



Micronutrient maintenance sprays

Posted by [Josh Willis](#)

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[Josh Willis](#)

[Micronutrient maintenance sprays](#)

August 09, 2022 04:22AM

Registered: 6 years ago

Posts: 134

I had a conversation last month with the gentleman from Crop Services International, and he mentioned that he usually recommends a monthly micronutrient maintenance spray, regardless of nutrient test results, to members of this forum. I hadn't seen any mention of this, although I obviously may have missed it! I did see Brittany's post in the plant sap analysis topic re: continuing her micronutrient pak sprays.

Anybody else, do you do regular maintenance micronutrient sprays? Any thoughts on the matter?

Thanks.

Earthworks

Zone 7a in West-Central MD

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

Edited 1 time(s). Last edit at 08/10/2022 11:32PM by Josh Willis.

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[Todd Parlo](#)

[Re: Micronutrient maintenance sprays](#)

August 11, 2022 02:22PM

Registered: 10 years ago

Posts: 301

Making sure that micronutrients are present is clearly important. In our area of northern VT we have to watch out for Boron levels for instance, but wouldn't dream of applying additional amounts without information. That may be spray delivered but good soil maintenance will also fill the need. I am troubled by the above statement that they should be applied regardless of the information from testing. If through soil monitoring or tissue analysis you see good numbers then further application should seem silly to all of us, doesn't it? Unless of course you are a seller of said amendments. There are some cases when I will tell a client that the more the merrier when applying, but that will be in the case of a weak fertilizer, mulch and especially compost. Otherwise, it may be a waste of time and resources. Micronutrients have members that can be toxic in relatively small amounts. I should also remind folks too that good soil stewardship can reduce need for foliar applications across the board and is where activity should begin.

[Walden Heights Nursery & Orchard](#)

Zone 3 in Vermont

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[Brittany Kordick](#)

[Re: Micronutrient maintenance sprays](#)

August 11, 2022 03:58PM

Registered: 4 years ago

Posts: 211

A small group of HON members, including myself, have been working with Dane at Crop Services International as we explore plant sap analysis this season. We share our results, sometimes do group calls with CSI, and often discuss how it's all going via email. Interestingly, one of us was just pointing out the surprising fact that all of our orchards have been consistently low in micronutrients across the board. I concur with Todd that I wouldn't dream of applying something that wasn't shown to be needed in our orchard, nutrient-wise, and that goes for a trace micronutrient blend booster, as well. However, I'm just wondering if perhaps more context is needed in fairness to Dane's apparent statement that he typically recommends a monthly micronutrient spray regardless of test results, since this has not been our experience with him at all. I realize that this was intended to be a greater discussion of micronutrient applications in orchards and hope it gets there, but being that Dane has been such a great help to us this season, I feel compelled to say a few words about him specifically here.

What we apply in response to any perceived low micronutrient numbers is a general blend of trace minerals, provided in extremely low amounts. Michael Phillips once described to me his somewhat regular application of a trace nutrient blend as giving the trees a "tonic" offering, which they can sort of use as a bonus grab-bag for what they may be lacking, though I don't really understand how trees would be able to, say, effectively reject something they may already have in abundance. At any rate, application is not so much intended to push the needle on amounts through direct application, but rather intended to stimulate the trees to scavenge more of these nutrients on their own. (I

had always wondered about the seemingly ridiculously low amounts of micronutrients applied, how they could hope to do anything.) Even with our consistently demonstrated overall deficiencies, we have only applied a micronutrient blend a handful of times this season in response to Dane's advice surrounding our plant sap analysis results, always given with the greatest attention to the time of year, tree/fruit stage, any toxicity concerns, as well as complex nutrient relationships. As many times as he has advised us to go ahead with an application, he has advised us to leave off and wait until another sap test comes back a couple of months down the road. Incidentally, while Crop Services International does offer a line of products, they've barely been mentioned to us, and only in passing that if we can't find anything else, CSI might have something along the lines of what we're looking for. Dane usually asks what we're planning to apply and assesses it on our behalf (always a thumbs up, to date) or gives us an idea of what to look for in a product.

