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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, 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 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 and Regional Reports

In the south and southwest, growing conditions until just recently have been extremely hot and humid, with very little rain. Temperatures often soared well into the upper 90's and low 100's from July 9 to July 23. The region cooled down over the past weekend, and much of the region received much needed rain.

Peach harvest continues, moving out of Red Haven and into later varieties. Loss to hail damage has been reported in some blocks, but by and large the crop reports look very favorable. Harvest of sweet corn, cantaloupe, and tomatoes continues. Several growers have reported higher levels of insect and disease pressure this year despite a consistent spray program ... not surprising considering the high temperature indices and the large amount of rainfall experienced through most of the growing season. Even through more recent dry times, humidity has been very high.

Judging by the number of calls and farm visits, wilt has become a problem for a number of cucurbit growers. One of the most common causes of wilt in cucurbit crops this season has been bacterial wilt. Cucumber and melon are the most severely affected by bacterial wilt, whereas the disease has not been as damaging to squash and pumpkin, and watermelons appear not to be affected by it. The bacterial wilt pathogen is entirely dependent on spotted and striped cucumber beetle for its transmission. The beetles carry the pathogen in their gut, and they transmit the bacteria to plants when they feed and excrete wastes on plant leaves.

There is a fairly simple technique to identify whether bacterial wilt is present. Cut a wilted runner close to the crown—select a runner that is beginning to die, not one that is completely wilted or dead. Rejoin the two cut ends together for a moment and gradually pull apart. The presence of sticky strands up to ¼ inch long and somewhat milky in color spanning the gap between the two cut pieces is a positive indication of bacterial wilt.

There is no cure for infected plants, and control of bacterial wilt depends on control of the cucumber beetle vectors. Since the infected beetles overwinter as adults, they can transmit the disease as soon as they feed in the spring, so early season control of cucumber beetles is especially important to reduce losses. The application of both preplant systemic and postemergence foliar insecticides often is necessary to prevent a problem with bacterial wilt in commercial plantings. For a complete listing of control options, check the 2004 Midwest Vegetable Production Guide for Commercial Growers: http://www.entm.purdue.edu/Entomology/ext/targets/ID/ .

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In northern Illinois, day temperatures have been in the upper 70s to upper 80s and night temperatures in the upper 50s to lower 70s during the July 11-26 period. Cloudy days with day temperatures in the low 70s and night temperatures in the 50s occurred during the last three days. Soil moisture is low, as some counties such as Kankakee received only 0.1 inches of rainfall, while Cook, Lake, and Rock Island counties received about 1 inch. Counties to the northwest of Chicago (Rockford area), and towards the central part of the state received about 2 inches of rainfall during the same period. Many growers are irrigating.

Apples are sizing well in most orchards despite scattered problems with apple scab. Orchardists' summer spray programs are including calcium sprays; Japanese beetles also are the targets of sprays in some orchards. Grapes also are sizing well in most vineyards.

Sweet corn harvest continues, and tomatoes will be ready for picking soon in northern counties. Muskmelon harvesting is going on in the Kankakee area. European corn borer and corn earworms are the targets of spray programs in sweet corn, and rust has been observed on tassels and ears. Foliar and fruit diseases are now showing up in vegetables; problems include Alternaria rot reported in peppers, early blight on tomatoes, bacterial spot and canker on tomatoes, shriveling & necrosis on onion leaves, and powdery mildew on older leaves of summer squash. Insect pest pressure has been low, with a few imported cabbage worms & cabbage loopers observed on cole crops, cucumber beetles and western corn rootworm beetles on vine crops, squash bugs laying eggs on squash and pumpkin leaves, squash plants infested with squash vine borer larvae, flea beetles on eggplant leaves, and some aphids on pumpkins. Some growers are applying calcium foliar feeds to fruiting vegetables such as peppers, tomatoes, and melons.

