



Ripening mystery

Posted by [Josh Willis](#)

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[Josh Willis](#)

[Ripening mystery](#)


October 15, 2018 11:16PM

Registered: 6 years ago

Posts: 134

I have a strange tree in our (very) aging orchard. Thought I'd post here in case anybody enjoys solving orchard mysteries. As you'll see, it's probably not so much a case of "what's the problem" as "which problem from this long list." 

'Symptoms':

- By the calendar, its apples should be ripe now (or near). However, (a) the fruit hasn't colored at all (b) fruit has no sweetness or flavor. It's like biting into a tasteless watermelon - crisp, watery, not underripe / starchy, not overripe...just bland. (c) Fruit is @ ~65% proper size (though as you'll see, this last bit is common throughout the orchard due, I'm guessing, to nutrition and/or age). I googled these symptoms, and all the hits were in the realm of 'why don't supermarket apples taste good anymore.' 

Details:

- 40 y/o 'Imperial' Winesap
- Weather has been singularly strange this year. We have 200% rainfall levels. (is it that simple - a 'watery' apple? I'd think the poor size precludes this, but really I've no clue). GDD's are way off too; while some apples harvested 'on time,' other apples are a month+ late with little sign of progress.
- Major leaf drop by Aug. (consistent with rest of Orchard and other trees in area - I think due to heavy rain, a couple small droughts, poor nutritional health, and rot/scab pressure).
- Soil & leaf tests this year show low: N, Ca, Mg, S, B, Zn, and 5.9 pH. (To be sure, we'll be addressing amendments this year).
- Due to the specifics of where this tree is sited, we spread weed fabric across ~50% dripline last March. Not ideal, I know, but that's a longer story. While I've heard mixed messages about how this might effect nutrition in long run, I didn't think to see an immediate effect...but now I wonder.

Earthworks

Zone 7a in West-Central MD

Non-commercial, ~100 fruit trees, dwarf to MM106

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[Wesley Cornell](#)

[Re: Ripening mystery](#)

October 20, 2018 02:55AM

Registered: 5 years ago

Posts: 1

Hi Josh,

I manage an orchard near Frederick MD and have experienced the same phenomenon this season in our ~30yr old Criterion on M7. Several trees have much smaller apples and no flavor (Brix ~8-10 in early October), though they are crisp and don't taste starchy. Other Criterion in the orchard that perhaps were naturally thinned better (we don't thin our apples) got their characteristic flavor (and Brix of 13 in early September). I don't have a good explanation for this. I notice with certainty varieties of our Asian pears there is a significant taste difference between thinned and not thinned fruit. I've seen research from Cornell that suggests that apples that aren't thinned have a greater concentration of flavor compounds (I would guess because of a higher skin/flesh ratio) but this experience would contradict that study.

Best,
Wesley

Willow Oaks Cider

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[Josh Willis](#)

[Re: Ripening mystery](#)

October 22, 2018 07:39PM

Registered: 6 years ago

Posts: 134

That's interesting to hear our experience isn't totally unique in the area as well. Which makes me wonder more about our common weather pattern this year...it's been really wild, eh?

Interesting thoughts on thinning, though I wouldn't think that's our own Winesap issue - it was not a particularly heavy bearing year for it.

Earthworks
Zone 7a in West-Central MD
Non-commercial, ~100 fruit trees, dwarf to MM106

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[Brian Caldwell](#)

[Re: Ripening mystery](#)

February 11, 2020 06:54PM

We have a heck of a time ripening Golden Delicious and Jonagold. The problem started about 15 years ago when our semidwarf trees were about 20 years old. About 1/4 of the fruit will ripen on time, and the rest will be mostly green and will straggle along, many dropping before they are fully colored and flavored. I used to think it was a result of inadequate thinning, but last season they were thinned well, had good size, and the same thing happened.

Could this be a nutritional issue?? Pruning??

