



# UNIVERSITY OF ILLINOIS EXTENSION

College of Agricultural, Consumer, and Environmental Sciences

## *Illinois Fruit and Vegetable News*

Vol. 22, No. 11, July 7, 2016

Editors: Nathan Johannang & Bronwyn Aly

*A newsletter to provide timely, research-based information that commercial fruit & vegetable growers can apply to benefit their farming operations.*

Address any questions or comments regarding this newsletter to the individual authors listed after each article or to its editors, Nathan Johannang, 618-687-1727, [njohann@illinois.edu](mailto:njohann@illinois.edu) or Bronwyn Aly 618-382-2662, [baly@illinois.edu](mailto:baly@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, contact Nathan Johannang at the phone number or email address above.

### *In this issue...*

- **Upcoming programs** (listings for beginning and established growers)
- **Regional Reports** (northern, north-central, southern Illinois)
- **Vegetable Production and Pest Management** (Cover Crop Highlight - Buckwheat, Heat transfer damage on pepper plants)
- **Wildlife Management** (Raccoons, woodchucks, and skunks, oh my.)
- **News & Announcements** (IDOA cost share available for organic growers, St. Charles twilight meeting cancelled)
- **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://illinoisare.org/> and <http://illinoisare.org/calendar.php>

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

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

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

- **USDA- ARS Webinar: Specialty Crops Market News --Capturing the Universe. Thursday, July 14, 2016 2:00 p.m. Eastern time (3:00 p.m. Central).** This Webinar will be discussing some of the online resources the USDA-ARS has available through the [Specialty Crops Market News](#) Website. For more information or to register for this webinar [click here](#).
- **Good Agricultural Practices (GAPs) Webinar Series, Tuesdays: July 26 – August 16, 2016 from 6:00 p.m. - 8:00 p.m.** **Please note the change in date for this webinar series.** The webinar series is being offered by University of Illinois Extension. Each registered participant will be sent webinar instructions, handouts, and a GAPs manual prior to the first webinar, and webinar instructions before each subsequent session. There is a \$25 fee per participant and pre-registration along with pre-payment is required by July 22, 2016. Please register online at: <https://web.extension.illinois.edu/registration/?RegistrationID=14676> For more information, please call James Theuri, [jtheu50@illinois.edu](mailto:jtheu50@illinois.edu), at Kankakee County Extension Office at 815-933-8337, or Laurie George, [ljgeorge@illinois.edu](mailto:ljgeorge@illinois.edu), at Jefferson County Extension Office 618-242-0780.
- **Southern Illinois Summer Twilight Series, 4 Monthly On-Farm Meetings on Mondays, May through August, 6:00 p.m.** For more information or details, contact Bronwyn Aly at 618-382-2662; [baly@illinois.edu](mailto:baly@illinois.edu) or Nathan Johannang at 618-687-1727; [njohann@illinois.edu](mailto:njohann@illinois.edu) Save the dates, more details to follow:
  - **July 18** – Spring Valley Farm, Pulaski, IL

Jerry P. and Lisa D. Thurston and family of Spring Valley Farm will be hosting our third twilight meeting on Monday, July 18, 2016 starting at 6 p.m. Spring Valley Farm, located in rural Pulaski County, is a fourth-generation family farm raising vegetables, grapes, traditional row crops, hogs, and cattle. In 2011, the

portion of the farm where produce is grown was designated a Centennial Farm. Spring Valley began selling to Schnuck's stores in Cape Girardeau and Carbondale in 2006. They have expanded their business with Schnuck's each year since, and last year they brokered with Robinson Fresh, making their produce available in Wal-Mart stores as well. In 2015, Spring Valley Farm passed their first USDA GAPs (Good Agricultural Practices) audit, certifying the farm for all types of peppers, squash, and eggplant. Over the course of the evening, Jerry and Lisa will share their experiences producing, marketing, packing, and shipping vegetable crops. Those attending will have the opportunity to tour their production fields and packing shed. Clay Mitchell, with Robinson Fresh, will discuss marketing opportunities for growers as well as ways his company supports growers wishing to receive GAPs certification.

