



2022 Thinning trials

Posted by [James Smith](#)

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[James Smith](#)

[2022 Thinning trials](#)

April 27, 2022 08:07AM

Registered: 2 years ago

Posts: 57

So, I had asked about using lime/sulphur in another thread to thin apples. In my case, strip the trees. I have three rows with 85 trees per row that are closest to the road I don't want any fruit on. Last year a 'field man' for one of the packing sheds reported to the Pest Sheriff that I had CM stings on my fruit. The Sheriff came by to check and said I had a few stings, nothing major, and said I should remove the fruit. When I said that if this 'field man' went into my orchard he was trespassing, the Sheriff told me he said he had "seen it from the street". Solution: no visible fruit from the street.

Brittany suggested I was in a great position to trial some sprays I'm up for the task. I read the other thread that baking soda is also used for thinning. Today I picked up 130 pounds of BS (the white powder BS) to try out. Cost \$77. I can get L/S, \$200 for 30 gallons. After reading how harsh L/S is, I would prefer to stay away from it, but since I'm volunteering to experiment, I can be talked into it.

Brittany said she was using BS at the rate of 10 pounds per 100 gallons. I can do this as a baseline. Any other suggestions/requests for other rates to experiment with? I don't want to kill the trees or do excessive damage to them. I want them to be a visual buffer zone so I would like to keep them in leaves. However, I do have more rows that I can experiment harshly on as they are going to be culled anyway,

Here's your chance folks. Suggest rates and I will try to accommodate, in the interest of science, or in interest of 'let's see what the hell happens'.

Washington Okanogan Valley

Zone 6b

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[James Smith](#)

[Re: 2022 Thinning trials](#)

April 27, 2022 08:13AM

Registered: 2 years ago

Posts: 57

I'll add that I use a Rears 'Pull-Tank', very similar to the 'Pak-Tank' Michael used. Only difference is Michael attached his to the tractor by a three-point hitch, mine is a trailer pulled by the drawbar. Application is the same, pointing a gun from the tractor seat.

Washington Okanogan Valley

Zone 6b

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[Claude Jolicoeur](#)

[Re: 2022 Thinning trials](#)

April 27, 2022 01:34PM

Registered: 11 years ago

Posts: 226

James Smith Wrote:

-
- > Last year a 'field man' for one of the
 - > packing sheds reported to the Pest Sheriff that I
 - > had CM stings on my fruit. The Sheriff came by to
 - > check and said I had a few stings, nothing major,
 - > and said I should remove the fruit.

Do you mean to say here that there is a "police" that checks if there are unsprayed apple trees?

What sort of world do we live in...

What would happen to an unmanaged population of wild apple trees?

[Jolicoeur Orchard](#)

Zone 4 in Quebec

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

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[James Smith](#)

Registered: 2 years ago

Posts: 57

[Re: 2022 Thinning trials](#)

April 27, 2022 02:55PM

Claude Jolicoeur Wrote:

> James Smith Wrote:

- > -----
- > Do you mean to say here that there is a "police"
 - > that checks if there are unsprayed apple trees?
 - > What sort of world do we live in...
 - > What would happen to an unmanaged population of
 - > wild apple trees?

I've mentioned some of my adventures with the "police" in other threads. By law in Washington state a property owner must control pests to prevent them from affecting their neighbours. It also allows for the creation of a 'Pest Control Board' who has the power to enforce these laws. Basically, what happens is that someone (in my case a neighbouring orchardist and their field men) file a complaint with the board and the Director (whom I call the 'Sheriff') will start an investigation. His underlings (whom I call his 'Deputies') will place traps and monitor pest activity. If the property owner does not institute a plan of control and follow it, the Board with appeal to the courts, who will grant an order to have the source of the pests removed at the property owner's expense. An unmanaged population of wild apple trees would become an unmanaged pile of uprooted trees in short order.

Washington Okanogan Valley

Zone 6b

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[Claude Jolicoeur](#)

[Re: 2022 Thinning trials](#)

April 27, 2022 05:32PM

Interesting...

I don't think I'd be happy living in Washington State - for sure I wouldn't be able to do the things I now do.

And by the way, what does the police do for an ordinary quidam who has a decorative crab tree in front of his house? They will force him to spray?

Registered: 11 years ago

Posts: 226

[Jolicoeur Orchard](#)

Zone 4 in Quebec

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

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[James Smith](#)

[Re: 2022 Thinning trials](#)

April 27, 2022 05:52PM

Nobody can be forced to spray. But if pests aren't controlled, the offending tree is removed at owner's expense. Your ordinary quidam would have the choice of spraying, removing the tree or all the fruit (no fruit, no CM damage), or having it removed and sent the bill.

