



UNIVERSITY OF ILLINOIS EXTENSION

College of Agricultural, Consumer, and Environmental Sciences

Illinois Fruit and Vegetable News

Vol. 19, No. 7, June 20, 2013

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://ipm.illinois.edu/ifvn/>. To receive email notification of new postings of this newsletter, call or write Rick Weinzierl at the number or email address above.

Because of the July 4 holiday, the next issue of the Illinois Fruit and Vegetable News will be posted on July 11 or 12.

In this issue ...

- **Upcoming programs**
- **Regional Observations** (from Mike Roegge in western Illinois)
- **Notes from Chris Doll** (thinning, historical notes on cicadas, Summer Horticulture Day)
- **Fruit Production and Pest Management** (oriental fruit moth and codling moth updates, spotted wing *Drosophila* recommendations)
- **Vegetable Production and Pest Management** (more on saturated soils, European corn borer and corn earworm; aphids, mites, and thrips in high tunnels)
- **Local Foods Issues** (GAPS – water quality and disinfectants in postharvest handling)
- **University of Illinois Extension Educators and Specialists in Fruit and Vegetable Production and Pest Management**

Upcoming Programs

Check the Illinois SARE calendar for a full list of programs and links for registration.

<http://illinoissare.org/> and <http://illinoissare.org/calendar.php>

- **Seasonal High Tunnels and Pollinator Habitat** (two separate topics), **June 25, 2013**, 9:00 a.m. – noon. University of Illinois Extension Office - 402 Ava Road, Murphysboro, IL. For more information, call the Jackson County SWCD office at (618) 684 3064 - extension 3. The event is free, but pre-registration is required. See <http://web.extension.illinois.edu/units/event.cfm?UnitID=629&EventID=62235>
- **Dealing with Weeds**, **June 26, 2013**, 5:30-8:00 p.m. The Land Connection is hosting a farm tour and working field day at [Henry's Farm](#), a local, organic vegetable farm located near Congerville. To learn more, or register for this field day, call (217) 840-2128 or see <http://www.thelandconnection.org/fielddaysandworkshops>.
- **Good Agricultural Practices (GAPS) Workshop**, **June 28, 2013**, 9:30 a.m. – 4:00 p.m. at the University of Illinois Boone County Extension Office, 205 Cadillac Ct., Unit 5, Belvidere, IL. This program will provide an overview of GAPS, a vegetable retailer presentation on concerns about food safety, good handling practices, food defense protocols in the food chain, self-auditing farms for food safety, crisis and risk management, and writing a food safety plan. Cost per participant is \$10 (one set of curriculum per farm). Pre-registration is required by **June 25, 2013**. Lunch and light refreshments will be provided. For more information, call 815-544-3710, or you may register online at <http://web.extension.illinois.edu/bdo/>.
- **Good Agricultural Practices (GAPS) Webinar Series**, **July 1, 8, 15, and 22, 2013**, 6:00-8:00 p.m. Online program. Sessions cover soil and manure management, water quality and testing, record-keeping, traceback, writing a food safety plan, and being audited. For more information contact James Theuri at 815-993-8337 or jtheu50@illinois.edu. Register online at <https://webs.extension.uiuc.edu/registration/?RegistrationID=8407>.

- **Sally's Fields CSA Twilight Tour, July 8, 2013**, 6:00-8:00 p.m. Sally's Fields, 9364 Lead Line Road, Loami. To register, contact Deborah Cavanaugh-Grant at cvnghgrn@illinois.edu or 217-341-0398. There is no charge to attend. Click [here](#) for map.
- **Growing Your Sustainable Farm Business: A Producers Perspective, July 13, 2013**, 3:00-7:00 p.m. [Living Waters Farm](#), 29695 E. 100 North Road, Strawn and [South Pork Ranch](#), 32796 E 750 North Rd, Chatsworth (Livingston County). For more information, <http://cisfn.org/field-days>.
- **Roots to Rooftop Tour, July 28, 2013**, 1:00-4:00 p.m. A school garden, a roof-top garden, and other neighborhood and community gardens will be the featured stops on an upcoming urban agriculture and garden tour throughout the Springfield area. For more information, see <http://web.extension.illinois.edu/units/event.cfm?UnitID=629&EventID=62221>.

