ILLINOIS Extension

COLLEGE OF AGRICULTURAL, CONSUMER & ENVIRONMENTAL SCIENCES

Illinois Fruit and Vegetable News

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Editors: Nathan Johanning & 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 Johanning, 618-687-1727, njohann@illinois.edu or Bronwyn Aly 618-382-2662, 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 Johanning at the phone number or email address above.

In this issue…

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 website** at:
http://web.extension.illinois.edu/smallfarm/ and the calendar of events at
http://web.extension.illinois.edu/units/calendar.cfm?UnitID=629.

- **Southern Illinois Summer Twilight Series: Dixon Springs Ag Center, Monday, May 21, 2018 6 p.m. 354 State Highway 145 N; Simpson, IL 62985.** This first twilight meeting of the summer series will be an open house for the "re-opening" of the horticulture research at the Dixon Springs Ag Center. We will tour the high tunnels and the current research in each, including hydroponic tomatoes, cucumbers, lettuce and in-ground production of a wide range of vegetable crops. Save the date and registration information will be up soon! For further information contact Bronwyn Aly at baly@illinois.edu or 618-695-6060. The other dates for the series are listed below:
    - **Blueberry Hill Farm, Cobden, IL June 18, 2018**
    - **Karl Sweitzer Produce, Cobden, IL July 16, 2018**
    - **Cahokia Rice, McClure, IL August 20, 2018**
- **Southwestern Illinois Tree Fruit Twilight Meeting. Wednesday, May 22 from 5:30 to 7:30 p.m. at Broom Orchard 12803 Broom Rd, Carlinville. IL.** Registration can be found at https://web.extension.illinois.edu/registration/?RegistrationID=18580 or by calling 217-532-3941. For more information people can contact Ken Johnson at 217-243-7424 or kjohnso@illinois.edu or Andrew Holsinger 217-532-3941 or aholsing@illinois.edu
- **2018 Illinois Summer Horticulture Field Day, Thursday, June 7, 2018.** Annual Illinois State Horticulture Society annual summer field day will be hosted by Flamm's Orchard in Alto Pass, IL. Advance registration is

$27 and includes lunch. For more information and registration visit https://www.tickettailor.com/events/ishs/136569/ or contact the society at ilsthortsoc@gmail.com or 217-621-7371

- **Produce Safety Alliance Grower Training Course, Monday August 13, 2018 8 a.m. – 5 p.m. Jefferson County Extension Office, 4618 Broadway, Mt. Vernon, IL.** For more information on this grower training and to register visit http://go.illinois.edu/PSAMtVernon2018 or contact Laurie George at ljgeorge@illinois.edu or 618-242-0780. Registration will close on July 27, 2018. There are a limited number of seats available for this training. Once the course is full, registrations will close.
- **2018 Pumpkin Field Day, Thursday, September 6, 2018, 10 a.m.** Ewing Demonstration Center (located about 20 minutes south of Mt. Vernon, IL) 16132 N. Ewing Rd. Ewing, IL 62836. Pumpkin Variety & Pest Management trials, No-till Production and more! Save the date; more details to come! For additional information contact Nathan Johanning at 618-687-1727 or njohann@illinois.edu.
- **Midwest Mechanical Weed Control Field Day Wednesday September 26, 2018 PrariErth farm in Atlanta, Illinois.** Visit https://thelandconnection.org/farmers/mechanical-weed-control-field-day-2018 for more details and information about the field day as time gets closer.

News and Announcements

Dixon Springs Agricultural Center Twilight Meeting Monday, May 21

University of Illinois Extension is excited to be the host for the first of four twilight meetings at their newly rejuvenated horticulture research and demonstration area at the Dixon Springs Agricultural Center Monday, May 21, 2018 starting at 6 p.m. University of Illinois Extension Local Food Systems & Small Farms Educators, Bronwyn Aly and Nathan Johanning, have been partnering with area farmers over the past four years to provide evening "twilight meetings" to highlight and demonstrate diverse farming enterprises across southern Illinois. Anyone involved or interested in local food production or learning more about farms in our region is encouraged and invited to attend. The Dixon Springs Agricultural Center, established in the late 1930's, is the southernmost agricultural research center for the University of Illinois. For almost 60 years, fruit and vegetable research and extension outreach has been conducted on-site, providing Midwest growers with a wide range of information on various topics including: variety selection, intensive production and management practices, pick-your-own marketing, strawberry plasticulture production, and high tunnel production. After a brief closure, the new Dean of the College of Agriculture, Consumer, and Environmental Sciences, Dr. Kimberlee Kidwell, re-opened a portion of the horticulture research area, tasking southern Illinois Agriculture and Natural Resource Extension Educators to continue to provide research and demonstration outreach to the regional community. Extension staff are currently focusing on production and management systems within high tunnels on various vegetable and fruit crops to fulfill this charge.

