PURDUE UNIVERSITY
PURDUE EXTENSION
FACTS FOR Fancy Fruit
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In This Issue

Crop conditions

(Peter M Hirst, hirst@purdue.edu, (765) 494-1323)

Apples and peaches are developing well and crops are looking good, although a little too heavy in places. Strawberry harvest is underway.

Hort. Society Summer Field Day

(Peter M Hirst, hirst@purdue.edu, (765) 494-1323)

The summer meeting of the Indiana Horticultural Society will be held June 22 mainly at Doud's Countyline Orchard in Wabash, IN. David Doud, with his wife Valerie, established Countyline Orchard on family land about 30 years ago.

During the early planting years of 1988-93, the planting was planned with varieties that ripened progressively from August 1 thru November 1 and in proportion to their relative popularity and retail sales potential. Utilizing the experience of growing up on a retail apple orchard, Lorne Doud's nursery propagation of new (for 1970) commercial varieties, and Steven Doud's heirloom/antique variety collection, about 50 varieties were chosen and about 3000 trees propagated on site by bench grafting and growing in pots. Many of the most heavily planted varieties were common mid-twentieth century varieties with which everyone is familiar – others, that add spice to sales and cider, are less common. Many of these varieties and trees remain. But in the last 10 years, utilizing the experience gained with the Midwest Apple Improvement Association breeding program, many MAIA elite selections have been planted for testing purposes and of those a number have been planted in quantities that allow for retail and small wholesale sale. Examples of newer cultivars being planted are Evercrisp, Pixy Crunch, GoldRush, and Honeycrisp. David is also looking at different rootstocks and has Evercrisp growing on G.935, G.41, B.9 and M.7 rootstocks.

David will present on the current situation surrounding MAIA varieties and talk about four varieties being released this year and what's in the pipeline for the future. We will examine trees; seedlings, second generation elites, and the new releases.

The orchard comprises about 15 acres of apples, 3 acres of pears, 3 acres of peaches (Redhaven, Contender, White Nectar, Cresthaven) and 3 acres of strawberries (Jewel and Honeoye). The strawberry patch may still be selling at the date of this meeting. Deer damage continues to be a major challenge to the establishment of new orchards, and a concern with B.9 rootstock is that it may not withstand the level of deer browsing present. Asian pear varieties include Korean Giant and Kosui.

Strawberries are sold on site and about 90% you-pick – roughly equal amounts of tree fruit are sold on farm, at farmer's markets, and small lot wholesale. The farm is not an entertainment farm and is open only seasonally, selling strawberries in June and apple/peaches/pears from August 1 thru Christmas.

David is a past president of the Indiana Horticultural Society and is a board member of the Midwest Apple Improvement Association (MAIA). He has been a strong proponent of the Evercrisp apple and has put his money where his mouth is with extensive plantings on his farm. He has plantings of advanced selections of MAIA material and also a number of seedlings that he is

evaluating.

Cordes Berry Farm

Erica and Jared Cordes are grain farmers but started planting blackberries in 2013. They planted 10 acres of berries, mainly Natchez and Ouchita. Crops were produced in both 2014 and 2015 and they are looking forward to their 3rd crop. Their modern plantings are on a trellis system that lays down to allow the planting to be covered in the winter. The farm sells mainly wholesale but is also pursuing you-pick traffic. This farm is a great example of farm diversification and how new growers can be successful.

Metzger Farm

The Metzger's are small scale producers of peaches, blueberries, and strawberries. The blueberry planting is transitioning to Organic and the strawberries are on black plastic and organically produced. There is a new deer fence and the blueberries have a bird netting system protecting them. They typify how attention to detail can pay off on a small family farm.

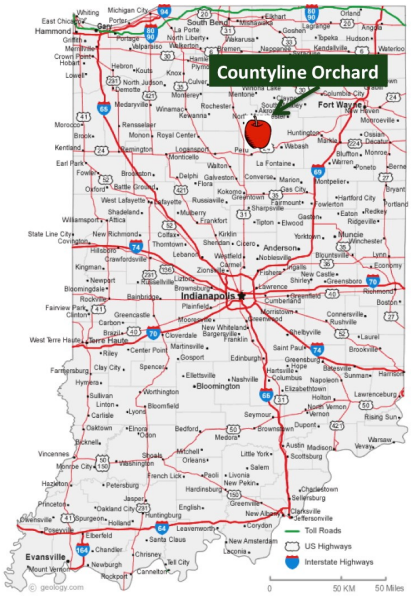
RiverRidge Farm

This is a small farm, owned by Nathan and Diane Fingerle, that is land-limited. Nate is taking some very innovative approaches to using the land as intensively as possible. He has a number of high tunnels and focuses mostly on production of leafy greens. With careful attention to drop rotations, he aims to double crop as much as possible. An inspiring place, particularly for aspiring market growers.

Hawkins Family Farm

This three generation family farm raises both livestock and crops, and approaches farming from a sustainable and integrated perspective. Their production methods and approach have proven popular with customers and they have established a successful CSA. We will see and hear about a number of their enterprises.