**DIRECTIONS:** From Ullin, head south on old highway 51 to Pulaski. At the south edge of Pulaski turn right (west) on to W. Commercial Ave. Continue on across the railroad tracks (turns into Fairground Rd.) straight for 1.5 miles to the farm.

This program is provided at no cost but pre-registration is appreciated. Please register online at <https://web.extension.illinois.edu/ghhpsw/> or by calling 618-382-2662 no later than Friday, July 15, 2016.

- **Aug 8** – Grant's Orchard, near Johnston City, IL
- **Illinois Pumpkin Field Day, Wednesday, August 31, 2016, 10 a.m.** Ewing Demonstration Center, 16132 N. Ewing Rd; Ewing, IL 62836. For more information, contact Nathan Johanning at 618-687-1727 or [njohann@illinois.edu](mailto:njohann@illinois.edu)
- **Meet the Farmers, Meet the Buyer. Monday, October 10, 2016, 10:00 AM to 5:00 PM** (Doors open at 9:30 AM). St. Louis University campus in the II Monastero Building, 3050 Olive Street, St. Louis, Missouri. This event is an opportunity for farmers to meet with buyers and learn what it takes to do business with the grocery and foodservice industries. To register visit <http://www.ilfb.org/ifb-news-and-events/conferences-events/october-10,-2016-meet-the-buyer-event.aspx>. For more information contact Cynthia Haskins, 309-557-2155; [CHaskins@ilfb.org](mailto:CHaskins@ilfb.org).

Anyone interested or needing a copy of the *2016 Midwest Fruit Pest Management Guide* can contact Laurie George, [ljgeorge@illinois.edu](mailto:ljgeorge@illinois.edu) at the Jefferson Co. Extension Office 618-242-0780. Plenty of copies are available!

## ***Regional Reports***

From northern Illinois... Here in Northern Illinois, we had a period of very hot weather in the 90s towards the end of June. I've been to a number of farms in the last week and have seen a lot of disease already. In the last week, I've seen Septoria on tomatoes, Cane Blight, and Fireblight on cherry trees. Growers are reminded to look at the Midwest Fruit and Vegetable Spray guides for recommended spray programs. Growers should also be vigilant with recognizing the disease and taking control of the disease once properly identified. A number of farms with high tunnels have gotten their first tomatoes in the last week.

*Grant McCarty (815-235-4125; [gmccarty@illinois.edu](mailto:gmccarty@illinois.edu))*

From north-central Illinois... The cool temperatures over the 4<sup>th</sup> of July weekend were a welcome relief to our early summer. Even more welcomed was the rain that came with it. In Macomb we are still relatively dry, not receiving the amount of rainfall others to the south encountered. The soils are still dry and cracking, and most lawns are browning, opting for dormancy as opposed to growth. From June 1 to July 6, Macomb saw a little over 2-inches of rain. Of that, 1.4-inches came this past weekend.

Spider mites found a foothold on my Cascade hops this past week. Spider mites are rarely a problem in systems that have an adequate number of beneficial predators. It seems the population established on three stressed hops and progressed to a few healthy bines. To gain an idea of an appropriate rotation of pesticides for Midwestern hops, I treated half the infested plants with spinosad early in the week. The spinosad seems to have done the trick, but I identified a few pollinators also met their end. Many beneficial or benign insects that I often observed in my hops are now absent. For the second half of the hops, I applied neem oil earlier today. Nothing to report as of yet and this link has additional information on [spider mite control](#). Ensure the pesticides used are labeled for the crop being sprayed. Additionally, Purdue recently posted a series of videos from their [2016 Hops Production Workshop](#). They are a good resource if you are a hops grower or interested in breaking into this field.

Yesterday I harvested onions, and carrots are next on the list for Friday. As these crops are pulled, the transition to the fall growing season comes to mind. An early start to fall-seeded plants will ensure adequate growth before cool temperatures. 2015 was a cool growing season for us. In fact, our average soil temperature at 4" under bare soil was highest in July at 79.8 degrees Fahrenheit in Monmouth. For 2016, our 4" under bare soil temp stayed above 80 degrees Fahrenheit for most of June. Growers can use data to plan accordingly from the [Illinois State Water Survey Website](#).