Regional Observations

From western Illinois ... I don't believe there have been two consecutive years so different. The Quincy Regional Airport has reported rainfall accumulation (from Jan. 1 to June 19) at 26" compared to 8" last year at this time (average is 16"). This past weekend some parts of eastern Adams county and western Brown county reported 8+". I don't think anyone has seen the amount of erosion and soil movement we've seen this year.

All the rain and wet soils have created problems in getting plants/seeds established. Succession plantings have been difficult and replanting has been common. The rains on June 15 were accompanied by high winds that leaned over corn (both commercial and sweet corn), but by midweek most had righted itself.

My first planting of sweet corn (planted April 30) is beginning to show tassel in the whorl, and as I was scouting it I found European corn borer "shothole" feeding injury in about 75% of the plants. Pulling a few whorls I found 1st instar larvae. **(More on corn bores a little later in this issue.)**

We still have more pumpkins to plant, as the wet soils have not lead to timely planting. We sow rye in the fall and plant pumpkins into that. We've found the rye helps control weeds and also lays down a barrier between the pumpkins and the soil so pumpkins are much cleaner in the fall. However, rye also leads to other problems. Four of the last 5 years we've had excessively wet conditions. It's almost impossible to get soil to dry under the rye in a wet year. Last year was excessively dry, and the rye used up most of the soil moisture reserves. Neither condition is good. Rye also greatly increases the risk of vole damage, but since there aren't many herbicide choices for pumpkins, the rye does help control some weed species.

Matted row strawberry production is starting to wind down, and after the final harvest, renovation should begin. If dandelions are a problem, consider applying 2,4-D (it will not harm the strawberry plant if applied immediately after the last harvest, but you should be cautious if susceptible plants like tomatoes or grapes are nearby). Wait 5 days after 2,4-D application and then mow off strawberry plants 1-2" above the soil. Spread a complete fertilizer at the rate of 2# per 100' of row (or 40-50# of nitrogen per acre). Use a tiller to narrow the plant beds down to no more than 16" in width. Wider beds don't produce any more berries because sunlight has a difficult time reaching the inner plants in a wide bed spacing. There are several herbicides labeled for use at renovation in strawberry, including Dachtal, Prowl, Sinbar, and others. Consult the [2013 Midwest Small Fruit and Grape Spray Guide](#).

Plasticulture strawberry harvest is complete, with yields higher than normal for us. I believe this is due to the lateness of harvest, which allowed extra branch crowns to develop this spring. We started picking Memorial Day this year (last year was May 1st). We've never been able to get adequate branch crown development in our Labor Day plantings (maybe because of our northern location). Because of the low yields we've carried over plantings for a second year of harvest. We intentionally stress out the plants during summer to reduce branch crown development; we do this mowing off foliage repeatedly and reducing water.

Red and black raspberry harvest has begun, and the first blueberries are now maturing on early varieties. Cole crops are at harvest and early-transplanted vine crops have been flowering.

In the high tunnel, a few early tomato fruits are beginning to color. Cucumber, zucchini, and green bean harvest has begun. Aphids are beginning to show up, and I've seen one instance of mites as well. We've always had aphids and/or

mites in our tunnels and have had varied success in controlling them using insecticides/miticides. This year we're going to try some biocontrol, using predator and parasitoid insect releases. ([More on biocontrol below.](#))

Mike Roegge (217-223-8380; roeggem@illinois.edu)

Notes from Chris Doll

Non-orchard travel has been my mode recently, and unfortunately no commercial orchards were included in the itinerary. So ... observations in the Back-40 today show good growth of both fruit and shoots on all the tree fruits and a reasonable set of fruit too. A little hand thinning is needed, which will improve not only the size and quality of the survivors, but also improve the quality of the pack out by getting rid of both hail and curculio injury. Few pests survived a minimal spray program except the curculio, but I will be looking for stink bugs of any kind while picking the brambles. Some potato leafhopper injury was also noted, but stopped with a recent spray.