Last season the same thing happened with Northern Spy and Spigold, for the first time.

Would love to hear suggestions!

Registered: 10 years ago

Posts: 69

[Hemlock Grove Farm](#)

Zone 5 in New York

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[Mike Biltonen](#)

[Re: Ripening mystery](#)

February 11, 2020 07:14PM

Brian, did you happen to take any brix, starch, seed color, tissue samples, etc. metrics or other observations on the fruit? It'd be interesting to know where those metrics were at the time they dropped. "Usually" green skin or unripened fruit is a result of higher than normal nitrogen levels. But that may not be case. You can send in fruit samples for a tissue analysis to see where the fruit is nutritionally before harvest. In WNY there are some later ripening varieties that aren't ripening fully because of early cold weather. That should not be the case with GD or the varieties in the FLX, so I am thinking physiological or nutritional. I know you can't use an ethrel product, but something that could bump the ripening process forward could be useful. One thing that would be interesting to see you try next year is the use of BD501 (horn silica) sprays before harvest and see if that helped at all. Hugh Williams has used it for years - as have other biodynamic fruit growers - I haven't yet directly though I work with growers that have.

Registered: 11 years ago

Posts: 298

[Mike Biltonen, Know Your Roots](#)

Zone 5b in New York

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[Michael Phillips](#)

[Re: Ripening mystery](#)

February 12, 2020 04:23PM

What I'm about to share is untried territory, Brian. A few weeks back I co-taught with John Kempf at No-Till on the Plains out in Kansas. He was talking about use of foliar boron to desiccate a wheat crop for an even grain harvest. He added that a generous foliar application of boron on fruit (such as tomatoes or apples) will speed up the natural sugar transport into the fruit. That this can help the fruit color and mature quickly and evenly days to weeks earlier than plants without a generous supply of boron. I have experience with boron being over applied that proved herbicidal at fruit set so am hesitant about "generous foliar boron" at any time of the year. However. This does suggest a nutritional aspect to uneven ripening and definitely worth a look. And whoever dares a foliar application of boron at harvest for this purpose had sure better report back here about sufficient rates!

Moderator

Registered: 11 years ago

Posts: 621

[Lost Nation Orchard](#)

Zone 4b in New Hampshire

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[Todd Parlo](#)

[Re: Ripening mystery](#)

February 18, 2020 08:40PM

This may not be the case (Josh does not mention if overcropping was involved, and it wasn't the case with Brian's), but excess cropload can certainly delay or eliminate proper ripening. I'd like to see the Cornell study that Wesley mentions, because most anecdotal evidence (my experience included) is that an overtaxed tree cannot ripen fruit well. (There is a study in the Oxford Tree Physiology journal that corroborates this- Tree Physiology, Volume 25, Issue 10, October 2005, Pages 1253-1263). If it is a question of allocation of resources, then any vegetative growth could be the causal factor. Or fairies.

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[Brian Caldwell](#)

[Re: Ripening mystery](#)

February 19, 2020 05:17AM

Thanks all,

Yes, Todd, I certainly agree that overcropping can delay maturity. I was hoping that with last year's well-thinned crop, we'd have better ripening, but alas, not so. (We seem to have no problem with red varieties like Melrose and Empire, etc.)

Mike, the seeds were dark and I tested brix on a green dropped Spy and it was around 10, terrible. It occurs to me that even though the trees seemed to have a good amount of leaves, they did have apple scab and Marssonina at the same time--maybe too much even for a big whopper Spy tree!

Michael, I have also defoliated peach trees with boron--not fun!

Registered: 10 years ago

Posts: 301

Registered: 10 years ago

Posts: 69

It is unfortunate that with organic certification, we need to show deficiency in a test (soil or tissue) in order to use micronutrient sprays. However, maybe I'll give the soil under the trees an extra boost of everything except nitrogen this spring.

[Hemlock Grove Farm](#)

Zone 5 in New York

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