



## Spectrum Basics

Posted by [Brittany Kordick](#)

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[Brittany Kordick](#)

[Spectrum Basics](#)

October 25, 2022 03:08PM

Registered: 4 years ago

Posts: 211

Historically, when we wanted to populate general beneficial microbes in our orchard we have always used EM-1 bacteria that we scaled up with molasses, supplemented with occasional applications of Quantum Light. A few forum users have mentioned Tainio's Spectrum in the past year, and we're interested in trying some out. It looks like AEA is the distributor for our region, so we reached out to them about pricing and usage questions. At first, it all sounded great -- wow, no need to do scale-up brewing a week or so ahead of time, less expensive than we expected, no big freight costs since it comes in little packets . . . then AEA did its typical add-on thing and highly recommended that we pair it with their Rejuvenate product to aid in reconstitution and establishment . . . which would have the effect of making Spectrum usage really, really expensive. They also mentioned that they don't recommend applying Spectrum, or any of their biologicals, above 40 psi.

I am happy to hear attention paid to applying and situating microbes successfully, not just hurling them out and patting oneself on the back with dreams of happy little microbes flitting through the canopy, but I don't have any interest in using the AEA Rejuvenate product (would consider adding some molasses and/or humic acid to the tank as an alternative), and I will be applying the Spectrum with an airblast I run at 100-150 psi (understanding very well that I may be harming some, but probably not nearly all, of my microbes . . . or conversely, I may not be harming any at all, we just don't know). I'm wondering if those of you using Spectrum in your orchards have any particular regimen besides reconstituting the Spectrum bacteria and spraying it out.

Also, you are applying this to the foliage and canopies, as well as the soil, correct? All the Spectrum products I've seen have specified soil application, and AEA reiterated that it's not really for foliar application. We've dealt with this before with some EM-1 mother cultures that specify soil application, but of course, we know that there's plenty of good stuff in the mix for the canopy, as well, and that runoff will reach the soil, as well, but just wanted to ask if you all are applying it to the soil exclusively or to the canopy, as well.

Thanks so much.

[Kordick Family Farm](#)

Westfield, NC

Zone 7a

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[Todd Parlo](#)

[Re: Spectrum Basics](#)

October 28, 2022 06:40PM

Registered: 10 years ago

Posts: 301

I love reading this sort of reaction to the amendment game. I often find myself on the fence, as a farmer, a consultant or frankly as a consumer. Far too much in the product realm is taken on faith. Many in this group understandably like the idea of alternative ag, shunning either a corporate response to food production and land stewardship or pushing against an autopilot approach to orchard care. Too often I see that (ironic) approach to what many perceive as a better alternative. Be that a home-brewed holistic spray or an industry marketing so called green products or approaches. There will always be instances where we have to drag something in, factory produced, shipped in from god knows where to keep things running well. What I see happening more and more however is a simple replacement of one pile of material for another. Safer maybe, greener maybe, but very likely unsustainable, and as Brittany hints here, a good way to bury a small farm in debt. There is hope I think in challenging some of this while making us all a little wiser- work and investment as a group. There is nothing stopping us collectively to use good science to run trials on these commercially available products and locally produced, or on farm alternatives. The Holistic Orchard Network is poised this coming year, with interest and investment, to do just that. If we do this correctly, in short order we will all be armed with the intelligence to know what is an effective and dollar worthy investment and what should be left on the shelf.

Edited 1 time(s). Last edit at 10/29/2022 03:03PM by Todd Parlo.

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[Brittany Kordick](#)

[Re: Spectrum Basics](#)

February 04, 2023 11:56PM

Registered: 4 years ago

Posts: 211

Going to answer my own question here after finding an old email from Michael Phillips in response to a query from me about what he was referring to by "Spectrum:"

"Spectrum is the foundation inoculant from Tainio Biologicals: details here. I know this says for soil application but truth is their foliar organism mix is Spectrum slightly toned down with respect to species counts. A rate of 5 to 10 grams per acre is appropriate for arboreal use. This has replaced Quantum as my source of photosynthetic bacteria, primarily for cost reasons but also because of greater organism diversity."

[Kordick Family Farm](#)

Westfield, NC

Zone 7a

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[Mike Biltonen](#)

[Re: Spectrum Basics](#)

February 05, 2023 11:49AM

Registered: 11 years ago

Posts: 298

I support this and have applied Spectrum (and others) to the foliage and tree architecture. My theory has been: I can't keep it all on the tree anyway and with runoff a good portion hits the ground anyway and with photooxidation the breakdown on the surface of the tree reduces its overall lifespan and viability anyway. One question though: did AEA explain why they didn't think it was appropriate for the tree itself (vs being more appropriate for the soil)? I've always found that AEA has been short on supporting data, not that the products are bad or don't do what they are purported to do, just short on supporting data. That said, AEA and Tainio are my go-tos.

[Mike Biltonen, Know Your Roots](#)

Zone 5b in New York

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[Brittany Kordick](#)

[Re: Spectrum Basics](#)

February 05, 2023 07:28PM

Registered: 4 years ago

Posts: 211

When we inquired with AEA about purchasing Spectrum, we were looking at the label via their website and noticed that it was only talking about rates and application for soil. We told them we planned to use it as a foliar spray, and that we had used bacterial products in the past for foliar even when they only specified soil application, so just wanted to confirm that this was the Spectrum formulation that folks were using on foliage, as well. The woman we talked to couldn't really speak to that, apparently hadn't talked to anyone using it on foliage before and simply stressed that, as far as she knew, this was just for soil application, but she was just going off the label specs, nothing else.

Actually, while the Teraganix EM-1 (which we used to use as a mother to scale up from) label mentions soil as well as foliar usage, I remember having a similar conversation with the owner of Kenkashi, a local to us company we started buying bacteria from (it's essentially EM-1 species, but sourced from local populations, so hopefully tapping into any benefits that might come from using your 'IM' or indigenous microbes). We had originally asked them if they made any bacteria blends for foliar application, and they said no, that all of their products were aimed specifically at soil populations (their niche is compost boosters). When we explained that we had been using EM-1 from Teraganix, she explained that her father had formerly worked for Teraganix and Kenkashi was very similar to EM-1 in species makeup, so no reason she knew that it couldn't be used in the canopy, as well.

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