



## How long before spraying sulfur again?

Posted by [Nick Hall](#)

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[Nick Hall](#)

[How long before spraying sulfur again?](#)

May 09, 2016 09:48PM

Hello,

Registered: 7 years ago

Posts: 4

I'm an orchard newbie, helping out with about 150 apple trees that my grandpa had planted about 10 years ago. They were not previously sprayed so they had quite a lot of apple scab last year. I am not currently at the orchard location but I go over there every week and do what I can when I'm there.

I bought The Apple Grower book and have been learning about apples and am looking for a little clarification about spraying sulfur for scab.

I bought some micronized sulfur as recommended in the book and have sprayed it once so far, 4 days ago (we are in a cold climate so the stage was Tight Cluster, it hit first pink this weekend).

A day after I had sprayed the orchard got about 0.1" of rain.

I understand from the book that the sulfur seems to lose effectiveness after a while, perhaps 1 week if there is no rain you'd want to spray again?

I also understand that if there was a lot of rain then you would have to spray again to maintain coverage.

But what I'm unclear on is when spraying again is necessary in this case, where there was a little rain after the first spray (0.1" in our case). Did this 0.1" of rain wash off the sulfur?

There is a chance for 0.1" of rain tomorrow, which will have been 5 days since the previous spray. It seems at least 50/50 likely that the leaves will be wet long enough to get infected with scab, if they were unprotected, based on the leaf wetness vs temperature charts in the book.

But I'm wondering, is the spray that I did 5 days ago still providing coverage considering it got rained on a little? How much rain is enough to wash off the sulfur?

Thanks.

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[Michael Phillips](#)

[Re: How long before spraying sulfur again?](#)

May 11, 2016 04:49PM

**Moderator**

Registered: 11 years ago

Posts: 621

We learn these things one step at a time. You've done good recognizing the value of micronized sulfur and that even those fine grains have a finite life. A week is about right given ultraviolet radiation breaking down enzyme-suppressing activity. A light rain will not wash coverage off . . . that requires more of a deluge, as in an inch or two in a relatively short period of time. Think of that sulfur grain awash in a constant bath, keeping moisture puddles acidic, but eventually all dissipates into solution and now there's no source left of renewed acidity.

The next step in the sulfur journey is to put more focus on when spraying is not necessary. *One week later, spray again* is an approach that ends up setting back beneficial microbes more often than not. Accounting for actual weather patterns reveals long periods of spore maturation and thus when to renew coverage if going into a significant wetting event. On the flip side of things, you can boost weak coverage at the end of a wetting event so as to have more sulfur to play forward for the next wetting event. Tracking actual wetting events and temps helps you understand this dance.

I would not have renewed coverage this early in the season when leaf canopy is still minimal for a 0.1" predicted rain. I say this not knowing the pace of warming at your site, Nick, which is where degree day tracking and the fungal curves (page 184-5 ) come into play. Should the weather prove wetter, and I felt there was a significant chunk of mature ascospores being released, then I might have renewed this coverage at the tail end of that predicted rain. More likely, you could have waited another period of days until a "real rain" was

predicted. This is how you stretch out sulfur coverage in straddling the line between too much and too little.

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[Nick Hall](#)

[Re: How long before spraying sulfur again?](#)

May 11, 2016 06:01PM

Registered: 7 years ago

Posts: 4

Thanks a lot Michael. Very helpful. I did not end up spraying before the recent rain, mostly because I'm living 1.5 hours away right now so it is hard to make a special trip over just for that, but it is good to hear that I did not need to spray anyway because the sulfur wasn't washed off. Later this summer I will be living there so it will be a lot easier to spray if I need to.

It turns out that a nearby site recorded 0.36" of rain but it was a drizzly cold rain so based on what you're saying here and in your book it sounds like I should hopefully be OK with the previous coverage. There will likely be some more similar rain today and then after I will be able to get over there and renew the sulfur coverage (it will have been about 1 week but less than 1" of rain over the period). I understand from what you are saying that it may be best to wait a couple more days until a rain is predicted to spray but at this point, not being there, I have to work with my schedule as if I don't spray this week then it would be another week until I can really spray again, and that may be too long. In the future when I'm there I can work with the weather and the charts better.

The [uspest.org](#) apple scab model, if that is accurate, shows the spores are about 40% mature right now. The last couple of weeks have been kind of alternating between cool and hot weeks so its up to 400 DD32. During yesterday's rain of 0.36" it was only about 45F so based on your charts it sounds like about 50% of the available spores were released and the leaves would have needed to have been wet for about 15 hours in order to infect the leaves (not factoring in the sulfur). I'm not really sure if they were wet for that long or not -- it was likely close, but it sounds like the sulfur coverage would have likely taken care of that even if they stayed wet long enough.

Thanks for the advice. I got your other book for Christmas and plan on reading it this summer.

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