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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://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.

In this issue ...

- **Upcoming programs** (an extensive list of educational programs for beginning and established growers)
- **Fruit and Vegetable Production and Pest Management** (hydroponic production workshop; updated status of brown marmorated stink bug)
- **Local Foods Issues** (the NRCS EQIP high tunnel program; cost-sharing for food safety audits; the Illinois Small Business Contracts Act)
- **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>

Also see the University of Illinois Extension Local Food Systems and Small Farms Team's web site at:

<http://web.extension.illinois.edu/smallfarm/> and their calendar of events at

<http://web.extension.illinois.edu/units/calendar.cfm?UnitID=629>.

- **Local Food Systems & Small Farms Team Winter Webinar Series, Thursdays, January 9-March 27, 2014.** 1:00-2:30 p.m. Multiple topics for small farms. Sessions are presented by U of I Extension Educators and Specialists. No cost. For a list of topics and to register, see <http://go.illinois.edu/winterwebinar>.
- **"Putting Small Acres to Work" Workshops, multiple locations, January 18-April 5, 2014.** The University of Illinois Extension Local Food Systems and Small Farms Team is coordinating a series of workshops on topics that help people learn ways to put a few acres to use. Remaining locations include the Arthur Community Center on January 25; Spoon River College, Macomb, on February 1; Holiday Inn, Mt. Vernon, on February 12; Cook County Farm Bureau on February 15 (see http://web.extension.illinois.edu/state/calendar_event.cfm?ID=64513); Lincoln Land Community College (Springfield), on March 22; Kankakee Community College on March 29; Lincoln Land Community College (Litchfield) on April 5. Details and registration information for all but the Cook County program are available at <http://web.extension.illinois.edu/smallfarm/puttingsmallacrestowork.html>.
- **Strategies to Minimize the Potential for Herbicide Injury to Specialty Crops (workshop), January 28, 2014.** 10:00 a.m. – 1:00 p.m. Galesburg Extension Office, Galesburg, IL. No cost, lunch will be offered. For more information and to register, see <https://webs.extension.uiuc.edu/registration/?RegistrationID=9232>.
- **Horseradish Growers Conference, January 30, 2014.** Madison-Monroe-St Clair Branch Office, Collinsville, IL. Contact Patricia Stanton, 618-344-4230 or pstanton@illinois.edu, to receive registration materials.