Registered: 2 years ago

Posts: 57

Washington Okanogan Valley

Zone 6b

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[Brittany Kordick](#)

[Re: 2022 Thinning trials](#)

April 28, 2022 02:22PM

James, thanks so much for doing this, period, and especially for taking requests! I will be very eager to hear how your baking soda trial goes -- as you mentioned above, we had planned to do extensive thinning at a 10lb/100 gal/scant acre rate this spring, but repeated hard freeze events during bloom spooked us off and we ended up doing no blossom thinning at all. So another year of potential research lost for us, and we're grateful to you for picking up the baton.

Registered: 4 years ago

Posts: 211

What you're attempting with the baking soda sprays is essentially a low-cost play on thinning with Armicarb or any other potassium bicarbonate formulations. As far as anything else to consider trying, aside from the lime sulfur/oil standard thinning treatment, the only other organic blossom thinning method I've heard anything about is Regalia.plus stylet oil, but I'm not aware of recommended rates.

Best of luck!

[Kordick Family Farm](#)

Westfield, NC

Zone 7a

Edited 1 time(s). Last edit at 04/28/2022 02:27PM by Brittany Kordick.

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[Brittany Kordick](#)
[Re: 2022 Thinning trials](#)
April 28, 2022 02:34PM

Registered: 4 years ago
Posts: 211

One further thought came to mind that may be more appealing to anyone toying with thinning, always a nailbiting proposition (except for dear James who actually wants to rid himself of an entire crop): I'm becoming more interested in the idea of thinning by repelling pollinators once king blossms are demonstrably fertilized. We recently applied Grandevo for the the first time in our orchard, targeting plum curculio, and there is a warning on the label that Grandevo will actually repel (but not harm) pollinators for a few days after application, so to be mindful during bloomtime. Our 'Ralls' and 'Kingston Black' were just coming into full bloom, while the remainder of the orchard was at petal fall or beyond when we applied Grandevo. I did notice a very diminished presence of pollinators in the days following, and it will be interesting to see what the fruit set is like in our two late bloomers as a result. Ordinarily, there would be very heavy fruitset since nothing else is in bloom in the orchard to distract from them. I'm not aware of any other pollinator "repellants," but I'm sure they're out there and it gives me food for thought since thinning by blossom damage will never be an appealing task for us.

[Kordick Family Farm](#)
Westfield, NC
Zone 7a
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[Mike Biltonen](#)
[Re: 2022 Thinning trials](#)
April 28, 2022 02:46PM

Registered: 11 years ago
Posts: 298

I've used Regalia before as a thinner and it does work. Greg Peck's research shows that applied at petal fall timings can reduce fruit set. It can also burn petals and blossom thin that way. That's a bit trickier as I've taken too much off in some instances. Timing is critical and that's where using the pollen tube growth model can help so you don't off too much before you've set a crop. Biodynamically Hugh Williams has used BD501 (horn silica) to successfully thin when applied various post-fruit set timings. He has done sequential applications, but found that the later application was all the was really needed. I've also used 501 and again it works, but its results were inconsistent for me. From a blossom and not fruitlet thinning perspective, the use salts and fertilizers can thin. Conventionally, the use of ATS (ammonium thiosulfate) is routinely used in some parts to thin blossoms. Seeking a holistic alternative could also bring this approach into the fold as well, though I suspect the rate would have to be high and therefore expensive when using any organic N fertilizers (or other salts). I believe table salt has also been to 'burn' the blossoms. These are all potential avenues and need to be explored. So yes thanks to James for all his efforts wherever they may lead. As far as pollinator repellents, there are a number of products that act as repellents such as Thymegard, Agropest, garlic, and others. Not sure how effective they are against pollinators, but they do work against other insects.

[Mike Biltonen, Know Your Roots](#)
Zone 5b in New York

[Reply Quote](#)
[Brian Caldwell](#)
[Re: 2022 Thinning trials](#)
May 10, 2022 05:33PM

Registered: 10 years ago
Posts: 69

We expect full bloom in 2 days with warm, clear weather. The following day I plan to put on a thinning spray on the heavy bloomers @ 10 lb baking soda per 100 gal. I'll let you know what happens.

[Hemlock Grove Farm](#)
Zone 5 in New York
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[James Smith](#)
[Re: 2022 Thinning trials](#)
May 11, 2022 08:41AM

Registered: 2 years ago
Posts: 57

Yesterday I did my first 'trial'. I sprayed four rows along the street at 10 pounds baking soda in 100 gallons of water with a sticker/spreader called BioLink which is manufactured in Vista, CA. I checked the trees this afternoon, some petals are browning, but not a lot. I have some rows that are going to be removed, I may up the rate and see what happens. Can't hurt them, eh?

BTW, I've been blessed with many trees not blooming. Not sure why, I've heard that last summer's extreme heat wave (we broke records, temperatures exceeding 43C/110F) or this winter's extreme cold may have contributed. I did not harvest much fruit last fall; most was chopped up with a flail mower and left under the trees, nor did I run the wind machine this spring during frosty nights. Whatever the reason, I have trees not blooming, or not blooming much. But there are some in full bloom. A bit odd to see them interspersed in a row. As a result, my spray was directed at flowers only.