As Todd alluded to, these "tonic" spray applications are also not necessarily superior or even equal to soil applications (foliar vs. soil applied nitrogen is one topic that our little group has discussed in earnest this season), and serve as mere attempts to give the trees a minor boost during the growing season until more effective fall or spring soil applications may be undertaken. Plant sap analysis offers growers the opportunity to really tweak their nutrient levels on a micromanagement basis, but it's up to the individual grower whether or not to go this route. Thus far, our little band of skeptics retains very, very open minds with regards to both psa and application advice. We're looking forward to doing soil applications of certain nutrients towards the end of the year and ahead of bloom to try and reduce any maintenance-based inclusion of micronutrients (or anything else!) in our regular sprays next season.

[Kordick Family Farm](#)

Westfield, NC

Zone 7a

Edited 2 time(s). Last edit at 08/11/2022 04:03PM by Brittany Kordick.

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[Todd Parlo](#)

[Re: Micronutrient maintenance sprays](#)

August 11, 2022 04:37PM

Registered: 10 years ago

Posts: 301

Brittany, thank you for sharing your experience with Dale, who I am sure is trying to help growers. Perhaps going forward we should be very specific about the details. Part of the future of the Holistic Orchard Network as I see it is to apply a bit more rigor, research and care into what we share. I think Josh is, and Brittany you always do this, but it bears repeating. For instance micronutrient has a specific meaning and for me raises a red flag when it doesn't immediately mention trace amounts as an application and that there is a calculated need. Micronutrient is of course a nutrient needed in small amounts whereas "trace" is a word that usually relates to how much of that micronutrient is being applied. Now, we can have toxic effects with overapplication of many of these including manganese, iron, boron, etc. This is why we address the imbalance when we have information that tells us that a need exists. When I am coaching a grower it encompasses budget and labor as well as tree health. Applying something that likely isn't needed is wasteful, of time and money, and always has an environmental impact. So I think it is good procedure to have good monitoring in place and act accordingly. Now I am sure this is grossly overstating the point, but I want to allow for a simple reminder that we want to always use an ipm like approach to growing rather than a schedule approach. We also want to use resources when warranted and not a drop more in most cases. I will add, ironically, that most growers are far too lax in monitoring for and applying materials beyond NPK and compost. They should just do it wisely.

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[Josh Willis](#)

[Re: Micronutrient maintenance sprays](#)

August 11, 2022 05:49PM

Registered: 6 years ago

Posts: 134

Thank you both for sharing your insights!

I feel I should clarify that my description above was meant as a general topic starter, not as a verbatim representation of this gentleman's advice. So please take it with a grain of salt. He certainly made it clear that he was not pushing his own particular products. My apologies for not being more specific.

So as Brittany suggests, I think it makes sense to steer the conversation more towards an overall discussion of trace micronutrient sprays. My understanding was along the lines of the tonic that Brittany describes, certainly in trace amounts, used to stimulate further soil uptake. I think, if I understood correctly, he mentioned that even with proper soil levels, uptake is not always optimal, hence his rec for this trace micronutrient spray. I of course asked about toxicity, and apparently these sprays are in such low amounts that this is not a concern. Again, this is my recollection from a phone call a few weeks ago, not a cited and sourced thesis, so please take with a grain of epsom salt.

This was in a larger conversation of testing, of course, given their business. I was asking about the process for sap analysis for smaller and non commercial growers such as myself. I assumed it was too much time and expense. And indeed, it is! But this spray came up in that context and wider ranging conversation. Initial testing would likely show some micronutrient low levels, but non commercial growers are not likely to be testing several times throughout the year, which is what I took to understand his potential rec for regular "tonic" trace micronutrient sprays. Again, I may well have misunderstood his meaning.

