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COLLEGE OF AGRICULTURAL, CONSUMER
& ENVIRONMENTAL SCIENCES

Illinois Fruit and Vegetable News

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Editors: Nathan Johannig & 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 Johannig, 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 Johannig at the phone number or email address above.

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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>.

- **Great Lakes EXPO, December 4-6, 2018, DeVos Place Convention Center, Grand Rapids, MI.** This conference cover, fruit, vegetable and farm markets along with the Michigan Greenhouse Growers Expo. To register or for more details visit, www.glexpo.com
- **2019 Illinois Specialty Crops Agritourism & Organics Conference, Wednesday-Friday, January 9-11, 2019.** Crowne Plaza, Springfield, IL. Save the date! More conference details and registration information coming soon.
- **2019 Southwestern Illinois Tree Fruit School, Thursday, February 7, 2019, Knights of Columbus Hall, Hardin, IL.** Save the date; more details to follow!
- **2019 Southern Illinois Fruit & Vegetable School, Friday, February 8, 2019, Doubletree (formerly Holiday Inn) Mt. Vernon, IL.** *NOTE: this program represents the merging of the Gateway Small Fruit and Vegetable School and the Southern Illinois Tree Fruit School covering, tree fruit, small fruit & vegetables.* Save the date; more details to follow!

Regional Reports



'GoldRush' The official Apple of Illinois

From St. Louis Metro East... The landscape has finally taken on the look of fall, with leaves shining all shades of yellow, red and brown. Hard to believe, but apple harvest has moved into the latest cultivars. Golden Delicious, Red Delicious, EverCrisp, Braeburn, Liberty and Cameo have finished up. Currently in harvest are SunCrisp, Fuji, GoldRush, CandyCrisp, Enterprise and Granny Smith. The last weekend in October couldn't have been much better for pumpkin sales and apple picking. Saturday morning started out cloudy and cool from the previous day's rain, but it did not take long for the sun to pop out and finish the day in the finest fall fashion. Sunday was a bit breezier, but still a great day for families to get out and buy local. Sweet potatoes and greens harvest continues as well as cover crops being planted in preparation for next year.

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

From southern Illinois... Well pumpkin season has again come and gone for 2018! The weather in southern Illinois has been a little challenging from a production and marketing this fall season. We have gone from hot to below average temperatures in the last month with at least some weekends turning off cool and at least partially rainy and cloudy. We went straight from close to 90° for a high to highs in the 50s and 60s. Lately, we have had more frequent rains that we are not used to for the fall months which have kept fields fairly wet for the most part. Since Wednesday (10/31) we have had 2.8" of rain here at Murphysboro, which will slow any field work for a while. The forecast has us with continued highs in the 50s & 60s and some rain chances throughout the next week.

The "summer" growing season officially ended most everywhere on the morning of Sunday, October 21 with most all of southern Illinois getting to or below freezing. Some areas had seen very light frost prior, but most crops were still growing until then. Fall cole crops and greens are still going strong and enjoying the cooler weather. Many fall broccoli plantings have not performed well with the high temperatures we had into October with some varieties wanting to bolt early and greatly reduce yield and quality. Most crops have not been the happiest this fall between hot temperatures and then lots of rain, many late summer crops have high disease pressure like tomatoes with lots of fruit rots and poor quality fruit.

Looking back on the pumpkin season, overall for most it turned out alright, but the heavy rains in early September brought lots of bacterial spot and other fruit rots to many field greatly reducing the storage life and quality of fruit. Also, even in the best field systems, no-till with cover crop, it was still hard to get extremely clean fruit, especially when forced to harvest in the rain (which I have done more than I care to admit this season). Mid-August had brought in some virus in pumpkins which delayed fruit set for some; however, plants seemed to recover and set some later fruit, many of which had to deal with wet conditions and fruit rot. At home my pumpkin field was on a high ridge and I did not see nearly as much fruit rot issues as I expected. In our field trials at the Ewing Demonstration Center, the late set of fruit after the heavy rains in Mid-September were littered with bacterial spot at some points almost half of the fruit you could find at least one lesion on.