Black raspberries are at full harvest and thornless blackberries are looking good, with new cane growth up the top wire (which need to be tipped at a desired height to induce side branching). Grapes have set nice crop on nice sized clusters. The only negative on this crop is some phenoxy injury on shoot terminals, with the source being unknown.

It's time for Japanese beetle emergence, but my trap has not been set prior to this writing. It has been interesting for me to read about the periodical cicada emergence in some eastern and northeastern states and to see the photos of some skeletal accumulations under the trees. This pest is absent here this year, but I've watched growers battle them through several emergences. The one in 1967 was the worst, with bushels of skeletons under old apple trees. The use of pesticides to reduce adult populations and egg laying in orchards, renewal of old orchards, and planting in fallowed open ground free of inhabitation seemed to reduce the numbers in local orchards since that time. During the last emergence, I advanced the idea of onion bags or other types of covers over new trees – the same idea floating row covers that allow photosynthesis to continue and are light in weight so that young shoots are not damaged. Chemical control has been easier, but for lack of that, the protection worked.

The Summer Orchard Day at Curtis Orchard near Champaign was well attended and worth the effort of all the Curtis family members present. It is a great example of fine orcharding and marketing by all. That was followed by a tour of the University of Illinois Fruit Research Farm plots, which are yielding some good research data for many us in and around the state. Thanks to both groups.

Chris Doll

Fruit Production and Pest Management

Updates on Codling Moth and Oriental Fruit Moth

Oriental fruit moth: Based on biofix dates of April 18 near Batchtown in Calhoun County and April 29 at Urbana, degree-day accumulations (base 45F) since biofix for each location are ...

Location	Biofix Date	Degree-Days base 45F, through June 19	Degree-Days base 45F, projected through June 26	Degree-Days base 45F, projected through July 3
Calhoun County	April 18	1191	1406	1627
Urbana	April 29	1115	1322	1531

One location in far southern Illinois did not record consistent flights and a biofix until May 5. This is likely the result of very low populations at that particular orchard. Flight likely started in other far-southern Illinois orchards before that date.

Degree-day accumulations are taken from the Degree-Day Calculator program managed by the Illinois State Water Survey and the University of Illinois – see <http://ipm.illinois.edu/degreedays/>.

Key sprays for second generation control should be timed to correspond with accumulations of 1,175 degree-days (base 45 F) and 1,475 degree-days after first generation biofix ... but always keep monitoring traps to observe flights in individual orchards. Effective insecticides for oriental fruit moth control include Altacor, Assail, Belt, Delegate, Imidan, and Rimon; Entrust is effective in organic production (as is mating disruption, but because it simply prevents mating, it does not kill moths that have already mated or the eggs and larvae that result from those matings ... so since second-generation flight is already underway in most peach production areas, it's really a bit too late to start that approach).

Codling moth: Based on the biofix dates for the locations listed below, degree-day accumulations (base 50F) since biofix for each location (based on the closest regional weather stations) are ...

Location	Biofix Date	Degree-Days base 50F, through June 19	Degree-Days base 50F, projected through June 26	Degree-Days base 50F, projected through July 3
Murphysboro	May 4	877	1050	1229
Belleville	May 10	791	966	1149
Centralia	May 15	765	951	1140
Urbana	May 17	636	808	982
Lake County	May 19	484	633	782

Some key events in the codling moth's life cycle in comparison with degree-day accumulations (based on Table 6, p. 260, in *Orchard Pest management, A Resource Guide for the Pacific Northwest*, by Beers et al, published by the Good Fruit Grower in 1993) ...

Degree-Day Accumulations (Base 50 F)	First-Generation Flight	First-Generation Egg Hatch	Second-Generation Flight	Second-Generation Egg hatch
500	90 percent complete	54 percent complete		
600	96 percent complete	73 percent complete		
700	99 percent complete	87 percent complete		
800	100 percent complete	95 percent complete		
900		98 percent complete	1 percent complete	
1,000		100 percent complete	5 percent complete	
1,100			13 percent complete	1 percent complete
1,200			26 percent complete	3 percent complete
1,300			43 percent complete	10 percent complete

See the [2013 Midwest Tree Fruit Spray Guide](#) for listings of effective insecticides for codling moth control; they include Assail, Calypso, Altacor, Belt, Delegate, and Rimon. Entrust and codling moth virus products are available for organic growers. Again, see the *Spray Guide* for listings.