In any case, thank you both for your responses. And thank you Brittany for sharing some of the insights from your group's work. Much appreciated and helpful.

Earthworks

Zone 7a in West-Central MD

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

Edited 2 time(s). Last edit at 08/11/2022 05:51PM by Josh Willis.

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[Josh Willis](#)

[Re: Micronutrient maintenance sprays](#)

August 12, 2022 12:16AM

Registered: 6 years ago

Posts: 134

These are interesting points to consider, Todd. I think we would all agree that the less we need to do, the better. This is where Claude chimes in about his marvelous trees, ha! ;)

I wonder about the "IPM like approach." My understanding of many parts of the holistic spray program, as broadly discussed in Michael's books and discussed in these forums, is they are often keyed in on the annual or seasonal biorhythm of the trees (or crops) and its ecosystem. Much of the spring sprays, from some well-timed fatty acids to SeaCrop's timely use to support meristem regrowth (if I recall correctly), are as much about the plant's cyclical health as about a specific point of data, test, or pest ID. All this to say, I could see there being room for other seasonal applications to support holistic support, if they are evidence based. And that if statement is the important and tricky part, of course! But it is an interesting question to ponder, thank you.

As an aside, that's a helpful clarification on the use of "trace." I thought I'd seen different publications use micronutrients and trace nutrients sometimes interchangeably and sometimes differently, and not necessarily to mean amounts. Good to know, thank you!

Earthworks

Zone 7a in West-Central MD

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

[Reply](#) [Quote](#)

[Todd Parlo](#)

[Re: Micronutrient maintenance sprays](#)

August 12, 2022 02:20PM

Registered: 10 years ago

Posts: 301

I have a call in to Dale to expand on his advice, which I am sure will shed light on the discussion. As I mentioned the inclusion of micronutrients in the management plan can have a positive influence in our orchards. When needed. My fussiness is centered on being informed about when and if we need to apply said nutrients. "Conventional" agriculture tends to use a set routine as its basis, whereas IPM appeared as an alternative...to be more informed about the problem and then address it. Whereas that is more often an issue of pest management, it applies to nutrient management as well. No question we are using a routine in the Holistic Spray program so we will all have to decide when to be thorough in testing before we extend effort, and when to apply something routinely. For instance, I tend to use natural, farm based materials added to my spray tank more freely than I would, say, boron. Simply because one is less likely to get you into trouble than the other. I also reiterate that we shouldn't spend more time and money than we need to. That said, micronutrients play an important function in plant growth and maintenance as well as combatting stressors and improving immune function. This happens by being present in the required amounts. Finally a clarification in the above semantics- trace mineral and element are indeed used interchangeably with micronutrient, however micronutrient has a specific and accepted meaning in plant/soil science and trace is thrown around more generally. Trace element is used commonly and can include things like cadmium and arsenic, which micronutrient does not... the latter relating to a trace element that is essential to plant (or another organisms) health. Returning to the point at hand it would be great to hear from other growers about how the application of micronutrients in their program helped in orchard health and fruit productivity. Did you do a lab test before application? Did you use a test block or apply broadly? How much did you spend in time and outlay? Specifically what improvements did you see (plant growth, general health, impact on insect predation or disease)?

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[Claude Jolicoeur](#)

[Re: Micronutrient maintenance sprays](#)

August 12, 2022 08:42PM

Registered: 11 years ago

Posts: 226

Josh Willis Wrote:

> This is where Claude chimes in about his marvelous trees, ha! ;)

Ha Ha Ha!!!

True, I don't usually read in depth the discussions related to spraying as I don't spray much.

I am too lazy and I work on the principle the tree should be able to naturally find what it needs, without my help.

So I won't comment further.

[Jolicoeur Orchard](#)

Zone 4 in Quebec

Author, [The New Cider Maker's Handbook](#)

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