*Chris Enroth (309-837-3939; [cenroth@illinois.edu](mailto:cenroth@illinois.edu))*

From southern Illinois ... Despite our stretch of hot and dry conditions, we finally got a break over the holiday weekend with widespread rain and unseasonably cool temperatures, with highs only in the 70s on Saturday and Sunday. The rain for the most part was a slow, steady rain which was much needed and brought from 2 inches to over 3.5 depending on where you were at in the region. Now, we have gotten back to our typical very high humidity and temperatures in the low 90s. The rain was desperately needed overall. Some places had gotten some spot showers before, but many were very dry to the point of causing some stress on crops that were not irrigated. We continue to be in a pattern of possible scattered storms, with the potential for significant rainfall totals. Flooding is now occurring in many areas in the extreme southern part of the region.

Lots of work to be done out in the field! Harvest of field tomatoes and sweet corn has started. We have a corn earworm trap up in Franklin Co. at the Ewing Demonstration Center, and I did notice a small flight about 10 days ago, so make sure to keep any pollinating sweet corn protected. We are now in peach season with harvest on some early cling peaches and the start of a few Red Havens as well. Back on my blueberries at home, the early and mid-season varieties are pretty well done and we are midway through the late season varieties like Chandler, Liberty, and Elliott. We are in the midst of harvest on the early blackberry varieties like Natchez and Kiowa. I took a moment to put a few of the unsprayed Kiowa blackberries in some sugar water to look for spotted wing drosophila. In about a cup of berries, I easily found 20-30 larva, and I'm sure a few more were hiding. They are definitely out here in the Murphysboro area, and I am sure most other places across the region. Refer to the last issue of the newsletter (issue 10) for more details on SWD monitoring and management.

On June 23<sup>rd</sup> and 24<sup>th</sup>, we were able to get our pumpkins transplanted for pumpkin field day at the Ewing Demonstration Center, including two pest management trials (herbicide & fungicide) and a pumpkin variety trial with 72 different varieties, from 'Munchkin' to 'Polar Bear' and everything in between. Thanks to coworkers, Maggie Rose, Bronwyn Aly, Laurie George, Lynn Heins, and Marc Lamczyk for all of the help getting everything out! The transplants are looking good, and are already putting on multiple new leaves. They have really taken off with this rain and heat!



*Nathan Johannning (tractor), Maggie Rose (left) and Bronwyn Aly (right) hard at work, transplanting pumpkins at the Ewing Demonstration Center for the 2016 Pumpkin Field Day! Photo: L. Heins.*

*Nathan Johannning (618-687-1727; [njohann@illinois.edu](mailto:njohann@illinois.edu))*

## ***Vegetable Production & Pest Management***

### **Cover Crop Highlight - Buckwheat**

There are always opportunities to include cover crops in your production system, and I just wanted to take a chance to highlight a cover crop you can make use of and some details about it.

Buckwheat is a broadleaf, summer annual cover crop most noted for its fast growth and suppression of weeds. In addition, buckwheat loves the summer heat and is somewhat tolerant of dry conditions and adapted to a wide range of soils. It is also great for the soil, and it has a fibrous root system that improves soil tilth and is able to mineralize and make additional phosphorus available to plants in the soil. The white blossoms are a favorite of pollinators, beneficial insects, and butterflies.

#### ***Planting***

Buckwheat will germinate on the soil surface with some moisture, but drilling or shallow incorporation will improve stand and consistency. Seeding rate would be 30-50 lbs/A. Utilize the higher seeding rates when surface broadcasting or where you want to be aggressive on weed suppression, and lower rates with drilling and more ideal seed bed conditions.

#### ***Termination***

Buckwheat is notorious for reseeding so you need to keep an eye on it. Also, it is fast growing, reaching maturity relatively quickly. You can get the first flowers 40 days after planting, and mature seed can form 7-10 days after flowering. It has an indeterminate habit and will continue to bloom and flower up the stem as it grows. To prevent any chance for seed formation, terminate 7-10 days after first flower. Termination is fairly easy and adequately achieved by mowing, light tillage, or herbicide burndown with glyphosate or paraquat (or others).