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

Use Traps to Detect Spotted Wing Drosophila

Everyone growing blueberries, blackberries, and raspberries should be monitoring for spotted wing Drosophila, a new invasive pest that infests thin-skinned fruits as they ripen. This invasive insect is known to be present in much of Illinois and will damage these crops severely, making the fruits unmarketable. Peaches, tomatoes, and grapes also are suitable host plants.

As I have noted previously in this newsletter, there is lots of useful information on this insect on a Michigan State University web site devoted to it ... http://www.ipm.msu.edu/invasive_species/spotted_wing_drosophila. A section on [monitoring](#) includes instructions on how to make and use traps to detect this insect's presence.

Some simple instructions for making traps ...

1. If you don't want to sort through the bait liquid described below, order some sticky yellow cards from [Great Lakes IPM](#) (800-235-0285). Do this first so that they arrive in the mail by the time you've completed steps 2 and 3. See page 25 of the online catalog ... a package of 25 3" x 5" cards sells for \$8.75. You will cut them in half, so 25 of them will allow you to run 5 traps for 10 weeks. Order a larger number if you need more.
2. Get and make the traps ... use 1-quart deli cups, preferably clear. (Go to a supermarket with a deli, and if they will not sell you empty containers, buy some potato salad or whatever, and save the container and lid.) Make at least 2 holes near the top of the container so that you can run wire or string through them to hang the containers. Make at least 6 more holes along the side of the container at least 2-3 inches above the bottom ... these will let flies in. The holes should be about the diameter of a number 2 pencil. Use a paper punch or use a heated metal rod to burn through the plastic. Hang half of a yellow sticky card (3" x 2 1/2") from the lid.
3. Prepare the liquid bait that draws fruit flies to the trap. You can use apple cider vinegar or a mixture of 1/4 oz. yeast, 4 teaspoons of sugar, and 12 oz. of water. Pour the bait into the trap to a depth of about 1 inch.
4. Hang traps in the shade about waist high in area where ripening fruit is present. Check the traps and replace the bait liquid weekly and discard the old bait liquid away from the trap. Use at least 2 traps for each separate patch or location for each crop. Male spotted wing *Drosophila* fruit flies have a dark spot on each wing. If you think you have detected this insect, send specimens to me or contact me by email ... Rick Weinzierl, 1102 S. Goodwin Avenue, Urbana, IL 61820; 217-244-2126, weinzier@illinois.edu.



Spotted wing *Drosophila* trap and adult male.

In general, insecticides that have short PHIs (preharvest intervals) and have been shown to be effective against spotted wing *Drosophila* include ...

Insecticide	PHI (days) in Blueberries	PHI (days) in Brambles	Days of Residual Activity
Malathion	1	1	5-7
Imidan	3	Not labeled	7
Mustang Max	1	1	7
Danitol	3	3	7
Brigade	1	3	7
Delegate	3	1	7
Entrust (OMRI)	3	1	3-5
Pyganic (OMRI)	(12 hours, REI)	(12 hours, REI)	2

Estimates of residual activity are adapted from work done by Rufus Isaacs and reported on the Michigan State University web site listed above.

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

Vegetable Production and Pest management

More on saturated soils ...

As Mike Roegge explained in the last issue, saturated soils are prevalent in many areas. To continue his discussion, let's talk about some more issues we will likely see this year as a result of excessive rainfall.



Leaf yellowing (chlorosis) of tomato resulting from excess soil moisture (James Theuri).

