



## using both sulfur and competitive biology

Posted by [Leigh Wiley](#)

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[Leigh Wiley](#)

[using both sulfur and competitive biology](#)

February 05, 2013 10:13PM

Registered: 11 years ago

Posts: 3

I am still feeling I will need to use sulfur as well as effective microbes (EM) in part due to the very heavy scab infestation we had last year as a result of the extended rains in June. Would it be better to alternate sulfur and EM on a weekly basis, does it negate the EM if tank mixed with sulfur (seems like it would!), or are there other alternatives?

Edited 1 time(s). Last edit at 02/05/2013 11:32PM by Michael Phillips.

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[Michael Phillips](#)

[Re: using both sulfur and competitive biology](#)

February 07, 2013 05:21PM

**Moderator**

Registered: 11 years ago

Posts: 621

A fundamental question, Leigh: Can a grower utilize both organic mineral fungicides and holistic approaches at the same time, and thus seemingly double the odds of overcoming fruit tree disease? I like to turn to visualization on the microbe level to "see the answer" that waits when we think such things through more deeply.

We have to understand how the mineral fungicide approach works to deter pathogenic fungi as well as what supports competitive colonization and what does not. Put simply, a spray material applied to counter bad fungi by toxic means will always impact beneficial microbes negatively as well. You certainly can't take living biology in the form of effective microbes and/or compost tea and expect those organisms to thrive in a toxic environment ... so let's rule out tankmixing sulfur (or lime sulfur or copper) with biology. It comes down to what's going on on the surface of the leaf and down in the blossom cluster where fruitlets are being formed during the primary infection period for apple scab. Sulfur in solution makes the moist regions on growing tissue far more acidic, thus inhibiting the enzyme process needed by fungal spores to access leaf cell resources. Not unlike how acid rain wipes out canopy colonization ... being one of the reasons I came to realize the need to apply "biological reinforcement" on a regular basis. Fungicides of any persuasion undermine the biology by definition, including the mycorrhizae in the soil.

Yet, perhaps, maybe - especially in what turns out to be an incredibly wet early summer - a well-timed sulfur application in the midst of a holistic program has merit in the face of a major spore release event. These are the sorts of things needing exploring. I no longer use sulfur at all. Every grower will come to such change at their own pace. Often, in my consulting work, I identify transition situations where an organic allopathic touch may be appropriate early on in the process of renewing a fully-functioning biology. Such as a dormant copper spray prior to quarter-inch green where little work with leaf decomposition has been done the previous fall (and ideally, copper levels in the soil have been revealed as needing a boost on a soil test). But these are choices to move beyond once you reestablish a healthy, diverse biota of both tree and soil. Frankly, a "bad scab year" is best negated not by more medicine in the season ahead but rather active investment in decomposition of potential disease inoculum following harvest and on through to early spring.

But this is me. Others should engage here and make this a really, really good discussion.

[Lost Nation Orchard](#)

Zone 4b in New Hampshire

Edited 2 time(s). Last edit at 07/08/2013 09:08PM by Michael Phillips.

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[Fabio Chizzola](#)

[Re: using both sulfur and competitive biology](#)

March 03, 2013 03:38PM

Registered: 11 years ago

Posts: 35

Did anyone try a block of their orchard just using the holistic approach with no sulfur, beside Michael?? if yes, could you share the results? Especially on scab?

Thx.  
Fabio  
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[Todd Parlo](#)

[Re: using both sulfur and competitve biology](#)

March 05, 2013 08:16PM

Registered: 10 years ago  
Posts: 301

I began last year a full fledged approach in one block, using generally most of what Michael has recommended. I will state that is was not successful for scab, or much else this first year. I only mention this because no one out there should expect much either. Michael just posted a good response to this in the forum, concerning [biological transition](#), and I fully agree. If I remember correctly Brian also had poor luck short term with scab using the holistic approach, but he also seems to agree here. For those who are interested I am going to throw a piece together on scab and post it here and on our website to show how darn complicated scab management can be and how we might deal with it under a new paradigm. I will say that when I sprayed that block I did NOT smell like a railroad flare, and the neem in the mix did keep the insects better in check.

[Walden Heights Nursery & Orchard](#)

Zone 3 in Vermont

Edited 1 time(s). Last edit at 07/08/2013 09:11PM by Michael Phillips.

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[Fabio Chizzola](#)

[Re: using both sulfur and competitve biology](#)

March 06, 2013 12:23AM

Registered: 11 years ago  
Posts: 35

Todd,

are you going to approach the same block again with just holistic sprays this year?

Fabio

[Westwind Orchard](#)

Zone 5b in New York

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[Todd Parlo](#)

[Re: using both sulfur and competitve biology](#)

March 06, 2013 02:59AM

Registered: 10 years ago  
Posts: 301

Fabio,  
I will. There is no duration set before I would expect results, but cost of materials and reliance on inputs have bearing on what we do here. Also, we are interested largely in the educational part of this, maybe even beyond profits. We are pretty diversified here, and the orchard is young, so a disaster with dessert fruit won't break the bank. I am sure I don't need to tell anyone whos livelihood depends on marketable fruit that cautiously testing the waters with any experimental program is the way to go. That goes for a natural approach just as it would with trying some new industrial chemical approach. But we owe it to any test to give it a good long time to make its case.

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Zone 3 in Vermont

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