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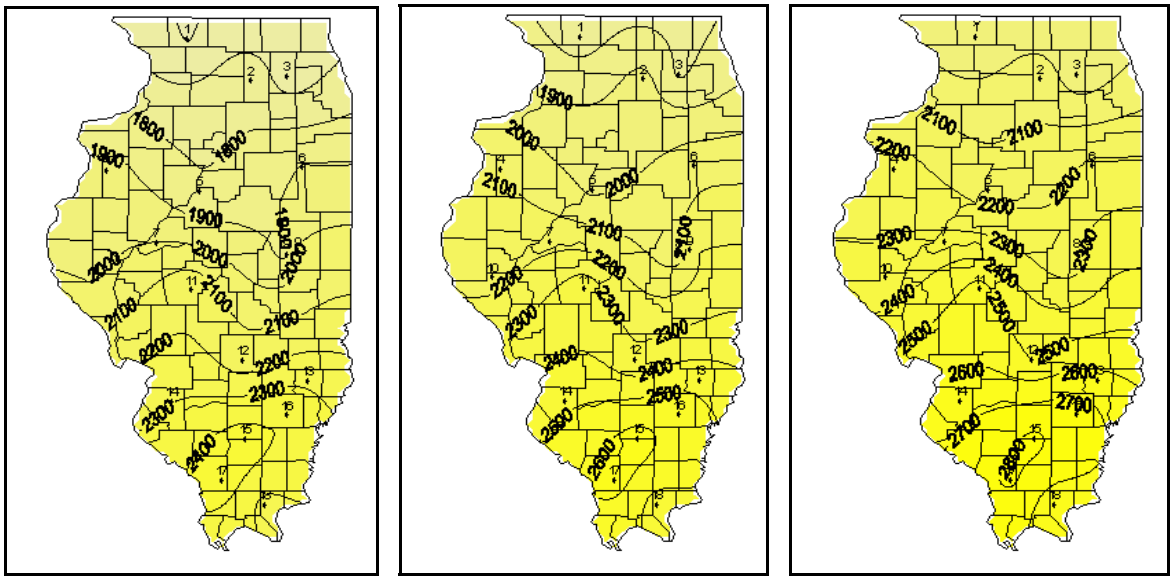
Degree-Day Accumulations and Projections



DD accumulations, base 50 F, for January 1 through July 27 (left) and projected through Aug 3 (center) and Aug 10 (right).

No.	Station	County	Base 50 Degree-Days Jan 1 - July 27
1	Freeport	Stephenson	1593
2	Dekalb	Dekalb	1789
3	St. Charles	Kane	1637
4	Monmouth	Warren	1947
5	Peoria	Tazewell	1813
6	Stelle	Ford	1907
7	Kilbourne	Mason	2001
8	Bondville	Champaign	1879
9	Champaign	Champaign	2018
10	Perry	Pike	1990
11	Springfield	Sangamon	2183
12	Brownstown	Fayette	2133
13	Olney	Richland	2282
14	Belleville	St. Clair	2297
15	Rend Lake	Jefferson	2446
16	Fairfield	Wayne	2395
17	Carbondale	Jackson	2455
18	Dixon Springs	Pope	2267

To view an up-to-date contour map of accumulated degree-days in Illinois, go to http://www.sws.uiuc.edu/warm/pestdata/choosemap.asp?plc=#, and select a base temperature of 50˚F. To reach the degree-day calculator, go to: http://www.ipm.uiuc.edu/degreedays or http://www.sws.uiuc.edu/warm/agdata.asp.

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Notes from Chris Doll

In late July, we're having apple weather during peach season – nice, cool weather for working and even coloring of apples. Three mornings with temps in the 50's make one think of September. It also makes me think that red apples absorb more heat and that ultimately some sunburn will happen during our normal August weather.

The season continues to be about a week ahead of 2003 based on harvest of several red raspberry, grape, peach and apple varieties in the Back-40. Gala apples are starting to change toward maturity and will be ready in another 10 days. A 20-day dry spell was broken by a nice rain on the 25th. Fruit size and quality is good.. But like commercial orchards, there are problems such as Japanese beetle feeding continuing, brown rot in nectarines, bitter rot in apple, necrotic leaf blotch on Goldens, birds in grape and peach, and continuing concern about codling moth and Oriental fruit moth. The last fire blight infection was found about two weeks ago, but apples with ooze were found just five days ago.

Commercial peach harvest has pushed through Red Havens and into Jim Dandee and beyond in this area. Bounty and Loring are ready further south. There is a full crop of peaches in the downstate area if readers in other areas need supplies or just good eating Queen Peach. A slowdown in wholesale marketing can be attributed somewhat to high volume around the country. National Peach Council estimates were for a 9 percent increase over 2003 for the nation, but 25-30 percent increases for the two major southeastern states. Of course, size and quality enter into the picture too.

