

Kentucky Fruit Facts

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Fruit Crop News

John Strang, U.K. Extension Horticulturist

Fruit crop and weed growth has been maximized this season because soil moisture certainly has not been limited. It has been difficult to find a dry day to spray and spray material is washing off of the fruit about as fast as we put it on. I have already noted sooty blotch and flyspeck developing on apple fruit. Most growers found that their apple thinners worked a little better than they expected this spring. The cool wet weather and less than perfect pollination contributed to a heavy fruit drop, figure 1.

Blueberry harvest is in full swing and it is time to have completed matted row strawberry renovation, but again the rain is interfering. I have been amazed at the thornless erect blackberry production at the UK Research and Education Center at Princeton, KY. Their station thermometer recorded -13°F back in February and they are obtaining pretty decent production on their Osage, Ouachita, and Natchez blackberries. There are some canes that don't have many leaves and the fruit are smaller, but overall the production is much more than I would have predicted.

At our last fruit grower orchard meeting at Paul

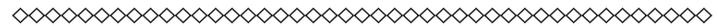
Tokosh's Hillview Farm & Orchard on April 14th, growers saw some excellent twenty-two-year-old Honeysweet pear trees on OH X F333 semi dwarfing rootstock. Trees were planted 12 feet apart in the row and weren't any taller than 15 feet in height. Using Paul's air blast sprayer and water sensitive paper Ric Bessin demonstrated how spray coverage throughout a dense apple canopy could be improved by turning off some nozzles and changing nozzle size in a few places. Nicole Gauthier discussed the intricacies of fire blight which has been fairly minimal this year for most growers compared to the 2014 season.



Figure 1. GoldRush apple drops, note the low viable seed numbers where we would like to see 10 good seeds

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Upcoming Meetings

(All meetings are Eastern time unless specified.)

Jul. 16 Sustainable Agriculture Workshop, Third Thursday Thing, Harold Benson Research and Demonstration Farm, 1525 Mills Lane, Frankfort, KY, 502-597-6325, Contact Marion Simon by email at marion.simon@kysu.edu. See Program below.

Jul. 23-24 2015 North American Fruit Explorers (NAFEX) Annual Meeting, Days Inn Conference Center, 101 Sky Harbor Drive, LaCrosse, WI 54603. See website; NAFEX.org for more details. The first day is devoted to technical papers and the second day is a tour. Registration information at www.nafex.org/meeting.php

Jul. 26-29 106th Annual Meeting of the Northern Nut Growers Association (NNGA), University of Wisconsin-La Crosse, Cartwright Center, La Crosse, WI 54601. For meeting and registration information see <http://www.nutgrowing.org/meetinfo.htm>

Jul. 28 University of Kentucky Horticultural Research Farm Twilight Tour, 4321 Emmert Farm Rd., Lexington, KY 40514. This will be an evening tour of fruit and vegetable research plots, a program is provided below.

Aug. 13 An Evening Field Walk, Robinson Center for Appalachian Resource Sustainability, 130 Robinson Rd., Jackson, KY 41339. 6:00 p.m. Contact Shawn Wright 606-666-2438 Ext 234. See write up below.

Nov. 7 Kentucky Nut Growers Association Fall Meeting, Henderson County Extension Office, 3341 Zion Rd., Henderson, KY 42420. Contact Danny Ganno 270-860-8362

Jan. 4-5, 2016 Kentucky Fruit and Vegetable Conference, Embassy Suites Hotel, Lexington, KY. Contact John Strang 859-257-5685; email: jstrang@uky.edu

Kentucky State University Sustainable Agriculture Workshop, July 16, 10:00 a.m.

Harold Benson Research and Demonstration Farm
1525 Mills Lane
Frankfort, KY

Directions: From I-64 Exit 53, take US127 South toward Lawrenceburg to the 4th stoplight, turn left onto Mills Lane, the KSU Farm is 1 ½ miles on the right.