Blossom end rot. In general, most soils have sufficient calcium to support proper plant growth. While proper liming will insure there is adequate calcium, it is not the lack of calcium in the soil that causes blossom end rot in most cases. It is the inadequate movement of calcium into plants that is the common culprit. Anything that impacts root activity or effectiveness will limit calcium uptake. This includes saturated soils (low oxygen limits root function). Nutrient and water adsorption and their translocation are impacted; consequently, wilting, yellowing, stunting, and nutrient deficiencies are the most common symptoms associated with flooded soils with most vegetables. See last week's issue for [Mike Roegge's comments on nitrogen](#).

Hormonal imbalances often occur when roots are in saturated soils, especially at cool temperatures, as production declines in the root-made hormones while stress/aging hormone production increases in other parts of the plant. These shifts create serious imbalances in the levels, ratios, and timing of hormones, which results in abnormal plant development.

Soilborne diseases can be a major limitation to crop production, particularly for vegetables. They are often difficult to control. Fungal and bacterial pathogens are the most common pathogens that cause soilborne diseases. Soilborne bacterial pathogens usually persist in the soil for only a short time. Soilborne viruses that affect vegetables are few in number and generally survive only in the living tissues of the host plant or in the nematode or fungal vectors that transmit them. Soilborne pathogens often survive for long periods on host plant debris, soil organic matter, or as free-living organisms. Many soil factors including soil type, texture, pH, **moisture**, temperature, nutrient levels, and ecology affect the activity of soilborne pathogens.

More than likely, symptoms of issues we will see this year are going to be varied and complicated. What we might diagnose in the field as one issue may well be another. Plant stresses, such as excessive soil moisture, make themselves evident in a number of ways. There is always more than meets the eye. A tremendous resource we have here in Illinois is the Plant Disease Clinic. Don't hesitate to get them involved in helping diagnose a problem. Visit the [Plant Clinic web site](#) to learn more.

Kyle Cecil (309-342-5108; cecil@illinois.edu) and James Theuri (815-933-8337; jtheu50@illinois.edu)

European Corn Borer and Corn Earworm

Mike Roegge reported infestations of European corn borer in his early plantings of sweet corn near Quincy. This insect tunnels into and damages sweet corn ears, fruits of tomatoes and peppers, and a few other vegetable crops. It overwinters here in the larval stage, pupates in late spring, and the first generation of moths fly and lay eggs in June in most years. It is important to monitor and if necessary control this insect before silking in sweet corn, because larvae

that tunnel into stalks may leave stalks and move into ears. Controlling them then is more difficult. Scout sweet corn by examining plants when the tassel is forming and just barely visible from above. Look for shot-hole and window-pane damage on leaves. Treat during the late whorl stage if 20 percent or more of the plants show larval feeding. One application during late whorl, followed by additional treatments every 5 to 7 days until about 7 days before harvest provides adequate control of European corn borer.



European corn borer damage on leaves and larva in ear.

I'll reiterate (from previous issues) that traps in several areas have been catching low numbers of corn earworm over recent weeks as well. Early sweet corn that is tasseling and silking ahead of all the field corn in an area will be THE preferred crop for egg-laying females. If your trap has been catching any moths, be sure to manage this insect. See [“Preseason Reminders for Corn Earworm Management in Sweet Corn”](#) in the February 20 issue of this newsletter for more information.

Mites, Aphids, and Thrips in High Tunnels

As Mike Roegge noted, many who grow vegetables and small fruits in high tunnels experience increased problems with mites, aphids, and thrips. In high tunnels, twospotted spider mite commonly infests tomatoes, peppers, cucumbers, brambles, and strawberries, especially day-neutral strawberries where plants are productive over several months. Aphids – a range of species – become numerous on peppers and tomatoes, as well as leafy greens. Thrips may build up on strawberries, brambles, and tomatoes.

The [2013 Midwest Vegetable Production Guide](#) lists the insecticides and miticides registered for use on specific crops for control of these pests. Unfortunately, products widely used for control of “general defoliators” such as caterpillars and beetles are often not effective against aphids, mites, and thrips. For example, pyrethroids are widely used on vegetables, but most are not very effective against aphids or mites, and because they natural enemies of these pests, infestations may even increase. In some cases, very specific miticides and aphicides may be effective and labeled for use on the infested crop, but their use is impractical because the smallest available container may treat several acres and cost several hundred dollars – not a practical purchase for one high tunnel. In addition, many growers do not use the

same high-pressure, high-volume applications that might be used with larger equipment in outdoor fields. The result is often poorer coverage and poorer control. So ... what do you do about aphids, mites, and thrips in high tunnels?