Over the course of the evening, Aly and Johanning will discuss the different types of high tunnel structures on-site, as well as the various production and management practices for each. Cucumbers, indeterminate tomatoes, strawberries, and various greens will be demonstrated in a hydroponic production system. Tomatoes, peppers, cucumbers, greens, and various other vegetables and flowers will be shown growing in ground beds. We encourage anyone interested in learning more about diverse vegetable production in southern Illinois to capitalize on this on-farm learning and networking opportunity.

The University of Illinois Dixon Springs Agricultural Center,is located at 354 State Highway 145 N, Simpson, IL 62985. Directions: From Harrisburg, IL: travel south on State Highway 145 for 24 miles. The horticulture area and high tunnels will be on your right before you get to the main office for the Center. From Vienna, IL: Take State Highway 146 east to State Highway 145. Take Highway 145 north for about 4 miles and the horticulture area and high tunnels will be on your left just past the main office for the Center.

This program is provided at no cost but pre-registration is appreciated. Please register online at 2018 Southern Illinois Summer Twilight Series or by calling 618-695-6060 no later than Friday, May 18, 2018. For more information about the Twilight Meeting contact:

Bronwyn Aly - baly@illinois.edu; 618-695-6060
Nathan Johanning - njohann@illinois.edu; 618-687-1727

Grower Samples Needed for Soil Screening for Copper in Fruit & Vegetable Fields

Researchers in the Department of Crop Sciences at the University of Illinois Urbana-Champaign are looking for vegetables and fruit growers to participate in a state-wide screening for soil copper build-up. Use of copper-based fungicides and bactericides such as Bordeaux mix, Kocide, Champ, Tenncop, Nordox, and Cueva can lead to accumulation of copper in soils. In regions of Australia and Europe, repeated use of copper to control crop pathogens has led to copper accumulation in soils that has compromised soil fertility. However, little is known about copper accumulation in the US, including Illinois. As a first step to assessing this potential issue in Illinois, U of I researchers are looking to test soils across the state for potential build up of copper.

To this end, U of I researchers are offering a free screening of soils for copper (total concentration) to growers who mail in a soil sample to the Soils Lab in the Department of Crop Sciences. Those interested should provide at least 1 cup of dry soil sampled as a composite from an area of interest. Up to 10 samples per grower will be screened at no cost. Contact information, including email, should be included so that results can be communicated. Soil samples should be packed in a sealable plastic bag and mailed to:

Soils Lab
1014 Plant Sciences Laboratory
1201 S Dorner Drive
University of Illinois Urbana-Champaign
Urbana, IL 61801

For further questions or information contact Andrew Margenot at margenot@illinois.edu or 217-333-3420.

Regional Reports

From west central Illinois… Summer-like highs has kept me holding a hose a couple times a day. Daytime temperatures have been reliably in the 80s, and we've inched into the 90s on a few occasions. A slight rain chance is in forecast for this coming weekend.

Fieldwork continues amidst dry soil conditions. Growers sowing summer crops have their fingers crossed for rain, or reseeding may be in the cards.

Field peas are struggling with the slow start to spring and now the sudden onset to summer-like weather. One grower commented he would be surprised if he gets a crop off his peas this year. The freeze we experienced three weeks ago, hit our early peach varieties hard. Speaking with growers and gardeners, everyone commented how their early peach trees lost almost every flower. Later peaches and every apple tree I have observed seem to be performing well. The Granny Smith apple tree outside my office window was in full bloom last week.

In our Extension food donation garden, field tomatoes are in along with our peppers and squash. Cucumber and bean seed were planted and have emerged with a few days.

Hops have been trained onto their trellis. Generally hops need 120 to 150 lbs of nitrogen per acre which is about 0.33 pounds of actual nitrogen per 100 square feet. (MSU Extension) Split this total nitrogen requirement in three to four applications. For instance, during the growing season I apply 4 ounces of bloodmeal (nitrogen) split into four, 1 ounce applications from May to about mid-July. Once the hop bines end their vegetative growth and begin developing cones it is important to halt any nitrogen applications. I did my first application of bloodmeal (1 oz per plant) the second week of May. Along with topdressing with one cup of worm castings and mulched with two inches of compost.