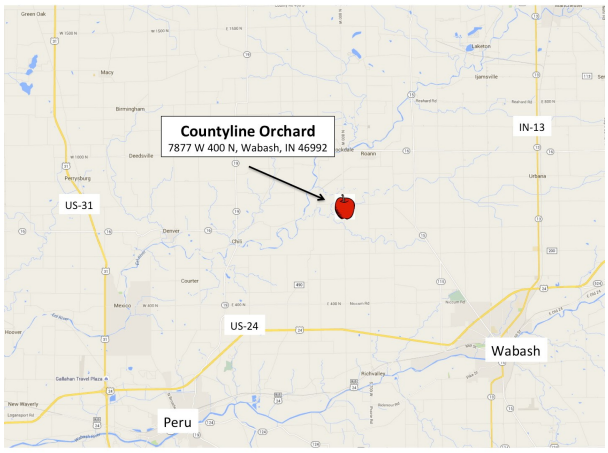
http://hawkinsfamilyfarm.com



Directions:

Countyline Orchard is located in Wabash County. The address is:

7877 W 400 N, Wabash, IN 46992



Program Schedule:

Tuesday June 21

- 6:30 pm
  - Optional dinner and social time for growers
    Charley Creek Inn Restaurant
    111 W Market St., Wabash, IN 46992
    Phone 260-563-0111
    http://www.charleycreekinn.com

For those wishing to stay over, a number of us will be staying at the Charley Creek Inn. Reservations can be made directly with the hotel or one of the online travel/hotel sites.

Wednesday June 22

Countyline Orchard, 7877 W 400 N, Wabash, IN 46992

- 9:30 am
  - Registration – coffee and donuts
- 10:00 am
  - Welcome and introductions
  - Tour of facilities
- 10:30 am
  - Walking field tour
- 12:00 pm
  - Conclude field tour
  - Lunch on site
  - Round table discussion
- 1:00 pm
  - Depart for Cordes blackberry farm (approx. 5 miles) – own transport
  - Overview of farm and walking tour
- 2:00 pm
  - Depart for Metzger farm (approx. 5 miles) – own transport
  - Overview of farm and walking tour
- 3:00 pm
  - Depart for RiverRidge Farm (approx. 5 miles) – own transport
  - Overview of farm and walking tour
- 4:00 pm
  - Depart for Hawkins Family farm (approx. 5 miles) – own transport
  - Overview of farm and walking tour
- 5:00 pm
  - Adjourn

Registration and meals

Registration: cost is $5.00 per person, payable on site at Countyline Orchard.

Lunch: cost is $10 including drinks

All growers, prospective growers and others interested are welcome to attend. While membership in the Indiana Horticultural Society is encouraged, it is not required.

Brown Rot

(Janna L Beckerman, jbeckerm@purdue.edu, (765) 494-4628)

We are already receiving reports of brown rot, caused by several different types of the fungus *Monilinia.,* Many of these are causing shoot blight, but we are receiving samples of brown rot on cherry fruit.

Brown rot is a common and destructive disease of stone fruit, a closely related group of trees that include peach, nectarine, apricot, plum, and cherry. Another type of brown rot, European brown rot, caused by *Monilinia laxa*, appears to be limited to sour cherries in some northern regions of the Midwest, but has not been found (yet!) in Indiana.

Fig. 1. Fruit rot and shoot blight state of brown rot on peach.

Symptoms and signs of infection include blossom and twig blight, cankers, and fruit rot on all the members of the stone fruit group. Symptoms first appear in the spring as blossoms become infected. Diseased flowers wilt and turn brown, but remain attached to the tree. The fungus may produce masses of tan spores on the dead blossoms. Flower infections may spread to both new growth and spurs, causing cankers and shoot death as the fungus spreads into twigs.

Young fruit is normally resistant to brown rot but can become infected through wounds, like plum curculio damage, or sunscald. As fruit matures, it becomes more susceptible to infection, even in the absence of wounds. Fruit infections appear as soft brown spots that expand rapidly and become covered with powdery, tan spores (Figure 1). Infection can spread into adjacent branches, causing dieback or death (Figure 2). An entire peach can be rotted in as little as two days, after which it shrinks into a wrinkled “mummy”. Rotted fruit and mummies may remain on the tree or fall to the ground (Figure 3).

During harvest, injured fruit are easily colonized and can rot within a few days.

Fig. 2. Brown rot infected cherry

The brown rot fungus survives the winter primarily in mummified fruits, but also survives in twig and branch cankers. During blossom time, mummified fruit on the ground develop a multitude of small, tan, wineglass-shaped structures called apothecia. The inside of these apothecia are lined with thousands of spore-containing sacs (asci) filled with spores that are forcibly discharged with changes of wind and barometric pressure. Spores that land on wet blossoms or new shoots will infect if they remain wet for longer than five hours. Infected blossoms wilt and powdery masses of tan spores (conidia), develop on the flower shuck. The infection can progress from the flower into the spur, then the twig, where it forms a canker. Conidia continue to be produced throughout early summer to infect injured and ripening fruit. Wet weather and temperatures ranging from 60 to 70 °F are most favorable for disease development.