- **Illinois Grape Growers and Vintners Association Annual Conference, January 30-February 1, 2014.** Crowne Plaza Hotel and Conference Center, Springfield IL. Contact: Megan Pressnall, Director of External Relations, IGGVA, 217-726-8518 or megan@illinoiswine.com. Registration coming soon at <http://www.illinoiswine.org/index.html>.
- **Chicago Farmers 2014 Farmland Fair, February 1, 2014.** 8:00 a.m. – 2:30 p.m., Wietendorf Agricultural Educational Center, 17840 Laraway Road, Joliet, IL 60433. The Chicago Farmers organization has been helping people with an interest in farmland connect face-to-face with each other since 1935. This year's program includes a focus on how to connect and learn about farmland on-line and increase business opportunities. For more information, see <http://chicagofarmers.org/meetinginfo.php?id=8&ts=1364858571>; to register, see <https://chicagofarmers.org/meet-reg1.php?id=8>.
- **Southwestern Illinois Commercial Tree Fruit School, February 4, 2014.** Knights of Columbus Hall, Hardin, IL. Contact: Michelle Vogel at 618-576-2293 or mbergv@illinois.edu. Registration information at <http://web.extension.illinois.edu/ccgms/>.
- **Southern Illinois Commercial Tree Fruit School, February 5, 2014.** Mt Vernon Holiday Inn, Mt. Vernon, IL. Contact: Patricia Stanton at 618-344-4230 or pstanton@illinois.edu. Registration information at <http://web.extension.illinois.edu/mms/>.
- **Stateline Fruit and Vegetable Growers Conference, February 7, 2014.** Loyola University Retreat and Ecology Campus, Woodstock IL. Educational program to address important issues faced by growers today and to explore future opportunities in the region. Registration fee is \$60 per person, and one guest per registrant can attend for an additional \$40. Lunch is included. The registration form and agenda are available at <http://web.extension.illinois.edu/lm>. For more information email Connie Echaiz at cechaiz@illinois.edu or call 847-223-8627.
- **Fruit Tree Pruning Hands-on Workshops, February 14, 2014 (PrairieErth Farm near Atlanta) and March 7, 2014 (Hildenbrand Farm near Pontiac).** 1:00 – 3:00 p.m. Contact Bill Davison at 309-663-8306 or wDavison@illinois.edu or see <https://webs.extension.uiuc.edu/registration/?RegistrationID=9249>.
- **Fresh Market Pepper Production Webinar, February 10, 2014.** 6:00-7:30 p.m. Topics include: types/varieties, production practices, IPM, harvest/post-harvest handling, and marketing. Register at <https://webs.extension.uiuc.edu/registration/?RegistrationID=9352>.
- **Illinois Small Fruit & Strawberry School and Southern Illinois Commercial Vegetable School, February 11-12, 2014.** Mt Vernon Holiday Inn, Mt. Vernon, IL. Contact: Patricia Stanton at 618-344-4230 or pstanton@illinois.edu. Registration coming soon at <http://web.extension.illinois.edu/mms/>.
- **eOrganic webinar on organic management strategies for spotted wing Drosophila, February 11, 2014.** 1:00 p.m. Central Time. No charge; advance registration is required. Attendees will be able to type in questions for the presenters. Register at: <https://www1.gotomeeting.com/register/720633376>.
- **GAPs Workshop, February 12, 2014.** University of Illinois Extension Westchester Branch 2205 Enterprise Dr., Suite 501, Westchester, IL (Cook County). Register at http://web.extension.illinois.edu/state/calendar_event.cfm?ID=64473.
- **Meet the Buyers, February 18, 2014.** Orland Park Civic Center, 14750 S. Ravinia Ave., Orland Park, IL 60467. Register at http://web.extension.illinois.edu/state/calendar_event.cfm?ID=64514.
- **11th Annual Central Illinois Composting Symposium, "What's the Dirt on Composting," February 19, 2014.** 9:00 a.m. – 3:00 p.m. \$30.00 registration fee. For more information and to register, contact Deborah Cavanaugh-Grant at 217-782-4617 or cvnghgrn@illinois.edu; see at <http://web.extension.illinois.edu/lms>
- **Kankakee Fruit and Vegetable Growers Symposium, February 20, 2014.** 8:30 a.m. – 4:00 p.m., Kankakee Community College, 100 College Drive, Kankakee IL 60901. Registration fee is \$25 (which includes lunch and handout materials) or \$35 (which includes lunch, handout materials, and the *2014 Midwest Vegetable Production Guide*) if paid by February 14, 2014. To register, see <https://webs.extension.uiuc.edu/registration/?RegistrationID=9535> or call James Theuri at the University of Illinois Kankakee County Extension Office at 815/933-8337 for more information.
- **Hydroponic Production Workshop, St. Charles, IL, February 25-26, 2014.** University of Illinois Kane County Extension Office and the St. Charles Horticulture Research Center. A 2-day workshop on basic hydroponic principles and practices, with classroom and hands-on lab activities. \$95 per person, with one guest per registrant at an additional \$45. For more information or to register please, email Shelby Henning at shenning@illinois.edu or call 630-584-7254. *See the agenda for this workshop under the Vegetable Production heading below.*
- **MOSES Organic Farming Conference, February 27-March 1, 2014.** La Crosse Center, La Crosse, WI. For more information and to register, see <http://mosesorganic.org/conference/>.