Asparagus harvest began last week, and strawberries are in full bloom. At this time last year asparagus harvest was just winding down.

Chris Enroth (309-837-3939; cenroth@illinois.edu)

From the St. Louis Metro-east… As expected, things are moving rapidly forward with the much anticipated spring warmup. In fruit crops, peaches are anywhere from shuck split to shucks off, and the crop looks big. All apple cultivars have passed full bloom and are in various stages of petal-fall into 1st cover. Like peaches, thinning operations have started. Buds are readily visible in blackberries. A note on Prime-Ark Freedom. In a past presentation by John Clark, University of Arkansas and breeder of Prime-Ark Freedom, he commented that Prime-Ark Freedom was likely very low chill. Local evidence supports this conclusion. At the time of the 2017 Gateway Small Fruit and Vegetable Conference (Feb 15) last year, Prime-Ark Freedom was already significantly leafed out, but temperatures stayed above freezing so no damage was reported. That early bud break did not work out in 2018. Temperatures dropped several times below freezing after bud break, resulting in significant floricane damage. Blueberries are in bloom and grapes are in initial cluster development. Plasticulture strawberries are very near first harvest. A lot of frost irrigation went into the 2018 crop.

A very happy site to see sweet corn up. One grower reported a failure with a March 10 planting but later March plantings on retained viability. Asparagus has been in harvest 1-2 weeks. Warm-loving vegetables like eggplant and peppers have been field planted, and growers are moving into cucurbits like summer squash and cantaloupe.

Peach - just shy of shucks off (left) and Golden Delicious – Petal Fall (right) Photos: E. Wahle

Elizabeth Wahle (618-344-4230; wahle@illinois.edu)

From southern Illinois… I think we maybe have just skipped over spring and headed straight to summer in southern Illinois. The last issue we were struggling to get warm days and were happy with 70s and around 80s. Since then Mother Nature turn up the heat and we have had high in the mid-80s to mid-90s. We have gotten very close to if not set some new record highs a few days over the past week. I know earlier this week I saw 94˚ on my thermometer at home. Overall, things had been dry until the middle of this week. We have had scattered pop-up storms throughout the area. If you caught one of these showers with multiple inches of rain, you are pretty wet. However, some places have completely missed the rain and things are rather dry. Rain chances are predicted to be up through the end of the week and then decrease by next week.

With the heat, things are really growing. Potatoes are now up and about 8-10" tall. Asparagus is almost growing faster than we can keep it harvested and all transplants out in the field are putting on growth fast. Plasticulture strawberries are in full harvest. The sudden warm weather has compressed the harvest season with early and later varieties all coming in very close to each other. Blueberries are just about to the tail end of bloom.

Nathan Johanning (618-687-1727; njohann@illinois.edu)

From Dixon Springs Ag Center…Harvest began in the hydroponic cucumber trial last Friday (May 11, 2018) and will continue every Monday, Wednesday, and Friday until the trial is terminated. On Monday, May 14th, we harvested about 55 pounds of cucumbers. At this rate, Julie and I may start sounding like Forrest Gump's friend, Bubba, sliced cucumbers, fried cucumbers, coconut cucumbers, cucumber gumbo, boiled cucumbers, etc. Vertical stackers with San Andreas strawberries are set up and growing and the hydroponic indeterminate tomatoes are setting fruit and their second flower cluster. We planted three rows of tomatoes, peppers, and cucumbers in the second tunnel in ground beds last Tuesday (May 8th) and by Thursday morning the deer had taken out about 80 plants. Needless to say, we have netting in place across the endwalls to keep them out at night, and replacement plants went in on Friday (May 11th).

This plant loss was most significant on our row of determinate tomatoes, and after replacements, we only have enough plants to do one row, instead of the planned second row. This week we are working on getting the rest of the in ground beds planted and finishing up the remaining hydroponic demonstration systems.

We hope to see everyone at the Dixons Springs Twilight Meeting Next Monday, May 21 at 6 p.m.!!

Bronwyn Aly (618-382-2662; baly@illinois.edu)

Hydroponic cucumber variety trial at DSAC began harvesting on May 11, 2018 (left); San Andreas strawberries in hydroponic vertical stacking system (right); Deer damage to tomato plots that required about 80 replacements (bottom). Photos by B. Aly.

Less seriously… In light of the fact that most people have had some type of deer situation on their farm, although generally not self-inflicted like this one.

Roping a Deer – Funny Story http://www.twitfall.com/funny-stories/roping-a-deer-funny-story/

I had this idea that I was going to rope a deer, put it in a stall, feed it up on corn for a couple of weeks, then kill it and eat it.

