



The Big Freeze of 2023

Posted by [Mike Biltonen](#)

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[Mike Biltonen](#)

[The Big Freeze of 2023](#)

May 23, 2023 05:12PM

Registered: 10 years ago

Posts: 298

As everyone is already - and sometimes painfully - aware, the broader northeast got hit hard by a deep freeze on morning of May 19. Temperatures were pretty steadily in the mid to upper 20s throughout the region with heavy frost. It was clear, lengthy cold, low humidity, and windy in some spots. I had 23F at my house for a low, but I don't grow fruit there - but it wasn't much warmer in higher surrounding areas where fruit is grown.

I am conducting a survey from anyone that is willing to contribute information whether data or not about the freeze and how it affected them. Personally and professionally, I am intrigued by several things we are seeing from this freeze.

1. apple varieties that had set fruit got hit harder than those that were still in bloom or pink.
2. location of damage within trees and within clusters
3. native tree species varied in how hard they were hit. E.g., sumac, chestnut, oak, walnut, and japanese knotweed (among others) were damaged extensively in my area. While many other like hawthorn, hazelnut, black currant and elderberry were not. All of the above were in my backyard, but also showed the same similarities throughout the Finger Lakes.

Native flowers plants and lower growing herbs were not affected at all (for the most part), but were located where it was coldest and the frost was heaviest.

Why did some plants and trees get hurt worse than others, and some not at all?

Were there site location differences with respect to elevation, aspect, slope?

Were there differences in how the freeze event manifested itself in specific locations? Duration, rapidity, wind, etc.

Were there differences between crops or even more important varieties in how they were affected?

Were there area in the northeast that didn't experience any damage at all?

I have reports of damage from NY to Vermont to Maine to eastern Massachusetts for a number of different crops, all consistently pretty much 'not good'. But it wasn't worse in the Catskills vs the Finger Lakes vs the upper Hudson Valley., that's for sure. You have to go south into NJ to get away from any impacts.

In addition to our fruit crops, I'd really like to hear what people are also seeing with the native/wild plant and tree species.

In fact, anything that anyone would like to contribute would be great. I am putting together a short slide presentation of what I am seeing. I will open this up to the public in a few weeks once it is done.

If you are willing to contribute, but want to keep any contributions or comments anonymous, just PM and I'll get back to you straight away.

I have a feeling that these events will be happening more often than not in the coming years as climate change becomes less certain and effects more pronounced. That last bit, however, is not news to fruit growers.

[Mike Biltonen, Know Your Roots](#)

Zone 5b in New York

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

[Brittany Kordick](#)

[Re: The Big Freeze of 2023](#)

May 31, 2023 03:07PM

Registered: 4 years ago

Posts: 211

Wow, I'm really surprised that no one has replied to this thread. Hopefully that means that a lot less HON growers were affected than initially expected, or maybe everyone is still in assessment mode. I'll be really interested to hear more about y'all's late freeze, since it was obviously so different from the events that affected us this spring. You mentioned that one trend from the Northeast freeze seemed to be that formed fruitlets were hardest hit. In our case, it was precisely the opposite: we have a handful of varieties that set an average to above average crop this year, and without exception, they were our very earliest bloomers, Hewes Crab, Redfield, Burfords Redflesh, and an unknown variety we call Baba Yaga. These varieties are located all over the orchard, so not in a locational cluster that might have enjoyed

slightly warmer or otherwise outlier conditions.

Most of our other varieties in the orchard set zero fruit or just a smattering. Compounding our events was overall poor return bloom following a zero crop year, then a bumper crop last year. Some of our varieties appear to have been pushed to biennial bearing now, though interestingly, not some of the ones we would have most expected to. We had an ideal winter that, while on the mild side, accumulated a ton of chill hours around late December, when temperatures plummeted for the better part of a week. We did not experience our usual January/early February thaw, when temperatures can soar to the 70s or 80s for a week or so and we get nervous. But it warmed up during the first week of March, pushing everything to wake up in a hurry. Overall, our trees broke dormancy about two and a half weeks earlier than our previous earliest seasons. That timing trend has stayed consistent across the board in subsequent months: bloom was about two and a half weeks early, cessation of fireblight pressure was about two and a half weeks early, etc. (Speaking of fireblight, this strange year allowed for some interesting observations, and I hope, valuable conclusions regarding our disease cycle, need to remember to write that up on this forum.) Our first flowers opened in the second week of March.