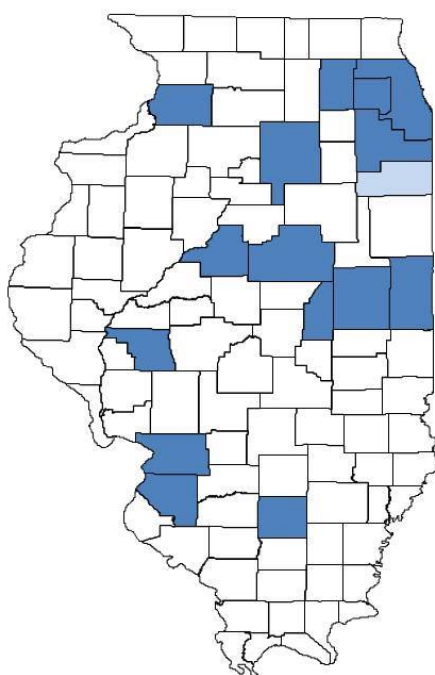
- **Illiana Vegetable Growers Symposium, March 4, 2014 (rescheduled).** Teibel’s Restaurant, Schererville, IN. For more information and to register, see <https://www2.ag.purdue.edu/hla/fruitveg/Pages/Events.aspx> or contact Purdue Extension-Lake County at (219) 755-3240. For questions on the program, contact Liz Maynard at (219) 531-4200 Ext. 4206.
- **Northern Illinois Strawberry Symposium, March 5, 2014.** Dining on the Green, 349 Main Street, Park Forest, IL 60466. For more information and to register, see http://web.extension.illinois.edu/state/calendar_event.cfm?ID=64515.

Fruit and Vegetable Production and Pest Management

Updated Status of Brown Marmorated Stink Bug

Let’s start with the good news ... we received no reports of significant damage caused by brown marmorated stink bug to fruits or vegetables (or other crops) in Illinois in 2013. It seems unlikely that this insect will cause widespread damage in Illinois in 2014. However, it has been detected in several counties, and as populations build, localized infestations may cause some degree of crop damage in 2014.

Kelly Estes, the coordinator of the Illinois CAPS (Cooperative Agricultural Pest Survey) program provided the map below that shows the distribution of confirmed detections of brown marmorated stink bug in Illinois through 2013. Most of these detections resulted from collections of adult brown marmorated stink bugs on or inside houses (where they aggregate to pass the winter). Where adults are invading buildings, it is likely that populations have begun to establish in surrounding crops and woods, but where numbers on or in buildings in the fall are very low (as is the case for almost all detections so far), observations from eastern states suggest that field populations are likely to be light or very light in the subsequent crop season.



Brown Marmorated Stink Bug Confirmations	
County	Year Confirmed
Cook	2010
Kane	2011
McLean	2011
Champaign	2011
Du Page	2012
Vermillion	2012
Whiteside	2012
Madison	2012
Morgan	2012
St. Clair	2013
Tazewell	2013
LaSalle	2013
Piatt	2013
Jefferson	2013
Will	2013
Kankakee*	2013

* suspected, but unconfirmed

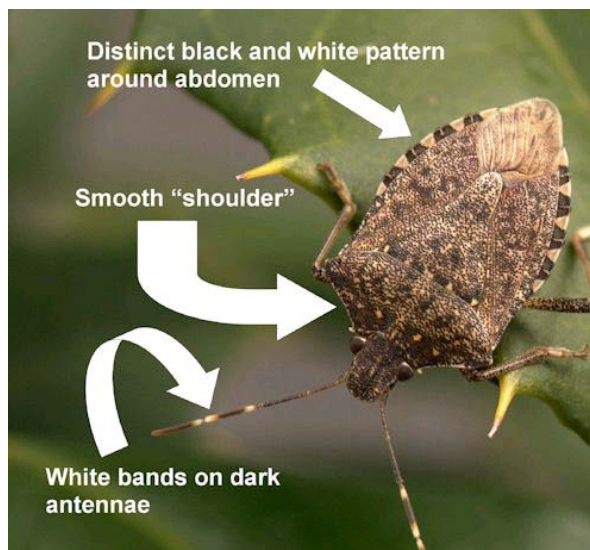
Kelly Estes, State Survey Coordinator
Illinois Cooperative Agricultural Pest Survey Program