The first step in this adventure was getting a deer. I figured that, since they congregate at my cattle feeder and do not seem to have much fear of me when we are there (a bold one will sometimes come right up and sniff at the bags of feed while I am in the back of the truck not 4 feet away), it should not be difficult to rope one, get up to it and toss a bag over its head (to calm it down) then hog tie it and transport it home.

I filled the cattle feeder then hid down at the end with my rope.
The cattle, having seen the roping thing before, stayed well back.
They were not having any of it.
After about 20 minutes, my deer showed up — 3 of them.
I picked out a likely looking one, stepped out from the end of the feeder, and threw my rope.
The deer just stood there and stared at me.

I wrapped the rope around my waist and twisted the end so I would have a good hold.
The deer still just stood and stared at me, but you could tell it was mildly concerned about the whole rope situation.
I took a step towards it…it took a step away.
I put a little tension on the rope and then received an education.

The first thing that I learned is that, while a deer may just stand there looking at you funny while you rope it, they are spurred to action when you start pulling on that rope. That deer EXPLODED.

The second thing I learned is that pound for pound, a deer is a LOT stronger than a cow or a colt.
A cow or a colt in that weight range I could fight down with a rope and with some dignity.
A deer– no chance.
That thing ran and bucked and twisted and pulled.
There was no controlling it and certainly no getting close to it.
As it jerked me off my feet and started dragging me across the ground, it occurred to me that having a deer on a rope was not nearly as good an idea as I had originally imagined.
The only upside is that they do not have as much stamina as many other animals.

A brief 10 minutes later, it was tired and not nearly as quick to jerk me off my feet and drag me when I managed to get up. It took me a few minutes to realize this, since I was mostly blinded by the blood flowing out of the big gash in my head.
At that point, I had lost my taste for corn-fed venison.
I just wanted to get that devil creature off the end of that rope.

I figured if I just let it go with the rope hanging around its neck, it would likely die slow and painfully somewhere.
At the time, there was no love at all between me and that deer.
At that moment, I hated the thing, and I would venture a guess that the feeling was mutual.

Despite the gash in my head and the several large knots where I had cleverly arrested the deer's momentum by bracing my head against various large rocks as it dragged me across the ground, I could still think clearly enough to recognize that there was a small chance that I shared some tiny amount of responsibility for the situation we were in, so I didn't want the deer to have it suffer a slow death, so I managed to get it lined back up in between my truck and the feeder – a little trap I had set before hand…kind of like a squeeze chute.
I got it to back in there and I started moving up so I could get my rope back.

Did you know that deer bite?
They do! I never in a million years would have thought that a deer would bite somebody, so I was very surprised when I reached up there to grab that rope and the deer grabbed hold of my wrist.

Now, when a deer bites you, it is not like being bit by a horse where they just bite you and then let go.
A deer bites you and shakes its head –almost like a pit bull. They bite HARD and it hurts.

The proper thing to do when a deer bites you is probably to freeze and draw back slowly.
I tried screaming and shaking instead. My method was ineffective.
It seems like the deer was biting and shaking for several minutes, but it was likely only several seconds.
I, being smarter than a deer (though you may be questioning that claim by
now) tricked it.

While I kept it busy tearing the bejesus out of my right arm, I reached up with my left hand and pulled that rope loose.
That was when I got my final lesson in deer behavior for the day.
Deer will strike at you with their front feet.
They rear right up on their back feet and strike right about head and shoulder level, and their hooves are surprisingly sharp.

I learned a long time ago that, when an animal — like a horse -strikes at you with their hooves and you can't get away easily, the best thing to do is try to make a loud noise and make an aggressive move towards the animal.
This will usually cause them to back down a bit so you can escape.
This was not a horse. This was a deer, so obviously, such trickery would not work.
In the course of a millisecond, I devised a different strategy.

I screamed like a woman and tried to turn and run.

The reason I had always been told NOT to try to turn and run from a horse that paws at you is that there is a good chance that it will hit you in the back of the head.
Deer may not be so different from horses after all, besides being twice as strong and 3 times as evil, because the second I turned to run, it hit me right in the back of the head and knocked me down.

Now, when a deer paws at you and knocks you down, it does not immediately leave.
I suspect it does not recognize that the danger has passed.
What they do instead is paw your back and jump up and down on you while you are laying there crying like a little girl and covering your head.

I finally managed to crawl under the truck and the deer went away.
So now I know why when people go deer hunting they bring a rifle with a scope so that they can be somewhat equal to the Prey.

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