So what if some does go to seed? Some growers used to actually let some seed form and then mow, and it will germinate and regrow for a continued cover. Overall, although very competitive, buckwheat is not hard to kill with tillage or common herbicides. From experience, it does not tolerate the residual herbicides such as atrazine products (sweet corn) or Sandea that are commonly used in many crops along with most any broad-spectrum or broadleaf herbicides. Buckwheat seed does not have a long life (seed dormancy) so as long as you do not let any of the volunteer plants go to seed, you can get the area under control. Also, buckwheat is very frost sensitive, and it will be one of the first plants to succumb to any remote cold. In my experience in southern Illinois, plantings made at or after Labor Day generally die before they have enough growth to make much seed. Of course, this is very dependent on the timing of that first frost/freeze.

#### ***Making Use of Buckwheat***

With a fast turnaround, buckwheat would be a great summer cover crop to put out after some spring crops like greens, onions, or brassica crops as a fill before fall plantings. As I mentioned above, using it later in the season about 40-50 days before frost can be useful as well. Any time you have around month and a half of summer open in a field, buckwheat would be a good candidate to fill the spot. It will help keep the weeds down and benefit your soil at the same time!

*Nathan Johanning (618-687-1727; [njohann@illinois.edu](mailto:njohann@illinois.edu))*



*Photos: N. Johanning*

## Heat Transfer Damages Pepper Plants

On June 29, 2016, I was alerted to a pepper problem that affected over half of the plants in two raised beds which were covered by black plastic. At the level of the black plastic, about one-inch sections of the stems of affected plants were white and dry, most likely in the process of dying. Leaves were chlorotic (yellowed), and most of the older leaves fell off easily (leaf senescence). Because black plastic absorbs heat (which is how it warms the soil in spring, allowing for faster crop development), it can also transfer this heat to plant tissue it contacts, causing “burns” on sensitive tissue. Pepper stems are especially sensitive to this heat transfer. To prevent this consequence, set transplants in the center of the hole and enlarge the holes to reduce the risk of plant/plastic contact. Also, if the hole was not punched cleanly, the flapping piece of plastic can also cause the same problem and should be removed during the transplant process.



James Theuri (815-933-8337; [jtheu50@illinois.edu](mailto:jtheu50@illinois.edu))

## Wildlife Management

### Raccoons, woodchucks, and skunks, oh my.

You have probably already had rabbits visiting your crops, but now growers have indicated new problems from wildlife. Raccoons can cause damage to sweet corn, watermelon, cantaloupe and other crops. Damage to sweet corn from raccoons typically is observed as partially eaten ears with the husk pulled back. This feeding behavior often breaks the stalk when raccoons climb to reach higher ears. The damage observed on watermelon and cantaloupe from raccoons appears as holes chewed into the melon and the internal flesh being pulled out.

Skunks, being carnivores are more likely going to cause losses to poultry producers; however, they will consume sweet corn too. Damage to corn caused by skunks is usually seen only on lower ears with little or no downed stalks because they cannot climb. Skunks will also cause damage to beehives trying to access the hive for honey and larvae.

Woodchucks, also called ground hogs are herbivores and may target many types of vegetables, especially, beans, squash, peas, soybeans and alfalfa. If a woodchuck locates its den within 50 to 150 feet of your crop area, extensive damage to crops is possible.

So what to do? There are no repellents that are registered for use to deter these three animals. Exclusion is one option. For raccoons and skunks an electric fence surrounding the crop field can reduce damage. One or two hot-wires can be placed 6 inches and a second 12 inches off the ground. The fence can be turned on at dusk and off again at daybreak. Woodchucks are great climbers and diggers so a more extensive fencing system is usually required. The electric fence design previously mentioned has worked in some situations. In other situations, a fence that is buried about a foot deep, extending to three to four feet above the ground, with an electric wire 4 to 5 inches above the ground outside the fence to prevent climbing and digging is necessary.