So, a brief summary of this insect’s history and some guidelines for the future ... Brown marmorated stink bug was “introduced” to North America (accidentally) and first detected near Allentown, PA, in 1998. It’s likely that large numbers aggregated in the fall in a shipping container in China, the container and its intended goods were shipped to a port on our Atlantic coast, and the stink bugs dispersed from the container upon arrival. Because it enters all kinds of

containers (including shipping crates, semi-trailers, and cars) as it seeks overwintering shelter in the fall, it has been transported westward and detected in several Midwestern states. Populations great enough to cause significant damage to fruits and vegetables were reported from Ohio and Kentucky in 2012 and from southern Indiana in 2013.

There are around 45 common species of native stink bugs in eastern North America, so not every brown stink bug is a brown marmorated stink bug. Keys to identifying this species are white bands on the antennae, smooth “shoulders” (without a sawtooth-like edge), and a distinct black and white pattern around the abdomen (though some other stink bugs also show this last trait). Although the identification of this species is not super-difficult, we still get a lot of suspected specimens that are not BMSB. If you think you see this insect, collect it, kill it by placing it in a container in the freezer for a week, then send it in a crush-proof container to me for confirmation – Rick Weinzierl, Department of Crop Sciences, University of Illinois, 1102 South Goodwin Avenue, Urbana, IL 61801.



Brown marmorated stink bug (USDA).

Brown marmorated stink bugs are especially troublesome for a few reasons. One is that when populations build up, they invade homes in large numbers. In this habit, they are somewhat like Asian multicolored Asian lady beetle, but their numbers in buildings can be even greater, and they smell even worse. In fruits and vegetables, their populations can reach much greater numbers than we usually see with native species, and they cause significantly more of the same kinds of damage.



Brown marmorated stink bug adults on a house in Pennsylvania (left) and on tomatoes.



Brown marmorated stink bug damage to peppers (left) and to apple (center and right).

Brown marmorated stink bug damages fruits and vegetables by inserting its feeding stylet (beak) into tissue and sucking out plant fluids. Cells around the feeding puncture are killed, and the area becomes discolored and corky.

Experiments and observations in the eastern US have shown that brown marmorated stink bugs can be very difficult to control. Where floating row covers or other approaches to excluding them from vulnerable crops are practical (such as screening vents in greenhouses), those methods can be used. Although research efforts are underway to identify and establish natural enemies for the biological control of this insect, there are no effective biological control practices available for growers to use at this time. Instead, using insecticides is the primary way to reduce infestations.

IF brown marmorated stink bugs infest fruits or vegetables in Illinois this year, the insecticides most likely to provide the best control include the pyrethroids, especially Brigade (bifenthrin) and Danitol (fenpropathrin), the neonicotinoids Belay (clothianidin) and Actara (thiamethoxam), and an old carbamate, Lannate (methomyl). All of these insecticides are highly toxic to bees and should not be used when bees are foraging on crops (or on weeds within a field or orchard), and the two neonicotinoids, Belay and Actara, should never be used ahead of bloom because they may move systemically into pollen and nectar. Registrations for these insecticides differ among crops, and it is always necessary to check labels to determine which ones can be used at what times on specific crops. Extensive evaluations of the effectiveness of many insecticides against brown marmorated stink bug have been summarized by Tracy Leskey and Greg Krawczyk (and coworkers) and can be found at <http://www.epa.gov/oppbppd1/biopesticides/nafta-workshop-slides/leskey-epa-nafta-workshop.pdf> and <http://extension.psu.edu/fruit-production/files/bmsb-slide-presentation>.

