



Learning from mistakes

Posted by [Jason MacArthur](#)[Forum List](#) [Message List](#) [New Topic](#)[Jason MacArthur](#)[Learning from mistakes](#)

February 27, 2019 02:27PM

Registered: 6 years ago

Posts: 28

The only way I seem able to learn anything is to make a mistake and then observe the fallout. As all of you no doubt appreciate, orchards are wonderful teachers in this way, reminding us for years of our missteps while prompting us to keep trying to improve. I am often reminded of a pithy adage used by my first orcharding mentor, "The orchardist is the most dangerous pest in the orchard"

In that vein I have been reflecting on the arcs of my orchard over the last few seasons. For years my trees produced modest volumes of high-quality fruit, within a reasonably biennial pattern, and had terrible looking bark and foliage. I gnashed my teeth and pulled my hair, tested the soil and leaves, and reacted. Within the course of two years I put down a heavy lime application and what should have been an appropriate boron ground application except that I banded the borax under the trees, as opposed to spreading it throughout the orchard. Soil tests now show excessive boron and appropriate pH, and tissue tests show appropriate levels of boron and marked decrease in calcium; other nutrients and micro-nutrients largely holding steady. My foliage looks greatly improved, but the fruit quality has taken a turn for the worse. The biggest issue I have is premature ripening, with seemingly more fruit rots(though this could be weather driven and unrelated) and less production overall. Often trees will bloom heavily for weeks on end and then set almost no fruit.

I know what path I want to take from here: rebuild soil biology with wood chips and compost, foliar feed balanced micronutrients and biodiversity, and let the trees and their soil allies take things from there. But in the meantime I will reflect on the subtlety and mystery of an orchard, how little I actually understand the repercussions of my own actions within it, and how much this mirrors life as a whole!

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February 27, 2019 04:43PM

Registered: 10 years ago

Posts: 298

Sounds like Benign Neglect to me! The big issue with fruit quality (and not sure specifically what your problems are since you don't say, except for rots) is likely a biological issue - it could be related to nutrition somewhat, but the cascade of events is usually a susceptible host being infected (directly or through a wound or physiological disorder), latent infection (no symptoms), then symptom development. In the case of Marsonnina leaf blotch for example the infection actually takes place 45 days before symptoms appear. Bitter rot infections can occur as early as bloom, but symptoms don't show up until later in the summer. This is true of a lot of diseases. Ensuring a strong competitive biological environment on the surface of the plants throughout these early infections is as critical and ensuring the same later in the season as symptoms build. Nutrient status, esp calcium and nitrogen, are critical and with low calcium levels in the leaves, you should be applying a calcium spray to the plant during the bio buildup period. The lack of uptake of calcium from the soil is obviously an issue with the roots, boron should have helped solve that (even though levels are high, are they toxic?). A stronger soil biology will help improve that uptake over time and hopefully correct the issue in time. Any way, I think you are on the right path, but don't give up on helping the tree where it needs to be helped with nutrient sprays.

[Mike Biltonen, Know Your Roots](#)

Zone 5b in New York

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February 28, 2019 01:32PM

Registered: 6 years ago

Posts: 28

I am certainly happy to help trees along with nutrients sprays, soil amendments, etc. What I am struck by though is how, in my case, a regime of "benign neglect" made my trees look terrible yet grow great fruit, while a more hands-on approach seems to be yielding the inverse of that. (And truthfully there are many many variables here: new trees, with different varieties and rootstocks, coming into production; a changing climate, etc.)

I speculate that my trees had reached a sort of equilibrium within a regime of benign neglect that they were content with, though certainly not thriving under. When life began to allow me more time to focus on my orchard I came in in perhaps too heavy-handed a way to correct mistakes- soil pH, a long-term boron deficit, etc. Somehow along the way I either disrupted soil biology or exacerbated an existing nutrient deficiency to the point that yield and fruit quality have suffered. I am confident that with time they will recover.

I am not suggesting that everyone's interventions are as ham handed as my own. But I do feel that my orchard and trees seem to react to my interventions in ways that take years for me to see, which makes diagnosing my own mistakes, or understanding what I've done right, that much more difficult. This is not a complaint as much as a musing, perhaps even a recognition of the deep allure of orcharding, that it is a long term and subtle relationship with a living ecosystem I can influence but not control. My purpose in writing is to remind all of us, by example, that our actions within the orchard must be carefully considered and that, even with the best of intentions, they can do harm as well as good.

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