonies of aphids build on plants in late summer, controlling them to prevent yield losses that result directly from feeding (draining sap, not transmitting viruses) can be worth doing.

In cucurbits, Thiodan (endosulfan) and Capture give some control, but thorough coverage of upper and lower leaf surfaces is essential (as it is for all insecticides used for aphid control except for systemic products). Dimethoate is labeled for use on

melons for aphid (and mite) control, but its use on other cucurbits is not legal. Malathion is somewhat effective. Newer insecticides labeled for aphid control in cucurbits include Fulfill (pymetrozine) and Actara (thiamethoxam). In peppers, Orthene, dimethoate, Thiodan, and Provado are labeled for aphid control; all are fairly to very effective. In addition, an older organophosphate, Metasystox-R, is still labeled and effective for aphid control on peppers and cucurbits. For organic growers, insecticidal soaps such as M-Pede are the best bet, though coverage of leaves is especially important for soaps.



Left: green peach aphid colony (photo from Colorado State University). Right: greenhouse whiteflies.

In the late summer and early fall, Illinois vegetable growers get to share in the joy of knowing certain insects that for most of the season are restricted to more southern climes – whiteflies. Whiteflies don't winter well in the Midwest, but by late season the combined processes of migration, movement on transplants, and local population increases produce populations great enough to warrant control in several vegetable crops, especially in the southern part of the state. In recent years, the "players" have included a banded-winged species, the greenhouse whitefly, and the sweet potato or silverleaf whitefly. The crops most often infested are green beans, cucurbits, eggplant, peppers, and tomatoes. The effectiveness of insecticides labeled for whitefly control varies considerably among locations, depending on the insecticide resistance characteristics of local populations. In some instances, a pyrethroid (Capture, Asana, or others, depending on the specific crop) may be effective; in other instances the local population may be resistant and go uncontrolled. Provado is an effective alternative in some of these crops, as are Lannate, dimethoate, and Thiodan. Insecticidal soaps (M-Pede) and neem products provide some control for organic growers. The key is to scout at least weekly to detect building infestations and to evaluate any insecticide treatments a couple of days after application. If a particular product fails to provide control, shift to an unrelated insecticide if another treatment is necessary.

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Fruit Production and Pest Management

Postharvest Applications of Insecticides for Borer Control in Peaches

As harvest ends in peaches over the next few weeks, timing will be right for trunk sprays for control of peachtree borer and lesser peachtree borer. Flights of peachtree borer typically peak in late July or August, and a second peak of lesser peachtree borers occurs at about this time too. Postharvest applications of Lorsban 4E, Thiodan, Asana, Pounce, or Ambush as trunk sprays offer several weeks of residual control of newly hatched larvae. Peachtree borer larvae most often tunnel under bark at or near the soil line (including just below the soil surface); lesser peachtree borers tunnel beneath the bark a little higher on the trunk and the scaffold branches. See labels for application rates ... apply enough water to thoroughly wet the bark.

Earlier issues of this newsletter have recommended the use of traps for monitoring flights of these pests. It's too late to start trapping now, but as you wonder, "Do I really need this spray?", or "Is now the right time for my specific orchard?", remember that using traps next year will supply you with the information you need to make the right decisions. You may also want to consider the use of mating disruption next year for the control of both of these pest species.



Above: Lesser peachtree borer larva, from a Michigan State University fact sheet on lesser peachtree borer, available on the web at <http://www.msue.msu.edu/vanburen/flptb.htm> . Michigan State University's web site also includes a fact sheet on (greater) peachtree borer; it's available at <http://www.msue.msu.edu/vanburen/fptb.htm> .

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This issue's words of wisdom ...

Bill Shoemaker provided this gem ...

After every flight, pilots fill out a form called a gripe sheet, which conveys to the mechanics problems encountered with the aircraft during the flight that need repair or correction. The mechanics read and correct the problem, and then respond in writing on the lower half of the form, telling what remedial action was taken, and the pilot reviews the gripe sheets before the next flight. Never let it be said that ground crews and engineers lack a sense of humor. Here are some actual logged maintenance complaints and problems as submitted by Qantas pilots and the solution recorded by maintenance engineers. By the way, Qantas is the only major airline that has never had an accident.

(P = The problem logged by the pilot.)

(S = The solution and action taken by the engineers.)

P: Left inside main tire almost needs replacement.

S: Almost replaced left inside main tire.

P: Test flight OK, except auto-land very rough.

S: Auto-land not installed on this aircraft.

P: Something loose in cockpit.

S: Something tightened in cockpit.

P: Dead bugs on windshield.

S: Live bugs on back-order.

P: Autopilot in altitude-hold mode produces a 200 feet per minute descent.

S: Cannot reproduce problem on ground.

P: Evidence of leak on right main landing gear.

S: Evidence removed.

P: DME volume unbelievably loud.

S: DME volume set to more believable level.

P: Friction locks cause throttle levers to stick.

S: That's what they're there for.

P: IFF inoperative.

S: IFF always inoperative in OFF mode.

P: Suspected crack in windshield.

S: Suspect you're right.

P: Number 3 engine missing.

S: Engine found on right wing after brief search.

P: Aircraft handles funny.

S: Aircraft warned to straighten up, fly right, and be serious.

P: Target radar hums.

S: Reprogrammed target radar with lyrics.

P: Mouse in cockpit.

S: Cat installed.

P: Noise coming from under instrument panel. Sounds like a midget pounding on something with a hammer.

S: Took hammer away from midget.

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