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

Hydroponic Production Workshop

The University of Illinois will host a 2-day workshop on hydroponic production on February 25 and 26, 2014, at the Kane County Extension Office in St. Charles and at the University of Illinois St. Charles Horticulture Research Center. The agenda will include both classroom and hands-on lab activities. The cost for the 2-day program is \$95 per person, and one guest per registrant will be allowed for an additional \$45. For more information or to register, contact Shelby Henning at shenning@illinois.edu or call 630-584-7254. The program for February 25 starts at 9:00 a.m., ends at 5:00 p.m., and includes an overview of hydroponic systems, the basics of greenhouse and high tunnel production, a greenhouse tour, plant nutrition basics, and specifics on production of leafy greens, cucumbers and strawberries. On February 26 (also 9:00 a.m. – 5:00 p.m.), the program covers the basics of starting a horticultural business, water testing, fertilizers and fertilization, integrated pest management, hydroponic production of tomatoes, and demonstration of hydroponic systems in the greenhouse. Lunch is provided each day.

Shelby Henning (630-584-7254; shenning@illinois.edu) and Jeff Kindhart (618-695-2770; jkindhar@illinois.edu)

Local Foods Issues

Financial Assistance for Seasonal High Tunnels through the USDA

The Natural Resources Conservation Service (NRCS) offers many conservation practices and programs to help growers implement beneficial conservation practices on their farms, through technical and/or financial assistance. The Environmental Quality Incentives Program (EQIP) is a voluntary program that I like to refer to as our “fix it” program. EQIP addresses resource concerns, or “fixes problems.” For example, through the EQIP program, eligible farm producers may apply for financial assistance for a Seasonal High Tunnel (SHT) to address the resource concerns of fruit and vegetable farms.

Here are a few quick rules for EQIP’s Seasonal High Tunnel program...

- Applicants need to be an eligible producer with a farm and tract number (through the Farm Service Agency).
- The seasonal high tunnel must be at least 6 feet tall.
- EQIP funds up to 2,178 square feet, per operation (this may be achieved in 1 or numerous high tunnels and through 1 or numerous EQIP contracts).
- All supporting practices needed to prevent ponding and runoff issues in and around the structure must also be included in the contract.
- Permanent raised beds may be installed, but all crops must be grown in the natural soil profile (omitting tables/benches, portable pots, etc.).
- Producer may be required to provide annual monitoring data to NRCS for 3 years (basic information from before and after the use of the high tunnel, i.e., crops grown, growing season length, nutrients applied, crop yields, etc.).
- Payment is based on a flat rate, per unit (i.e., \$3.75 per square foot).

For those of you who have looked into EQIP’s Seasonal High Tunnel programs in the past, you will recall the rule stating cost sharing on high tunnels was allowed only where the same crop had been grown for the last 2 out of 5 years.

This does not apply in 2014!

You may apply for EQIP at ANY TIME! Applications are accepted on a continuous basis. The next 2 application batching period deadlines for Illinois are March 21 and May 16.

I cannot stress enough the importance of developing a relationship with your local field office. Simply google “IL NRCS Field Office,” to find a complete directory of NRCS Field Offices across the state! Your local field office can explain all rules and requirements for EQIP and any other program or form of technical assistance we provide. We offer assistance for addressing erosion, implementing cover crops, creating pollinator habitat, and much more!

I encourage you to please start with your local NRCS office. If any further assistance is needed, you may contact me at the Piatt County Field Office (217-762-2571 ext. 3) or Jamie.Jones@il.usda.gov.