Around that time, our region experienced three back-to-back freeze events. Lows were forecast to low twenties for those three nights, and to stay below freezing for four plus hours each of those nights, so we breathed a sigh of relief when our orchard only experienced nights of 27, 22, and 29 respectively, although the orchard was below freezing for much of those first two nights. We were dissecting buds like crazy in the week after that spell, and were pleasantly shocked to see almost zero damage, didn't understand how that was possible. We were feeling incredibly lucky. But in the weeks following, which were alternately cool and warm, with no more freeze events, we noticed dwindling fruitset, even in trees that had had good return bloom. We didn't feel like pollinators were particularly adversely affected by anything during that time, and have concluded that poor bud quality coupled with cumulative cold damage must have been the culprit (a week prior to the three-day freeze stretch mentioned above, we experienced another three-day cold stretch, when lows were 28, 27, and 31, respectively). Part of this conclusion is due to the somewhat poor quality of the fruit that we do have, primarily in the trees where there is only a smattering. Size is all over the place, abnormal russetting, misshapen, etc.

Interestingly, we noted during that earlier cold stretch that the earliest varieties (which would go on to have great fruitset), were at pink, with some bloom starting, and we also noted that following the hasty break from dormancy in the preceding weeks, the cold weather seemed to have "arrested flower stage development" and slowed everything way the hell down. If this earlier cold stretch contributed in any way to cumulative cold damage in our orchard, it seems unusual that the most vulnerable buds were not adversely affected.

You asked about native plants affected by the freeze up north -- I remember noticing surprisingly little damage in our woodlines, although our handful of native pear trees did not set fruit (at least one had experienced a bumper crop the previous year, however, and had notably poor return bloom). Speaking of pears, which actually began blooming right at the end of February, again, very early for us, some of our varieties have a good (not great, but we're used to too-heavy crops in our pears, so a lighter fruitset is actually ideal and nice to see) crop this year. Do what?! No peaches, no plums. I'll hear more from conventional growers in our region when I attend a get-together in a week or so. Last we heard from the middle of March, most people in southwest VA came out of our bad freeze event feeling like we did, inexplicably lucky and apparently with not too much damage in their apples.

[Kordick Family Farm](#)

Westfield, NC

Zone 7a

Edited 2 time(s). Last edit at 06/02/2023 02:13PM by Brittany Kordick.

[Reply Quote](#)

[Mike Biltonen](#)

[Re: The Big Freeze of 2023](#)

May 31, 2023 03:45PM

Registered: 10 years ago

Posts: 298

I'll just chime in real quick by saying that:

- stone fruit is toast
- blueberries got hit hard
- strawberries that were covered seemed to do well.
- developing fruitlets were damaged most esp on dessert varieties
- late blooming cider apples appear to be ok.
- walnuts, chestnuts, sumac, oak, maple, knotweed etc heavily damaged, but not autumn olive, hazelnuts, most ground herbs, hawthorn, etc. amongst others
- The damage is widespread from western NY along Lake Ontario, to the FLX, Catskills, Hudson Valley and into New England with no areas being spared (though some did better than others).
- my estimate is that site and variety will determine who has a crop and who doesn't. It ranges from 100% loss in the most vulnerable sites to probably 50% in the better areas.
- Grapes as we know were heavily damaged but will recover with secondary shoots
- I did notice some foliage damage on apples, but not enough to be too worried about.

I need another week for a full assessment, but we went from a stellar year to a pretty dismal one in just a few hours. And I suspect we were just a few degrees and/or a few hours from a complete disaster.

[Mike Biltonen, Know Your Roots](#)

Zone 5b in New York

[Reply Quote](#)

[Brittany Kordick](#)

[Re: The Big Freeze of 2023](#)

May 31, 2023 03:49PM

Registered: 4 years ago

Posts: 211

Glad you mentioned strawberries -- I forgot I could at least include those in our assessment, as well. We have a bumper crop, and it just so happens that we grow them under our apple trees, so they are in the same relative microclimate the apples. I did not note the bloom time, but we are just coming off peak harvest (they are a "June bearing" variety). Would have been warmer closer to the ground, but still, would have expected to see some potential damage . . .

[Kordick Family Farm](#)

Westfield, NC

Zone 7a

[Reply Quote](#)

[Mike Biltonen](#)

[Re: The Big Freeze of 2023](#)

May 31, 2023 04:02PM

Registered: 10 years ago

Posts: 298

Yep. And so one of my theories (and potential management strategies) is to somehow use and perhaps even naturally improve the heat-holding capacity of the ground leading up to a frost or freeze event. How?