Retain growth regulator is in the news as being labeled for use on peach for delaying maturity. It is pretty late for Illinois growers to consider this year unless they want to stretch out the harvest on the late varieties. The publicity for the product all sounds and looks good, but the fruits I saw two years ago did not develop the sugars that are normal in peaches. Retain timing is here for Southern Illinois apples to delay maturity and maybe as a stop-drop material. I have yet to see outstanding success in the area, presumably due to our higher temperatures in August and early September.

Strawberry growers are reminded that early to mid-August is the time for another nitrogen application – 30-50 pounds of N per acre, depending on the renovation rate.

Fall is a good time to prepare new orchard sites for planting and for seeding ground covers in orchards that need them. Included in seeding preparation is land leveling, as I have expounded on for years. If an orchardist considers the number of trips through the orchard made in a year (maybe 20 or more) for the lifetime of the orchard, leveling is worthwhile. The ability to drive faster and save time, reduce wear and tear on equipment, and save the hauled fruit from bruising enters into the economic consideration. I was reminded of this while driving down the row of a northern Illinois orchard recently when I realized that I was going 22 mph. I then sped up to 40 mph and was still under control and hoping that I would not run into a worker or sprayer in the smoothest orchard floor I have found in the state.

On July 28, some Honeycrisp apples showed the effect of heat, humidity and southern Illinois growing conditions -- cork spot and water core to go along with some discolored leaves. Some of the apples measured in at 3.25 inches in diameter.

Chris Doll
Edwardsville, Illinois

Fruit Production and Pest Management

Mites in Apples

Art Agnello, extension entomologist for Cornell University at Geneva, New York, wrote the following brief note in the July 19 issue of Scaffolds, their newsletter for fruit growers. Although we're quickly approaching a time when European red mite females will begin laying eggs on twigs for overwintering instead of on leaves where they hatch and subsequent stages feed on foliage, Art's comments are still useful, especially in the northern part of the state ...

> "A few orchards we have seen are in trouble from European red mites so far, but also keep in mind the potential for two-spotted mite, which can reach alarming levels in a hurry. Inspect your leaves using the 5 mite/leaf [threshold], and be aware that two-spot populations increase more quickly than ERM, so be conservative in your interpretations. Acramite tends to be the most effective material against twospotted spider mite, and Pyramite works better against red mites than it does on two-spots, but the main advice is to get out there and look at your foliage." (*Art Agnello, Cornell University*)

Preharvest intervals for apple and peach insecticides

With apple harvest approaching and peach harvest ongoing, it's a good time to re-check the required pre-harvest intervals (PHIs) for insecticides used on these crops. (OK, so I should have put this list in for peaches a few weeks ago.) The table below lists the number of days that must elapse between the final application of the insecticide / miticide and harvest of treated fruit. Obeying these PHIs avoids leaving excess (= illegal) residues on fruit at harvest ... and that avoids fines, bad press, and lots of headaches for individual growers and the industry as a whole. Remember to follow all the other label restrictions too (maximum number of applications, maximum total amounts per season, etc.).

Insecticide	PHI for Apples	PHI for Peaches
Acramite	7	3
Apollo	45	21
Asana	21	14
Assail	7	not registered
Avaunt	28	not registered
Calypso	30	not registered
Danitol	14	not registered
Diazinon	21	21
Entrust / SpinTor	7	14
Esteem	45	14
Guthion	14-21	21
Imidan	7	14
Intrepid	14	7
Kelthane	7-14	not registered
Lannate	14	4
Malathion	--	7
Provado	7	10
Pyramite	25	7
Savey	28	28
Sevin	3	3
Thiodan (endosulfan)	21-30	21-30
Vendex	14	14
Warrior	21	14
Zeal	28	not registered

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Vegetable Production and Pest Management

Vegetable Insects

Corn leaf aphid

I've had a couple of reports of hard-to-control infestations of corn leaf aphids in northern Illinois sweet corn. While control resulting from the use of malathion and Warrior has been adequate to prevent pollination failures, infestations have persisted and moved from tassels to ear tips, and standards for many fresh-market retail venues make it difficult to sell aphid-infested ears (or ears with lots of smushed aphids covering the tips). The key in this problem lies in part in beginning control efforts a little earlier than you would if your only targets is corn earworm. As soon as tassels begin to form (or certainly by "row

tassel"), if aphids are in the whorl or on the developing tassel, insecticides can provide some degree of control. Malathion was always the old standard for corn leaf aphid control, but it does not persist long (especially in hot weather). Pyrethroids generally are not regarded as especially effective against aphids in most crops, but Capture is better against aphids than most. Given that lots of the state's fresh-market corn sold in farmers' markets is hand-harvested, and given the restrictions on registered insecticides, Capture is probably the best alternative where malathion fails to provide adequate control. Another choice is Lannate, though like malathion, it does not last long in hot weather either. Penncap-M is also labeled for aphid control in sweet corn.