Jamie Jones, Soil Conservationist/Area 5 Organic Specialist, USDA - NRCS Piatt County - Illinois

Cost-Share Opportunities for Specialty Crop Growers’ Food Safety Audits

Under an Illinois Department of Agriculture Specialty Crops Block Grant, specialty growers have the opportunity to receive a cost-share payment to partially offset the costs for a GAPs audit. If you have undergone the Good Agricultural Practices training and are a farmer in Illinois, you qualify to be for this program. See <http://web.extension.illinois.edu/smallfarm/downloads/50983.pdf> to download an application for the Audit Cost-Share after undergoing the audit. We urge those who are interested in this plan to take advantage of it this year, as it may not be available later. Contact the Local Food Systems and Small Farms Educator close to you (see the listing at the end of this newsletter) for more information.

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

The Illinois Small Business Contracts Act

Does your business sell less than 6 million dollars each year? If so, this may represent an opportunity for you ...

The State of Illinois spends billions of dollars purchasing thousands of different products and services each year. The state's demand is consistent, and it has a number of incentives to help Illinois' small businesses grow and prosper. The Small Business Contracts Act (Public Act 97-307) recognizes the economic impact of small business and sets an annual goal that at least 10% of the state's contracts are awarded to small business. The Illinois Chief Procurement Office requires state agencies making one-time commodity and service procurements of \$50,000 and less to purchase from registered small businesses.

How do I get registered as a small business? Registration is easy. Here's what you'll need to do to get registered and begin receiving email alerts when the state of Illinois needs what you're selling:

- Visit www.Sell2.illinois.gov
- Download the Small Business Application Form (http://www2.illinois.gov/cms/business/sell2/documents/sel_bapp.pdf), complete it, and mail it back to the State of Illinois. The application is a fillable / savable PDF form. This application may be emailed, and additional documents (e.g. income tax forms) may be scanned and emailed to eec.smallbusiness@illinois.gov.
- Include your State and Federal Tax returns (first page only for corporations and LLCs) with your application.
 - Manufactures must also provide the Illinois W-3.
 - Sole Proprietorships must also provide federal Schedule C.
- Follow the application directions carefully to avoid delay in processing.
- Enroll as a user of the Illinois Procurement Bulletin at <http://www.purchase.state.il.us/ipb/registration.nsf/RegMainFrameset?OpenFrameset>. The most common commodity code for growers would be 5148369 "Fresh Fruits and Vegetables," but take a look at the [commodity table](#) to see if there are other categories that apply to your operation (hint: search for "Groceries").

The form and additional documents may also be mailed to:

Chief Procurement Office
Attn. SBSP
401 South Spring Street Suite 515 Stratton Office Building
Springfield, IL 62706

Direct any questions to eec.smallbusiness@illinois.gov.

After you have registered as a Small Business with the State of Illinois, make sure to update your [Market Maker](#) profile to let others know you are registered.

Mary Hosier (217-333-7512; mhosier@illinois.edu)

Less seriously ...

- My daughter asked me for a pet spider for her birthday, so I went to our local pet shop and they were \$25!!! Blow this, I thought, I can get one cheaper off the web.
- I was at an ATM yesterday when a little old lady asked if I could check her balance, so I pushed her over.
- Statistically, 6 out of 7 of Snow White's dwarves are not Happy.
- My neighbor knocked on my door at 2:30 a.m. this morning, can you believe that, 2:30am?! Luckily for him I was still up playing my tuba.

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
BILL DAVISON , Livingston, McLean, and Woodford counties	309-663-8306	wdavison@illinois.edu
CONNIE ECHAIZ , Lake and McHenry counties	847-223-8627	cechaiz@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 , Cook County	708-449-4320	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
JAMIE WASHBURN , Effingham, Jasper, Clay, Fayette, Clark, Crawford and Edgar counties	217-374-7773	jlwshbrn@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
Horticulture Research-Extension Specialists at our Research Stations		
JEFF KINDHART , Dixon Springs Agricultural Center	618-695-2770 618-638-7799 (cell)	jkindhar@illinois.edu
SHELBY HENNING , St. Charles Horticulture Research Center	630-584-7254	shenning@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	weinzierl@illinois.edu

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