

In This Issue

- [Crop Conditions](#)
- [Pixy Crunch Apple](#)
- [Grape Harvest Continues](#)
- [Bitter Rot](#)
- [Purdue Fruit Grower Mail Lists](#)
- [Upcoming Events](#)

Vidal wine
grapes ripening
perfectly in this
great weather

With cooler nights, apple red color development is looking good. In the northern half of the state, Gala harvest is underway. Interestingly, Honeycrisp seems to be ripening about the same time as Gala this year, whereas normally it's a week or two later.

Crop Conditions



Primocane
fruiting
blackberry
harvest
continues-
delicious!



Gala harvest
underway



Pixy Crunch Apple

I've said it before and I'm saying it again - Pixie Crunch is a no-brainer for retail orchards. The more I see this apple, the more I like it.

Although we think of this as a relatively new apple, the original cross was made 45 years ago at Rutgers University and it was selected from a planting in West Lafayette, Indiana. Before being named Pixie Crunch, it was tested as Co-op 33. It resulted from a cross of two numbered apple selections but has both Golden Delicious and Rome in the pedigree.

The Pixie Crunch tree is spreading and precocious. Expect good crops and excellent quality fruit from young trees. Fruit size is about the same as Gala and fruit finish is a dark red blush over a yellow background. With reasonable tree management, most fruit will have over 75% color. Fruit ripens a week or two after Gala.

What stands out most about Pixy Crunch is its eating quality. Fruit are very crisp - maybe not quite as crisp as Honeycrisp but definitely crisper than Gala. Not only are fruit crisp, but they stay crisp on the

tree over a long period. Fruit drop is not usually a problem. These factors give Pixie Crunch a very wide harvest window, at least 3 weeks with fruit still in very good condition on the tree. Because of this, and the very good eating quality, Pixy Crunch should be included in plantings at retail farm markets.



Pixie crunch apple

Grape Harvest Continues

Grape harvest is in full swing across the state. The weather could not be more ideal. Warm sunny days and cool nights are ideal for fruit quality. Lack of major rainstorms is also a plus. This year is almost a complete opposite of 2016, when high temperatures and rain persisted through July and August, causing major fruit quality issues. The 2017 vintage should be excellent!

Bitter Rot

In 1907, Thomas Burrill wrote that regarding bitter rot, “There was nothing to do but to helplessly submit to the inevitable.” However, he continued and stated “that what formerly seemed incomprehensible is easily understandable.” Some key points he touches on regarding the management of bitter rot are weather conditions and sanitation. Obviously, there is little that can be done about the weather. The bitter rot pathogen complex grows well in hot, wet weather. I say

complex because it turns out there are several different species of *Colletotrichum* causing this disease (or causing Glomerella leaf spot). In fact, even the complex is complex, with the previous delimitation of *Colletotrichum gleosporioides* and *C. acutatum* both now described as complexes consisting of several different species each!

What is interesting, 110 years later is that little has changed by way of management options: “(1) cutting of and handpicking the cankers and old mummies; and (2) spraying with Bordeaux mixture”. We have more options than Bordeaux, but first, let’s focus on sanitation. Burrill points out that if you could remove every limb and twig infection (which may not be possible) and then take off all old infected fruits (which is possible) the disease would be controlled “in ordinary cases”.

Since removing every limb and twig infection is not possible, fungicides must be used “so as to prevent the penetration of the germ-tubes of the spores. This means actual coating of the apples with the germicidal substance...” Although there have been scattered reports of Glomerella leaf spot throughout the state (Fig. 1), our main problem is the fruit rot (Fig. 2). Our next problem is the disconnect between infection and symptom development: Fungicides to protect against bitter rot (and probably the other summer rots, as well) need to be applied beginning at bloom—at the latest. Recent work by Villani and Nance (2017) found at ~30% incident of bitter rot when applications began at petal fall. Early studies pointed to petal fall as the time to begin spraying, but the data by Villani and Nance clearly show that you need to spray early and often to protect against bitter rot.

But what to spray? Work by Brannen et al. (2017) found that early applications of mancozeb for as long as possible (within the 77-day PHI), followed by a rotation of Captan 80W(5 lb) and Inspire Super or Captan 80W(5 lb) and Merivon from petal fall to 6th cover were found to provide the best levels of bitter rot control (Aprovia + Captan was also found to be effective in this study, but has a 30-day PHI). It is important to note that Prophyt was used in this tank

mix, too. It would be interesting to determine if Prophyt in particular is necessary for this result, or if any acidifier would be sufficient. We are collecting data at Meigs this year looking at Rally and Pristine included in cover sprays to see if less costly options are equally effective. We hope to have that data available to you by Hort Congress. So far, our bitter rot and white rot infection pressure seems to be quite high; it will be interesting to see if there is a difference between treatments.