Corn leaf aphids

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This issue's words of wisdom ...

From Lee and Mary Rife ... Bud Abbott and Lou Costello's famous sketch "Who's on first?" might have turned out something like this in today's computer age:

Costello calls to buy a computer from Abbott ....
ABBOTT: Super Duper computer store. Can I help you?
COSTELLO: Thanks. I'm setting up an office in my den and I'm thinking about buying a computer.
ABBOTT: Mac?
COSTELLO: No, the name's Lou.
ABBOTT: Your computer?
COSTELLO: I don't own a computer. I want to buy one.
ABBOTT: Mac?
COSTELLO: I told you, my name's Lou.
ABBOTT: What about Windows?
COSTELLO: Why? Will it get stuffy in here?
ABBOTT: Do you want a computer with Windows?
COSTELLO: I don't know. What will I see when I look in the windows?
ABBOTT: Wallpaper.
COSTELLO: Never mind the windows. I need a computer and software.
ABBOTT: Software for Windows?
COSTELLO: No. On the computer! I need something I can use to write proposals, track expenses and run my business. What have you got?
ABBOTT: Office.
COSTELLO: Yeah, for my office. Can you recommend anything?
ABBOTT: I just did.
COSTELLO: You just did what?
ABBOTT: Recommend something.
COSTELLO: You recommended something?
ABBOTT: Yes.
COSTELLO: For my office?
ABBOTT: Yes. . .
COSTELLO: OK, what did you recommend for my office?
ABBOTT: Office.

COSTELLO: Yes, for my office!
ABBOTT: I recommend Office with Windows.
COSTELLO: I already have an office with windows! OK, lets just say I'm sitting at my computer and I want to type a proposal. What do I need?
ABBOTT: Word.
COSTELLO: What word?
ABBOTT: Word in Office.
COSTELLO: The only word in office is office.
ABBOTT: The Word in Office for Windows.
COSTELLO: Which word in office for windows?
ABBOTT: The Word you get when you click the blue "W".
COSTELLO: I'm going to click your blue "w" if you don't start with some straight answers. OK, forget that. Can I watch movies on the Internet?
ABBOTT: Yes, you want Real One.
COSTELLO: Maybe a real one, maybe a cartoon. What I watch is none of your business. Just tell me what I need!
ABBOTT: Real One.
COSTELLO: If it's a long movie I also want to see reel 2, 3 &4. Can I watch them?
ABBOTT: Of course.
COSTELLO: Great! With what?
ABBOTT: Real One.
COSTELLO: OK, I'm at my computer and I want to watch a movie. What do I do?
ABBOTT: You click the blue "1".
COSTELLO: I click the blue one what?
ABBOTT: The blue "1".
COSTELLO: Is that different from the blue w?
ABBOTT: The blue "1" is Real One and the blue "W" is Word.
COSTELLO: What word?
ABBOTT: The Word in Office for Windows.
COSTELLO: But there's three words in "office for windows"!
ABBOTT: No, just one. But it's the most popular Word in the world.
COSTELLO: It is?
ABBOTT: Yes, but to be fair, there aren't many other Words left. It pretty much wiped out all the other Words out there.
COSTELLO: And that word is real one?
ABBOTT: Real One has nothing to do with Word. Real One isn't even part of Office.
COSTELLO: STOP! Don't start that again. What about financial bookkeeping? You have anything I can track my money with?
ABBOTT: Money.
COSTELLO: That's right. What do you have?
ABBOTT: Money.
COSTELLO: I need money to track my money?
ABBOTT: It comes bundled with your computer
COS TELLO: What's bundled with my computer?
ABBOTT: Money.
COSTELLO: Money comes with my computer?
ABBOTT: Yes. No extra charge.
COSTELLO: I get a bundle of money with my computer? How much?
ABBOTT: One copy.
COSTELLO: Isn't it illegal to copy money?
ABBOTT: Microsoft gave us a license to copy money.
COSTELLO: They can give you a license to copy money?
ABBOTT: Why not? THEY OWN IT!

A FEW DAYS LATER . .

ABBOTT: Super Duper computer store. Can I help you?
COSTELLO: How do I turn my computer off?

ABBOTT: Click on "START". . .

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