Twospotted spider mites, aphids on tomatoes, and a typical plant-infesting thrips.

First, use the *Midwest Vegetable Production Guide's* listings of products that control these specific pests ... don't spray broadly toxic pyrethroids that are not listed to control them. Products that generally are effective against aphids include Actara, Assail, Dimethoate, Fulfill, Movento, M-Pede (insecticidal soap), Orthene, and Platinum. Products that generally are effective against twospotted spider mites include Acramite, Agri-mek, Oberon, Portal, and Zeal. Products that generally are effective against thrips include Entrust, Radiant, and the pyrethroids (see individual crop listings). **Be sure to check product labels the listings in the Midwest Vegetable Production Guide for the specific products that can be used on specific crops.**

Effective control depends on very thorough coverage ... use enough water and pressure to get the insecticide spray to the parts of plants that are infested.

Insectaries (suppliers of beneficial insects) offer different predators and parasites that are natural enemies of specific pests. For aphid control, releases of parasitic wasps that lay eggs into and kill aphids are most widely used. For twospotted spider mites, other small mites that are their predators are used most commonly. For plant-eating thrips, predaceous mites, predaceous thrips, and minute pirate bugs are the predators often recommended. Suppliers (insectaries) who have worked with Illinois fruit and vegetable growers include BioBest (<http://www.beesandbugs.com/>) or <http://www.mgshort.com/us/pest.php?id=10&name=Biological+Controls>) and Koppert (<http://www.koppert.com/distribution-koppert-products/usa/>). Representatives from these companies will recommend certain natural enemy species and release schedules based on crop and pest combinations. Remember that if you purchase natural enemies for biological control, applications of broad-spectrum insecticides such as organophosphates, pyrethroids, and most neonicotinoids will kill them, defeating the whole effort.

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

Local Foods Issues

Good Agricultural practices: Postharvest Wash Water Disinfection

Some harvested commodities are washed in water dump tanks or by using spray washers. While some processes re-use water for conservation, dirt, debris, and microbes can accumulate in the water. Because of this, there are important steps that should be taken to ensure a relatively consistent and acceptable wash water quality.

Disinfection is the process of inactivating pathogenic microbes on surfaces and in water that will come in contact with edible parts of fruit and vegetables. The goal of disinfection is to minimize the transfer of pathogenic microbes to fruit and vegetables so as to keep them safe for human consumption. Disinfection aims to keep food-contacting surfaces and water 'sanitary'.

Chlorine is one of several disinfectants. Others include hydrogen peroxide, ozone, ultraviolet light, oxidate, and peroxy-acetic acid. For chlorine, there are several forms that can be used: chlorine gas, calcium hypochlorite, sodium hypochlorite and chlorine dioxide. The most frequently used sanitizer in small farm settings is chlorine (similar but not identical to household bleach), and in an overall food safety program, it is effective. In addition, it is cheaper than other disinfectants, easy to use, and may be used in any operation. Chlorine is also relatively safe.

Chlorine is readily soluble in water and is a powerful disinfectant with oxidizing properties. The most common form used is sodium hypochlorite salt (NaOCl) which releases the hypochlorite (the oxidizing molecule, also called the 'available chlorine') in the solution. An oxidizing agent kills cells, and bacteria as single-celled organisms are readily destroyed by chlorine at a concentration of 100 to 250 ppm (about one pint of 12.5% sodium hypochlorite in 5 gallons of water).

The effectiveness of chlorine is affected by several factors:

- Water quality: clean, potable water should be used for wash water, and emptied when available chlorine gets low. Organic matter debris and soil particles do adsorb chlorine, making it unavailable (do a pre-wash of harvested produce with potable water only before immersing in chlorinated water).
- Low pH (acidic water) also makes chlorine unavailable to disinfect. Water should be buffered to be neutral.
- High temperature causes volatilization of chlorine and it escapes into the air.