- dark composts that are wet (preferably from a thermophilic pile created just for these situations). Wood chips probably won't do much since they do not have any moisture holding capacity to speak of until they are composted.
- irrigation to moisten the ground
- irrigation during the event to release heat
- subsoil or even disc (better yet keyline plow) the ground in the orchard to release "deep heat."
- certain biology coupled with improved respiration to create heat?

But I do believe that closer to the ground like strawberries prevented more damage (and too low-growing herbaceous plants as well). To understand that heat is released during the freeze/thaw process of water, it is possible that that would have been happening at ground level during the early and latter parts of the event creating a microclimate the higher growing plants didn't benefit from. Creating the opportunity for improved "thermals" could move that microclimate up into the canopy.

though like everything else - severity and duration are the key components of an event like the one we saw. If its too cold or for too long, all bets are off.

None of the above has to do with anything we can do to the tree or the aboveground orchard ecosystem via nutrition or biology or irrigation.

[Mike Biltonen, Know Your Roots](#)

Zone 5b in New York

[Reply Quote](#)

[Charlie Showers](#)

[Re: The Big Freeze of 2023](#)

June 01, 2023 12:41AM

Registered: 2 years ago

Posts: 18

It might not be much use for your nth American level of freeze, however for marginal frosts in spring we use this seaweed based product in Australia to give us a degree or two (C), however any seaweed product will seemingly do. There's a decent amount of research online.

[\[www.fairdinkumfertilizers.com\]](http://www.fairdinkumfertilizers.com)

[Black Barn Farm](#)

Zone 8b in Victoria, Australia

[Reply Quote](#)

[Mark Forstrom](#)

[Re: The Big Freeze of 2023](#)

June 01, 2023 02:27AM

Registered: 1 year ago

Posts: 16

At first look our small orchard in western Connecticut seemed to be fine. Now it seems the later blooming varieties like Zestar and Lodii, which were full of small fruit, took the big hit. I would say fruit drop was about 90% and 50% of the Lodi foliage killed. The bigger the fruit was, the better it fared. Peaches, nectarine, Bartlett and Bosc pear and Asian pear are all still good. I had 28-29 degrees at my house but think the orchard site was colder. The tomatoes and peppers that were planted there (that were covered) got totally zapped! The other varieties we have that made it through fine are Gala, Liberty, Honeycrisp Mac, Cortlandt and Fuji.

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[Mike Biltonen](#)

[Re: The Big Freeze of 2023](#)

June 01, 2023 04:19AM

Registered: 10 years ago

Posts: 298

Charlie,

Thanks for this. The name alone sells the product!! Do you know the species of kelp they use in this product and if there is any research or

data (observational or otherwise) to support claims? Not that I am doubting it, just wondering. Honestly, I think this is the way to go but it takes time to prepare and is not a "oh shit" strategy that can be implemented at the last moment.

[Mike Biltonen, Know Your Roots](#)

Zone 5b in New York

[Reply Quote](#)

[Charlie Showers](#)

[Re: The Big Freeze of 2023](#)

June 01, 2023 07:25AM

Registered: 2 years ago

Posts: 18

Yes seaweed is no frost silver bullet but a relatively cheap and beneficial option regardless. I've seen photos of pasture trials sprayed v non-sprayed and protection offered is clear to see. Likewise from my use I can't really comment on the apple trees as I spray them all, but I missed a section of my potatoes last spring and try were the only ones impacted by a late frost. I'm satisfied that it provides some level of protection. There is some research, likely more online too, mostly on grapes.

[pubmed.ncbi.nlm.nih.gov]

[Black Barn Farm](#)

Zone 8b in Victoria, Australia

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[Shane Patrick](#)

[Re: The Big Freeze of 2023](#)

June 02, 2023 12:29PM

Registered: 2 years ago

Posts: 22

Hi Gang,

Our orchard has 160' of elevation change and usually benefits from some air movement. Up by the house, even the asparagus was unscathed. As one goes down the hill, damage increases. Hardy kiwis didn't seem hardy but all those black leaves have already been replaced. Oaks have a smattering of dead leaves, whether on the forest edge or in the center of woodlots. Wild strawberries, planted and wild raspberries/blackberries- no damage. Haskaps laughed when they heard it was a killing frost.

Grapes (Concord and some other variety I never seem to remember and it doesn't matter anyway because since we've transitioned, I haven't figured out how to keep black rot at bay) were fine. We lost maybe 30% of our blueberry blossoms in the lower patch. Stone fruits look great except the peaches (Feb cold snap- four flowers on a dozen trees).