It is easy to see from Figure 1 that the spores of this fungus are everywhere, and that any type of injury to ripening fruit (insect, hail, twig rubs, picking injury) will provide an entry point for the brown rot fungus. Upon harvest, immediately cool, refrigerate, or process fruit.

Fig. 3. Peach mummy

The key to managing this disease is to keep spore numbers low by good sanitation practices and regular applications of fungicides. Promptly remove and destroy fallen and rotted fruit. Remove any mummies remaining on the tree should as well. Prune out cankers in late winter, during the dormant season, and remove any wild (cherry or plum) or neglected stone fruit trees that can serve as reservoirs for the disease.

Babygold No. 5, Elberta, and Glohaven are the only peach varieties with report resistant to brown rot. Most commonly grown stone fruit in the Midwest vary from susceptible to highly susceptible. In order of brown rot susceptibility, apricots are extremely susceptible to brown rot, nectarine is more susceptible than peach, Japanese plum is more susceptible than European varieties and hybrids, and sweet cherry is more susceptible than pie cherry. Having seen brown rot on all these plants, keep in mind that resistance is relative in this case!

See the 2016 Midwest Fruit Pest Management Guide at https://ag.purdue.edu/hla/Hort/Documents/ID-465.pdf or the Managing Pests in Home Fruit Plantings at https://www.extension.purdue.edu/extmedia/id/id-146-w.pdf for fungicide options and timings.

European Red Mites

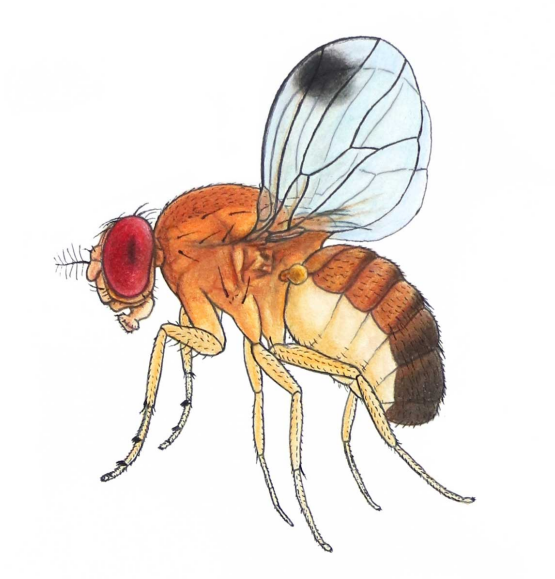
(Ricky E Foster, fosterre@purdue.edu)

It's time for apple growers to begin looking for European red mites. ERM can be a serious problem, reducing the yield and quality of this year's crop as well as reducing fruit buds for next year. Most growers know the area of their orchard where they first see ERM problems. Generally, populations will start to build in the same areas each year, so that's where you should begin your

scouting efforts. If you find them, you can expand your scouting to the remainder of the orchard. Remember that the threshold for spraying increases as the season progresses. For more information, see https://extension.entm.purdue.edu/publications/E-258/E-258.html.

Spotted Wing Drosophila

(Ricky E Foster, fosterre@purdue.edu)



Adult Male Spotted Wing Drosophila. Illustration by Phillip Kuhns.

It will soon be time to put your spotted wing drosophila traps in place. Recent research has shown that the commercially available SWD traps are as good as or better than the homemade traps that we have been recommending. Most significantly, we don't have to mess with the sugar/yeast mixture anymore. We have had good luck with the Trece SWD trap and the Trece Pherocon SWD lure. In the bottom of the cup, you should put some water with a few drops of unscented dish soap. That clear liquid makes it a lot easier to find the flies than sorting through the sugar/yeast goop. Traps should be placed on stakes around the perimeter of your fields, preferably in the shade. If you have woods near your field, place the traps at the edge of the woods. We normally expect to see the first flies in late June, with populations starting to take off in July.

Upcoming Events

(Peter M Hirst, hirst@purdue.edu, (765) 494-1323)

Indiana Hort Society Summer Field Day June 22, 2016

David Doud's Countyline Orchard 7877 W 400 N, Wabash, IN 46992.

Indiana Winery and Vineyard Association Summer meeting July 19-20, 2016

Brown County Inn. Nashville, IN. More information will follow.

IFTA Study Tour – July 19-21, 2016

International fruit Tree Association. New York. Full details and registration information at the IFTA website: http://www.ifruittree.org/Events/2016-Study-Tour

Indiana Horticultural Congress at the NEW LOCATION January 10-12, 2017

Indianapolis Marriott East Hotel, 7202 East 21st Street, Indianapolis, IN 46219.

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Current Growth Stages in Lafayette, IN

(Peter M Hirst, hirst@purdue.edu, (765) 494-1323) & (Bruce Bordelon, bordelon@purdue.edu, (765) 494-8212)

Grape – Post–bloom, Fruit sizing

Peach – Fruit about 25 mm

Strawberry – Harvest Continues

Black Raspberry – Post–bloom, Fruit sizing

Blackberry – Post–bloom, Fruit sizing