Other than some field clean up from summer crops things are starting to wind down. We do have some peppers and tomatoes left in our high tunnel here at the office, in addition to new plantings of carrots, broccoli and greens for the fall. Although the tomatoes are still alive and have fruit, I took a few home the other day and upon eating one decided that they were barely worth eating. The flavor and texture was not the same with the cool weather, despite looking nice on the outside. Sometimes you just have to know when to call it, and remember especially as weather changes to make sure you sample, or have someone sample things once in a while to make sure they taste as good as they look!

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

From Dixon Springs Ag Center...Our cooler temperatures and shorter days have slowed the ripening process of tomatoes in both the hydroponic and raised bed high tunnels. Surprisingly, the few nights of at or below freezing temperatures did not damage the tomato or pepper plants in either tunnel. Carrots planted the last week of July/first week of August are ready for harvest. We have removed the tomato, pepper, cut flower, herb, and green bean plots in the raised bed tunnel in order to sanitize and prepare for planting of winter plots. All plant debris, strings and stakes have been removed, with plant debris carried off to decompose in a field away from the tunnels. Stakes and hand tools will be sanitized to help reduce the incidence of overwintering disease pathogens. Beds will be tilled and double-dug where needed to prepare for planting the winter crops, which will include several varieties of lettuce, carrots, kale and spinach and will be planted in the next couple of weeks.

‘San Andreas’ strawberry, a day neutral variety, has been growing in vertical stacks hydroponically since the first week of May. A few outbreaks of aphids and spider mites occurred over the summer but to date, still no Spotted Wing Drosophila (SWD). The cooler, shorter days have signaled the plants to start fruit production again, and they have been flowering and setting quite a bit of fruit over the past month. This same variety was planted into the raised bed tunnel in plots of black and white plastic. They have also switched into fruit production mode but at a much slower pace. This planting is infested with SWD but it is interesting that these pests have not found their way to the hydroponic stacks that are in the neighboring tunnel 40 feet away. They will eventually infest the stacks but hopefully not this year.

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

Fruit & Vegetable Production & Pest Management

Preparing for Winter and Thinking Ahead to Next Year (if You Have 6 or 8 Legs)

By late October most insect and mite threats to fruit crops are concerns of the past. Stink bugs (brown marmorated and native green and brown species) are still feeding on late varieties where they are still on the trees. Earlier this season I summarized insecticide options for late-season stink bug control, and a really good summary of stink bug / brown marmorated stink bug control options is available on Michigan State University’s (MSU) web site covering Managing Brown Marmorated Stink Bug in Michigan Orchards (<http://www.canr.msu.edu/ipm/uploads/files/BMSB/MichiganBMSBMngtGuideJuly2017.pdf>). Neonicotinod and pyrethroid insecticides are effective against stink bugs, but their mandatory preharvest intervals forbid last-minute applications before harvest. Growers should check the MSU web site to think and plan ahead for 2019.

It’s also time to think ahead a little about how to manage the insect and mite problems you encountered in 2018. Here is how the key insect and mite pests of apples will pass the winter in Illinois apple and peach orchards.

Life histories of apple insects ... what stage overwinters? How many generations per year?		
Insect or Mite	Overwintering Stage	Generations per Year
Codling moth	Mature larvae on trunks and branches	2-3
Dogwood borer	Larvae in tunnels in burr knots	1

European red mite	Eggs on limbs	8 or more
Greater peachtree borer	Larvae beneath bark	1
Lesser peachtree borer	Larvae beneath bark	2
Japanese beetle	Larvae in soil	1
Oriental Fruit Moth	Mature larvae in cocoons on trees	3-5
Plum curculio	Adults in ground cover, woods	1 (2 in southern states)
San Jose Scale	Immatures under scales on limbs	2
Stink bugs / Plant bugs	Adults in ground cover, woods	2 or more

After they have survived (or not survived very well) the winter of 2018-19, the rough timing of their feeding and damage to apples and peaches next year will be ...