- 10:00 Welcome and Opening Remarks –
Dr. Marion Simon
- 10:15 Whole Farm Revenue Insurance Policy –
David Mathis
- 11:00 Noninsured Crop Disaster Assistance Program (NAP) – Marcinda Kester
- 12:00 Lunch
- 1:00 Blackberry, Purple Tomato Trial, and Hemp Plot Tours – Dr. Kirk Pomper, Sheri Crabtree, and Jeremy Lowe
- 2:00 Daylilies – David Kirchoff
- 2:45 Orchids – Dr. Hideka Kobayashi
- 3:30 Adjourn

Horticultural Research Farm Twilight Tour

July 28, 2015 (6:00 p.m. until dark)
4320 Emmert Farm Lane
Lexington, KY 40514

The U.K. Horticulture Department will host a twilight tour featuring current research and extension activities at the Horticultural Research Farm. Tours will begin at 6:00 p.m. Concurrent tours will be repeated two times until dark. Tours will start at the research center parking lot. Cold drinks and melons will be provided for participants.

The U.K. Horticultural Research Farm is located on the south side of Lexington approximately one block west of the intersection of Man O'War Boulevard and Nicholasville Road (U.S. 27). The entrance to the farm (Emmert Farm Lane) is off of Man O'War Boulevard at the traffic light opposite the entrance to the Lowe's and Walmart.

Questions? Contact: Pam Compton phone: 859-257-2909. e-mail: pscomp1@uky.edu.

Program

Welcome – *Dr. Robert Houtz*

Vegetable Tour

- Winter Squash Variety Trial - *Dr. John Strang*
- Downy Mildew Sentinel Plot - *Dr. Shubin Saha*
- Watermelon Anthracnose and Pollinators - *Dr. Shubin Saha*
- Evaluation of New Pepper Accessions for Capsicum -
Dr. George Antonious
- Glucosinolates in Arugula and Mustards -
Dr. George Antonious
- Tomato Breeding for Mite Resistance - *Dr. John Snyder and Mohammad Dawood*
- Sugar Enhanced Sweet Corn Variety Trial - *Chris Smigell*
- Summer Cover Crop Demonstration - *Steve Diver*
- Trap Crops for Stink Bugs - *Dr. Ric Bessin*
- Pumpkin Platiculture Demonstration - *Dr. Shubin Saha*

Muskmelon Variety Trial - *Dr. Shubin Saha*
Tripliod Watermelon Cultivar Trial - *Dr. Shubin Saha*

Sustainable Agriculture Vegetable, Fruit & Ornamental Tour

Evaluating Slow-Release Aluminum Sulfate for Blue Flowers in Hydrangea and Drone Agricultural Applications - *Carey Grable, Joshua Knight and Dr. Dewayne Ingram*
Organic Mixed Vegetables for CSA - *Tiffany Thompson*
Organic Apple Production Study - *Dr. Doug Archbold and Neil Wilson*
Moveable High Tunnels - *Dr. Alex Williams and Brett Wolff*
Controlling Cucumber Beetles and Squash Bugs in Muskmelons and Winter Squash with Meso Tunnels - *Dr. Mark Williams*
Furrow Guidance Machine System for Organic Vegetable Production - *Dr. John Wilhoit*

Fruit Tour

Kentucky Mesonet Weather Station and Prediction Models - *Dr. Nicole Ward Gauthier*
Apple Herbicides and Haskap, Blueberry, and Dwarf Sour Cherry Variety Trials - *Dr. Shawn Wright*
Bitter Rot in Apples - *Dr. Nicole Ward Gauthier*
Ten Years of Grape Research at U.K. - *Patsy Wilson, Jeff Wheeler, and Sean Lynch*
Matted Row Strawberry Variety Trial - *Dr. John Strang*

An Evening Field Walk,

August 13, 6:00 p.m.

Robinson Center for Appalachian Resource Sustainability
130 Robinson Rd.
Jackson, KY 41339
Contact Shawn Wright 606-666-2438, Ext 234

Krista Jacobsen and Shawn Wright will host an evening field walk August 13 at 6 PM. Krista will talk about high tunnel tomatoes and rainwater catchment and then we will walk around until it gets dark to look at what we have and discuss issues and opportunities.