Washington Okanogan Valley
Zone 6b
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[Chris McGuire](#)
[Re: 2022 Thinning trials](#)
June 05, 2022 04:06AM

Registered: 1 year ago
Posts: 18

Hi, Thank you to everyone for their thinning thoughts. Such an important topic. Thought I would share my observations from doing thinning trials for the past 4 seasons in southwest WI. We have tried several products at different timings and concentrations, often with split rows, where different part of the same row are sprayed differently.

1. Results with all products have been frustratingly inconsistent. Much variation year to year, variety to variety, and even within the same variety in the same year. E.g., a certain spray works well on a 4 year old row of Pristine trees but has no effect on another, older Pristine row in the same year.
2. Potassium bicarbonate (KBC) generally thins decently if applied at about 10%-30% of flowers open and again at 50-80% bloom. Works very well on some varieties (e.g. Priscilla) and not so well or has no effect at all on others (Goldrush, Sundance). We have tried 12-18 lbs/100 gpa, and settled on 15. We are using food/tech grade KBC. Have never seen any significant phytotoxicity although we are careful to apply under reasonable drying conditions. Have also applied it more than twice in some cases although the effect does not seem to increase a lot with 3 or 4 or 5 applications.
3. Regalia+JMS oil (1% v:v of each product) seems a bit more potent than KBC. It certainly causes more pronounced petal burn. However in my experience it is pretty useless if applied according to the pollen tube growth model and needs to be put on earlier than dictated by PTGM. In other words I don't think it prevents fruitset if applied when the pollen tube has made it most of the way down the style. According to the manufacturer, the original thinning trials done with Regalia+Oil were done with an older formulation of Regalia. The newer formulation is not as phytotoxic and not as effective as a thinner, according to them.
4. 3% vegetable-based spray oil at beginning of bloom (5-10% flowers open) can be a strong blossom thinner although that is a dangerous concentration to be playing around with perhaps. Also the effect of that spray seems to diminish over time and may not provide good thinning on late, straggler bloom on 1-year old wood. I think there is trial data showing good effect of 3-5% oil at mid bloom (e.g., 50%) as well, but we have not tried that.
5. I have not seen significant phytotoxicity from oil and sulfur applied close together. I have never tank-mixed them certainly, and we always use lower rates of S (5-10 lbs/acre) and we are careful about drying conditions but I do not think from my experience that concerns about phytotoxicity with S should rule out using oil, alone or with Regalia, for thinning or disease control.
6. What about fruitlet thinning if blossom thinning does not work? Protone is labelled for thinning and OMRI-approved. We saw very gentle or no effect when we tried it. 3% vegetable oil at this stage seems to work but again might be dangerous.

Chris McGuire
Southwest WI, zone 5A

[Reply Quote](#)

[Brian Caldwell](#)

[Re: 2022 Thinning trials](#)

June 08, 2022 01:45PM

Thanks Chris for the great information.

Registered: 10 years ago

Posts: 69

My experiences this year--

I put on a spray of food grade baking soda @ 10#/100 gal on 5/12 during full bloom of early varieties. I saw little browning of the blossoms, so the following day I sprayed another batch of later-blooming trees with a 16#/100 mix.

The weather was warm, with highs in the lower 80's, so bloom was progressing quickly. (Some local growers had fire blight issues from it as well.) I did see more blossom damage and some leaf margin burning from the second spray.

At first I thought that the sprays did nothing. There seemed to be lots of clusters of multiple fruitlets all over the trees. However, now that we've started hand-thinning, the crop seems a lot lighter and the thinning is going quickly. So maybe the sprays worked after all--??

One example is that we have 2 semidwarf trees of Chestnut Crab. They are early and had a heavy bloom. I was surprised to see that now their crop is light and will require no hand thinning. Lighter than I like to see! They got the 10#/100 spray. So, was the drastic crop reduction the result of the spray or some other physiological response? They had a good crop last year, so maybe they naturally aborted a majority of fruitlets. There were lots of bees and plenty of fruitset on other trees so pollination was not the issue.

Nearby, a Gala tree had a heavy bloom, was sprayed the same day, and is loaded. It will definitely need hand thinning. The reliable Idared trees nearby are the same.

In my haste and desire to reduce hand labor, I made the cardinal error of not leaving a few unsprayed trees for control comparisons. A complicating issue is that I rely on the heavy rate of baking soda to control scab as well, and am reluctant to make an extra spray for scab on trees without the baking soda thinning spray. The solution would be to choose a resistant variety like Liberty to flag as controls. Next year....

The upshot is that we will have an easy time hand-thinning the crop this year, and the thinning sprays MAY have been the reason.

[Hemlock Grove Farm](#)

Zone 5 in New York

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