Apples overall I'm guessing fifty percent loss. Pears closer to 90%. We did a fairly scientific assessment the morning after. Check five clusters from five trees per block, get depressed, move to the next block. In general, the bigger the fruitlet, the worse it fared. Makes sense from an evolutionary standpoint, blossoms are often subjected to late frosts, 5mm fruitlets, not so much and 10mm less so.

The morning scout trips continue to baffle and offer hope. Pears are sizing up nicely. When I break them open, the inside is damaged, seeds dead. Will those continue to grow or June drop? If they grow will they be saleable? I suspect the same is happening in the apples but they're a bit behind and not growing before your eyes just yet.

Conclusions: 1. The random planting pattern I find so annoying at harvest is beneficial for mitigating loss due to micro-climate weather events. 2. Diversity, both of species and variety, spreads loss. 3. Farming ain't for wimps.

Pleasant Pond Orchard
Richmond, ME 5B(kind)

Edited 1 time(s). Last edit at 06/02/2023 12:31PM by Shane Patrick.

[Reply Quote](#)

[Brittany Kordick](#)

[Re: The Big Freeze of 2023](#)

June 07, 2023 02:16AM

Registered: 4 years ago

Posts: 211

Heard that, farming ain't for wimps! After attending a regional meeting today, it sounds like in the Southwest VA region, most apple growers ultimately weathered our bouts of freezes and are expecting a low-good crop. Notably, most of us experienced poor return bloom coming off last year's bumper crop, but aside from outlier varieties that were completely lost to freezes, most regional growers expect a decent crop.

I know it's not the point of this thread, but since kelp was mentioned as a potential pre-freeze spray option, I wanted to chime in about an unusual product that we're aware of, as well. We use Lallemand's Lalstim Osmo (97% glycine betaine), an osmoprotectant designed to prevent abiotic environmental stress, at the company's recommendation with Lalstop G46. They recommend adding it at a 1/2 lb per acre to help the Lalstop G46 fungi withstand stress going from dry to wet during the reconstitution process. At that low rate, the Osmo protects the fungi, but does not protect the trees' cells. We were advised by a Lallemand rep as a by the by that Osmo can also be used to aid in freeze protection. At a high rate of 5 lbs/acre, applied at least 24 hours before the freeze event, Osmo will effectively raise tissue temperatures by 1 to 2 degrees during the event itself.

It sure ain't much, but it's another tool in the arsenal and we're glad to have it lying around, even if we're unlikely to resort to using it (it is quite expensive). FYI, Osmo also can help prevent postharvest disease when applied at 1-2 lbs/acre 30 days pre-harvest, but we've also never tried that. Here's a link to the company info: [www.lallemandplantcare.com]

[Kordick Family Farm](#)

Westfield, NC

Zone 7a

[Reply Quote](#)

[Josh Karp](#)

[Re: The Big Freeze of 2023](#)

June 08, 2023 04:50PM

Registered: 10 years ago

Posts: 18

Up here in N. VT at 1600', after a very cool spring and thus a bloom that went on forever, we're finally at the point where I can tell what the *(!)&^# happened during that freeze. We had 26 deg. throughout the orchard, with early varieties at king bloom and later ones in various pink stages.

I'd say damage ranged from 30% to 80%, most early varieties were thinned to zero to three fruitlets per cluster, while later varieties have 4-5 fruitlets left. We had a huge bloom this year, and since we never can quite muster (or afford) the labor force to properly hand-thin, by the grace of Mother Nature it wasn't any colder & we received some most appreciated thinning assistance!!

Just a few degrees colder I'm sure it would be a different story, and true crop losses would have occurred. I was actually expecting worse and was thinking about all the farm projects I'd get caught up on without a crop to take care of...I feel for anyone out there who had significant crop loss, my turn will inevitably come at some point.

I did spray kelp prior to the freeze, but was only able to get it on 20 hrs ahead of time, it's apparently recommended that it go on at least 36 hrs. prior to the freeze event, for the max protective effective effect of a few degrees. So maybe I got some protection out of that application..but more likely just lucked out it wasn't any colder than 26!! As Mike B. said, *"I suspect we were just a few degrees and/or a few hours from a complete disaster."*

I know some BD growers swear by the valerian spray for a few degrees of protection..wondering if anyone has experience with that?

I've never thought of *fruitlets* being damaged, since historically freezes happen during bloom periods. But it appears from reading the thread that orchards who experienced the freeze *post fruit-set* fared worse, i.e. that fruitlets were more damaged than orchards still in pink or bloom?