Crops and plots to discuss include, the cucurbit sentinel plot, green beans (greasy and cut shorts), peppers, watermelons, a sweet potato fertilizer trial, a pumpkin variety demonstration on plastic, hazelnuts, rhubarb, a cover crop demonstration, use of plasticulture, drip irrigation and raised beds, and a solar charged deer fence



Watch for Brown Marmorated Stink Bug

By Ric Bessin, U.K. Extension Entomologist

In areas of the state where brown marmorated stink bug (BMSB) has been established for several years, fruit and vegetable producers and home gardeners should keep an eye out for this new pest. Although it spends more than half the year indoors, this invasive insect is a pest of over 100 plant species, including vegetable, grain, fruit, and ornamental crops. During the period between early June and September, it is a highly mobile pest feeding on fruiting host plants (Figure 2).



Figure 2. Brown marmorated stink bug nymph on raspberries. (Photo: Ric Bessin, UK)

Like other species of stink bugs, both nymphs and adults use their piercing-sucking mouth parts to feed on leaf and fruit tissue. BMSB damages host plants while feeding by injecting enzymes for extra-oral digestion. Feeding sites can appear water-soaked, discolored, shrunken, swollen, or otherwise distorted depending on the plants they feed upon (Figure 3). When feeding BMSB aggregate in large numbers, their feeding results in more damage than our native stinkbug species.



Figure 3. Stink bug damage to peppers. (Photo: Ric Bessin, UK)

Management Netting

Woven row covers and fine netting can be used to keep BMSB off of highly susceptible vegetable plants, like peppers and tomatoes. These need to be in place prior to the start of fruiting and should be sealed along edges to keep BMSB out. We have found 1/6-inch or smaller netting can be used to block BMSB adults. A simple frame can be used to support the netting over taller vegetable plants. Netting may not be practical for plants that are dependent on constant insect pollination.

Hand Picking

While impractical with large pest populations, hand-picking can be very helpful with small numbers of pests. BMSB has a tendency to drop off plants when approached, so hand picking may be easier in the morning when the insects are more sluggish. Stink bugs that are collected can be dropped into soapy water. As BMSB is mobile, re-infestation from other areas is likely, so routine hand-picking may be necessary.

Trapping

There are commercial traps that are used to monitor for BMSB, but higher levels of BMSB and resultant plant damage occurs close to traps.

Chemical Control

With home gardening, chemical control is usually the tool of last resort. Chemical control has a number of potential negative side-effects. These include a limit to when you can harvest produce and the impact on pollinators and other beneficial insects. Specific insecticides will depend on the type of plant needing treatment. The crop plant must be approved and listed on the label with the appropriate rate. Research has demonstrated that products containing some of the pyrethroid insecticides (e.g., bifenthrin, zeta-cypermethrin, cyfluthrin) and organophosphate (malathion) effectively reduce BMSB levels and resulting damage. Since these products can be detrimental to insect pollinators, they should not be used on plants in bloom or they should be used in the evening when pollinators are not active.

FRUIT HUMOR

What do you call an apple that plays the trumpet?

A Tooty Fruity!



Reminder: Endosulfan Phase-out and Cancellation

By Ric Bessin, U.K. Extension Entomologist

One of the last organochlorine insecticides, endosulfan, has been undergoing a cancellation and phase-out over the past several years. This phase-out/cancellation will be complete by July 31, 2016. Many growers are familiar with this product under its former names of Thiodan and Golden Leaf, but its current names include Thionex and Endosulfan. Under an agreement with the EPA, it is being voluntarily phased out and uses cancelled. Under this agreement, various uses will be terminated at specific times. When each of these termination dates passes, it will be unlawful to use these products for those specific uses. The reason for cancellation is due to unacceptable risks to farm workers and the environment, as well as persistence in the environment.