Life histories ... when will infestations occur next year?	
Insect or Mite	Timing of infestations
Codling moth	First generation moth flight begins at bloom to petal fall; larvae of this and generations 2 and 3 tunnel into fruit
Dogwood borer	Adults emerge May through September; larvae tunnel into burr knots
European red mite	Egg hatch begins around pink; numbers build over generations; thrive in hot, dry weather
Greater peachtree borer	Moth flight begins in mid-June and spans several weeks
Lesser peachtree borer	Moth flight begins in early May in southern IL; a second flight occurs in late summer
Japanese beetle	Adults emerge June through August and persist through fall
Oriental Fruit Moth	Moth flight begins shortly before bloom; subsequent generations tunnel into fruit or shoots through fall
Plum curculio	Adults become active around bloom; lay eggs into fruit shortly after petal fall
San Jose Scale	Mating occurs around bloom; crawlers start new infestations a few weeks later, around third cover
Stink bugs / Plant bugs	Adults become active as temps exceed 60 F; developmental timing varies among species

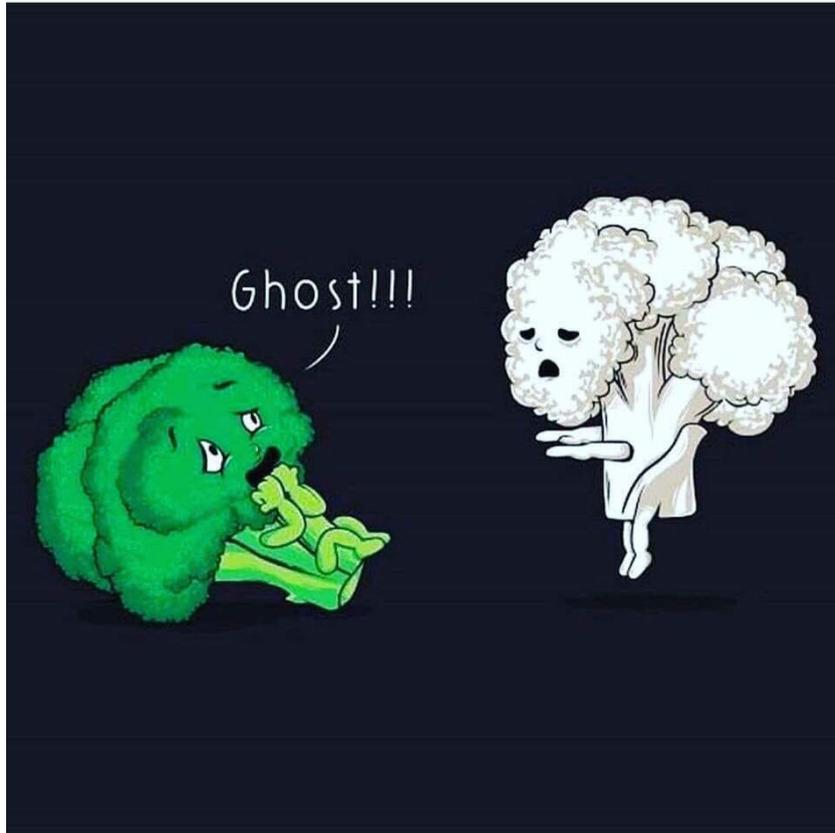
Sources such as Great Lakes IPM and the Midwest Fruit Pest Management Guide (compiled by the Land Grant universities of the region) provide more details on monitoring and controlling major fruit insects and mites. If you grow apples and peaches for commercial sale, consulting up-to-date editions of these resources should be part of your decision-making process throughout every year.

Rick Weinzierl (Weinzierl Fruit and Consulting, LLC, raweinzierl@gmail.com)

Contributions from Weinzierl Fruit and Consulting, LLC are provided through support by the Illinois Specialty Growers Association. Visit www.specialtygrowers.org for more information or to join the association.

Less Seriously...

https://www.google.com/search?q=broccoli+ghost+jokes&tbm=isch&tbs=rimg:CWGT40iB3s2Iji_1QRA3Y3XO14Hti3P7XoZkPLH8I6biVDyZ5Z_19Y5tAChuxNSEksTL1vJaVz8dvqSdzpPNJhBaEHyoSCb9BEDdjdc6XEdCwDCqU4v9VKhIJge2Lc_1tehmQRE8I9IHEg64MqEgk8sfwipuJUPBHC9Bqvz3pUNioSCZnln_11jm0AKEfXx9i_1eU6WvKhIJG7E1J6SxMvURgcEOTI_13dnYqEgm8lpXPx2-pJxHN1rGih-AcrioSCXOk80mEFoQfEWEU1MKb4cAN&tbo=u&sa=X&ved=2ahUKEwiI6YiX07PeAhUhw4MKHROBALAQ9C96BAgBEBg&biw=1920&bih=871&dpr=1#imgdii=PLH8I6biVDwzTM:&imgrc=YZN7g6IHezbCIM:



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