Finally, way back in 1907, Burrill concluded that it is still best to choose varieties not so susceptible to the disease. Susceptible varieties include perennial favorites like Cameo, Cripps Pink/Pink Lady, Fuji, Gala, Ginger Gold, Granny Smith, Grimes Golden, Honeycrisp, Ida Red and Nittany. High value cultivars, like Moneycrisp, may warrant the costlier fungicide applications.



Figure 1

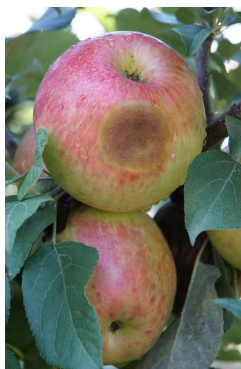


Figure 2

Literature Cited

Brannen, P, and R. Covington, D. Rogers. 2017. Evaluation of fungicide programs for bitter rot of apples in Georgia, 2016. PDMR 11:PF022.
Villani, S.M., and D.A. Nance. 2017. Evaluation of Merivon timings for the management of Glomerella

leaf spot and fruit rot on 'Gala' apple in NC, 2016. PDMR 11:PF011.

Burrill, T.J. 1907. Bitter rot of apples. Available online at:

<https://www.ideals.illinois.edu/bitstream/handle/2142/3142/bitterrotofapple07burr.pdf?sequence=1>

Purdue Fruit Grower Mail Lists

First it was email, then the internet. That was almost 30 years ago. Today various forms of social media is used by just about everyone. Obviously Facebook and Twitter are much more commonly used than email, and more people text today than make phone calls. But, there is still a place for mail lists. Mail lists continue to be a successful communication tool.

The way a mail list works is that people subscribe themselves and then have the authority to post messages to the list. All other subscribers on the list receive the message. One message can be sent to hundreds of readers at once. Replies to messages on a mail list can either go only to the sender of the message or to the entire list.

Purdue HLA Extension maintains two mail lists for users. The "Fruitveg" list is for all fruit and vegetable growers, farm marketers, etc. in Indiana and surrounding states. The "Winegrape" mail list is primarily for the Indiana wine industry. Anyone can subscribe to either list. Once subscribed users can post messages to the list. Our lists are set so that replies go only to the sender. If you prefer to reply to everyone on the list, hit "reply all" and check to see that the list address is in the send box.

The mail lists were established to allow Indiana fruit and vegetable growers, wine grape growers and wineries, and farm marketers to interact with each other electronically. Growers and marketers have been using this forum for free and open exchange of

information and ideas. The list are used to coordinate group purchases of equipment and supplies, and as a forum to buy and sell produce and used equipment and supplies. Each year grape growers post grapes available and many wineries have used the site to sell used equipment. After the freeze in 2012, many fruit growers and farm marketers used the list to help each other find sources of fruit. We encourage all growers to subscribe to the lists.

To subscribe to the lists, click on the links below.

Commercial Fruit and Vegetable – The Fruitveg mail list is for Indiana fruit and vegetable growers, and farm marketers to communicate electronically.

Wine and Grape Production – The Winegrape mail list is for Indiana and regional grape growers and winemakers to communicate electronically.

While we do not moderate the list, we watch activity. We do not allow personal vendettas, inflammatory comments or other inappropriate use of the list. Any

statements made do not represent “official” opinions, and Purdue University takes no responsibility for content.

Upcoming Events

Hydroponic Workshop II

September 8, 2017

Purdue University-HLA

Contact Lori Jolly-Brown ljollybr@purdue.edu

Register at <http://tinyurl.com/yb4dnwrh>

Purdue Wine Grape Team Fall Workshop

September 25, 2017

Purdue West Lafayette campus

Contact Jill Blume blume@purdue.edu

Indiana Horticultural Congress

February 13-15, 2018

Indianapolis Marriott East Indianapolis, IN

Contact Lori Jolly-Brown [@ljollybr@purdue.edu](mailto:ljollybr@purdue.edu)

Visit www.inhortcongress.org for more details

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