The next termination date is July 31, 2015 when use on eight crops will be eliminated. The phase-out/cancellation schedule is as follows:

Group E Uses (7/31/15 termination)	Group F Uses (7/31/16 termination)
Apple Blueberry Peppers Potatoes Pumpkins Sweet corn Tomato Winter squash	Livestock ear tags Pineapple Strawberry (perennial/biennial) Vegetable crops for seed (alfalfa, broccoli, Brussels sprouts, cabbage, cauliflower, Chinese cabbage, collard greens, kale, kohlrabi, mustard greens, radish, rutabaga, turnip)



Green June Bug Grubs Have a Natural Enemy

By Lee Townsend, U.K. Extension Entomologist

When green June beetles show up, the blue winged wasp is not far behind. This distinctive 1/2-inch long wasp with blue-black wings has a reddish tail and two yellow bars near the end of its abdomen (Figure 4). It is a natural enemy of green June beetle grubs.



Figure 4. The blue-winged wasp is a natural enemy of the green June beetle. (Photo: Lee Townsend, UK)

These wasps cruise over grassy areas in search of grubs. They will enter the soil and burrow to find the beetle larva, sting it, and then lay an egg. The wasp larva uses the grub for food and spends the winter in a cocoon within the host, emerging the following year. The wasps are not aggressive and do not pose a threat. Nectar provides them with an energy source that allows them to search for prey so they are commonly seen on flowers.



Strategies for Pricing Products for Farmers Market Sales

By Miranda Hileman Combs, Center for Crop Diversification

Pricing products for your farmers market booth can be a challenging part of selling directly to customers. So, where do you begin? The Center for Crop Diversification has been compiling price reports for farmers markets and produce auctions around Kentucky since 2005. This year, we'll be reporting prices from Barren County, Boone County, Daviess County, Fayette County, Henderson County, Jefferson County, Warren County, and Whitley County. We're very happy to have several new counties on the list, and new markets to highlight. In 2013, the University of Tennessee also began sharing farmers market price reports from across Tennessee. In 2014, the University of Illinois joined us in reporting farmers market prices from around Illinois. This year, the University of Illinois has been able to add price reports from one of their produce auctions, too!

Our goal in sharing price reports with the public is to help farmers learn about prices for common products being sold at farmers markets or produce auctions to better understand how to set prices that support profitability of

their farms and, at the same time, are fair to consumers. Price and sales information is helpful to producers who are selling through markets such as farmers markets, produce auctions, and terminal markets. Farmers market prices are collected on a weekly basis, and these reports are published as a service to the farming community to expose producers to the range of prices that are being paid for the products they grow. Producers tell us that it's helpful to see a range of prices that other producers are selling products for across the Commonwealth. We rely on dedicated volunteers to provide price reports from several markets across Kentucky, then we aggregate them into a weekly report. The weekly report showcases the common crops that are in season across the Commonwealth, so producers can continually find this information useful. These reports are very useful for new producers who are starting to market their products through various channels. But still, how do you start pricing your products? Here are a few tips to get you started:

Keep track of your production costs and calculate how much you need to make from that item.

Think about seasonality – is this crop a little early or later than usual? Are you the only vendor with that crop this week? You can often command a premium price if you are the only one selling a particular crop.

We do notice average price differences, sometimes significant, between rural and urban markets. Not every vendor has a choice of where to sell, but in some cases prices may justify a longer trip to market. Prices tend to reflect both the market demand in a particular community and also the available supply to the market.

Use price reports that are available to you. Kentucky has its own Farmers Market Price reports available here: <http://www.uky.edu/Ag/CCD/farmersmarket.html>. The USDA's Agricultural Marketing Service also provides price lists for specialty crops on a wholesale basis. These reports can be found here: <https://www.marketnews.usda.gov/mnp/fv-home>. Also, for organic growers, the Rodale Institute provides organic price reports (again, mostly wholesale) here: <http://rodaleinstitute.org/farm/organic-price-report/>.

Finally, talk with the other farmers at your farmers market. Try to avoid excessive price gaps between vendors – this will help you and the other farmers work together to understand how much to charge for items.



Receiving Fruit Facts on the Internet

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