Constant checking of the level of chlorine in wash solution is a necessity to ensure adequate wash water disinfection. Test strips are available and are cheap. For surfaces which come in contact with produce, a 5% bleach solution should be used to disinfect them.

James Theuri ((815-933-8337; jtheu50@illinois.edu)

Less seriously ...

Sherlock Holmes and Dr. Watson went on a camping trip. As they lay down for the night, Holmes said: "Watson, look up into the sky and tell me what you see."

Watson said, "I see millions and millions of stars."

Holmes: "And what does that tell you?"

Watson: "Astronomically, it tells me that there are millions of galaxies and potentially billions of planets. Theologically, it tells me that God is great and that we are small and insignificant. Meteorologically, it tells me that we will have a beautiful day tomorrow. What does it tell you?"

Holmes: "Somebody stole our tent."

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

Extension Educators – Local Food Systems and Small Farms		
STEPHEN AYERS , Champaign, Ford, Iroquois, & Vermilion counties	217-333-7672	srayers@illinois.edu
DEBORAH CAVANAUGH-GRANT , Logan, Menard & Sangamon counties	217-782-4617	cvnghgrn@illinois.edu
KYLE CECIL , Henderson, Knox, McDonough, & Warren counties	309-342-5108	cecil@illinois.edu
LAURIE GEORGE , Bond, Clinton, Jefferson, Marion, & Washington counties	618-548-1446	ljgeorge@illinois.edu
DOUG GUCKER , DeWitt, Macon, and Piatt counties	217-877-6042	dgucker@illinois.edu
NATHAN JOHANNING , Franklin, Jackson, Perry, Randolph, & Williamson counties	618-687-1727	njohann@illinois.edu
GRANT MCCARTY , Jo Daviess, Stephenson, and Winnebago counties	(815) 235-4125	gmccarty@illinois.edu
ELLEN PHILLIPS , Boone, DeKalb, & Ogle counties	815-732-2191	ephillps@illinois.edu
MIKE ROEGGE , Adams, Brown, Hancock, Pike & Schuyler counties	217-223-8380	roeggem@illinois.edu
DAVID SHILEY , Coles, Cumberland, Douglas, Moultrie & Shelby counties	217-543-3755	dshiley@illinois.edu
JAMES THEURI , Grundy, Kankakee, & Will counties	815-933-8337	jtheu50@illinois.edu
Extension Educators – Horticulture		
RICHARD HENTSCHEL , DuPage, Kane, & Kendall counties	630-584-6166	hentschel@illinois.edu
ANDREW HOLSINGER , Christian, Jersey, Macoupin, & Montgomery counties	217-532-3941	aholsing@illinois.edu
SONJA LALLEMAND , Franklin, Jackson, Perry, Randolph, & Williamson counties	618-687-1727	lalleman@illinois.edu
ELIZABETH WAHLE , Bond, Clinton, Jefferson, Marion, Madison, Monroe, St Clair, & Washington counties	618-344-4230	wahle@illinois.edu
Extension Programs for Farm to School		
JULIA GOVIS , Statewide Extension Program Coordinator, Farm to School	630-955-1150	jgovis@illinois.edu
Horticulture Research-Extension Specialists at our Research Stations		
JEFF KINDHART , Dixon Springs Agricultural Center	618-695-2770 618-638-7799 (cell)	jkindhar@illinois.edu
Campus-based Extension Specialists		
MOHAMMAD BABADOOST , Plant Pathology	217-333-1523	babadoos@illinois.edu
MOSBAH KUSHAD , Fruit & Vegetable Production	217-244-5691	kushad@illinois.edu
JOHN MASIUNAS , Weed Science	217-244-4469	masiunas@illinois.edu
CHUCK VOIGT , Vegetable Production (& herbs)	217-333-1969	cevoigt@illinois.edu
RICK WEINZIERL , Entomology	217-244-2126	weinzier@illinois.edu

Return Address:

Rick Weinzierl
Department of Crop Sciences
University of Illinois
1102 South Goodwin Ave.
Urbana, IL 61801