Removal of problem animals is also an option. A nuisance wildlife damage permit is required and can be obtained from an Illinois Department of Natural Resources wildlife biologist. The University of Illinois Extension has a website entitled "Living with Wildlife in Illinois" where you can find the wildlife biologist in your region to obtain a permit free of charge. You can also find information about wildlife nuisance damage reduction techniques. The website address is <http://web.extension.illinois.edu/wildlife/>.

Dave Shiley (217-543-3755; [dshiley@illinois.edu](mailto:dshiley@illinois.edu))

## ***News & Announcements***

### **Cost Share Rebate Funds Available For Organic Farmers, Producers**

Springfield, IL. - The Illinois Department of Agriculture wants to remind organic producers and handlers about federal funds that are available to help them either obtain or renew their USDA certification in the federal fiscal year that ends September 30, 2016.

In 2015, the Illinois Department of Agriculture secured \$202,000 to distribute to qualified applicants over a three year period. Last year, \$74,000 was distributed leaving \$128,000 still available for distribution.

This program recognizes four categories of certification: crops, wild crops, livestock, and processing and handling. The reimbursement covers 75-percent of the certification costs, up to \$750.

"Farming is an expensive occupation," said Director Raymond Poe. "From buying land and equipment to securing the proper license and certification, the soaring costs associated with production agriculture have had a big impact on our farms. I applaud and appreciate this effort by the USDA to help Illinois farmers."

These funds will be distributed to eligible recipients in the order their application packets are returned. In Illinois, operations must apply to the Illinois Department of Agriculture. Entities operating in more than one state should apply in the state where their federal tax returns are filed. Producers may apply for reimbursement even if they have received payments through the program in previous years; however, they only may apply for reimbursement once per certificate, or certification category per year, as verified by certification documentation.

Operations must possess current USDA organic certification to be eligible for reimbursement. This means the operation must have successfully received its initial USDA organic certification from a USDA-accredited certifying agent, or must have incurred expenses related to the renewal of their USDA organic certification from a USDA-accredited certifying agent between October 1, 2015 and September 30, 2016. Operations with a suspended or revoked certification are ineligible to participate in the program.

This financial assistance comes from the USDA's National Organic Certification Cost-Share Program. Applications will be accepted at the Illinois Department of Agriculture through November 1st. Application forms and additional details can be obtained by calling the department's Bureau of Marketing, Promotion, and Grants at (217) 524-9129, or by visiting its website at <http://www.agr.state.il.us/>.

*Illinois Department of Agriculture*

### **St. Charles Twilight Meeting Cancelled**

The final twilight meeting for the St. Charles Horticulture Research Center scheduled for July 21, 2016 prior to permanently closing has unfortunately been cancelled. This season has presented many difficulties that have resulted in this decision. The center has been plagued by several flooding events, multiple equipment failures, and a lack of support personnel that have negatively impacted many of the planned trials for 2016.

This decision was not made lightly, and the difficulties surrounding facility operations and the fast-approaching closing date of September 30, 2016 have been very difficult to navigate in conjunction with pertinent specialty crop research. I

would personally like to extend my thanks to all who have supported my research program over the past three years. I couldn't have pulled together the successful program that I had without your encouragement and help. Although the successfully implemented trials for this season do not warrant a full twilight meeting, interested parties are more than welcome to schedule a visit to the center to observe current research.

*Shelby Henning (630) 584-7254; [shenning@illinois.edu](mailto:shenning@illinois.edu)*

***Less seriously***

“Knowledge is knowing a tomato is a fruit; Wisdom is not putting it in a fruit salad.” – *Brian Gerald O’Driscoll*

“The hardest thing in the world to understand is income taxes.” – *Albert Einstein*

friEND, bestfriEND, boyfriEND, girlfriEND, food - only food has no end...

“Food is our common ground, a universal experience.” – *James Beard*

“You don’t have to cook fancy or complicated masterpieces-just good food from fresh ingredients.” – *Julia Child*

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

<b>Extension Educators – Local Food Systems and Small Farms</b>		
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