As Shane noted..Haskaps were unaffected and set a nice crop, what a rugged plant. Shane, do you know what range of lows you experienced throughout your plantings?

Josh Karp

Cate Hill Orchard, Greensboro VT

1600' @ zone 4a

mostly standard rootstocks.

[Reply Quote](#)

[Mike Biltonen](#)

[Re: The Big Freeze of 2023](#)

June 08, 2023 06:10PM

Registered: 10 years ago

Posts: 298

As I think I've mentioned before, I have a whole slew of plant examples that weren't affected by the freeze and others that were decimated. Why? I don't know. but I am developing theories and practical approaches to how we must prepare to try to avoid this situation again. Valerian included.

Valerian is a biodynamic herb with the astral, saturnian influences of warmth, light, and phosphorus. It is not an allopathic herb - meaning spraying it as a protectant per se (like the kelp) won't work. Instead, we are trying to bring in the influences of the outer planet to "warm" the surroundings with light and warmth. It hasn't ever been scientifically tested, so any results are anecdotal and based in individual experience. But used within the biodynamic realm - it has worked.

Valerian 3-4 mL mixed in 3 gal warm rain water and sprayed over no more than an acre should bring that warming influence to bear on the orchard. It should be sprayed the night before before the freeze or frost settles in. And then again in the morning as the sun rises along with some healing 500 or other healing herb (like comfrey or plantain). Again, this doesn't need to coat the tree, just spread the influence, though as much of the tree as you can cover (including the ground below) should work.

Here is a [JPI article](#) with more information about Valerian. I believe that more Valerian is needed than 21 drops, but that's my own experience. That and the addition of the healing herbs comes from reading other biodynamic practitioners and how they use Valerian.

The big problem is that we can't predict more than a few days ahead when we'll get these events - and 2023 was certainly an anomaly because of its timing. So we just need to simply be prepared and ready for anything by the beginning of the season.

I am in the process of writing a short paper of what we've experienced already this year (weather-wise) and dive into why we need to focus ecological rather than evolutionary adaptations of plants and trees, and why building a resilient orchard requires our intelligent intervention

(but not overt meddling or over-management). More to come.....Here's for smooth sailing the rest of the year for everyone!

[Mike Biltonen, Know Your Roots](#)

Zone 5b in New York

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[Shane Patrick](#)

[Re: The Big Freeze of 2023](#)

June 09, 2023 01:40PM

Hi Josh (and Gang)

Registered: 2 years ago

Posts: 22

I don't have thermometers throughout the orchard, just up at the house. That one registered a low of 26F. My more gadgety neighbors tell me that 24 was the coldest in the area. It probably got a little colder on the lower end.

Fruit damage update: pears still sizing up. The ones that aren't growing evenly or smoothly are black in the middle when opened. Smooth sided fruitlets have white seeds inside. I'm done examining them, we'll think good thoughts till picking time. I haven't found black centers in any apples, they're just falling off. Blueberry and grape original assessment holding true. Stone fruits- some are no longer growing/turning black but we'll still have a crop of both sour cherries(mahaleb rootstock did better but it's a small sample size) and plums.

The new peach trees we planted this spring lost substantial foliage. None dead yet but about ten percent of the fifty planted are struggling. An organized orchardist would tag those trees to compare future production and postulate as to whether we should coddle new plantings or give them tough love.

Regarding fruitlet sensitivity to frost- last year just before Father's day, my parents (Northern WI zone 4) had a light frost. They have a home orchard. The forty behind the farm is an overgrown homestead. A few of the original trees survive and the pasture is hundreds of seedlings, many of them more than a hundred years old. Zero apples made it into pies. First time in Dad's memory- he's 77.

Shane Patrick

Pleasant Pond Orchard

Richmond, Maine 5Bish

[Reply Quote](#)

[Carol Gudz](#)

[Re: The Big Freeze of 2023](#)

June 12, 2023 06:14AM

Registered: 1 year ago

Posts: 21

In our 5B zone, it looks like the plums and chums were really the only fruiting plants that were affected. Limited/no fruit. That said, time has stomped out all but the hardiest varieties of everything we grow. With a few exceptions, I have mostly given up trying to save plants from extreme weather, insect or disease events - just too many 1 in 100 year events happening these days. In Canada also, many products are prohibitively expensive in any case.

[Reply Quote](#)

[Brittany Kordick](#)

[Re: The Big Freeze of 2023](#)

June 19, 2023 11:56PM

Registered: 4 years ago

Posts: 211

One more fun freeze effect to report from the Southeast:

Our earliest varieties of apples are indeed ripening a full 2-3 weeks earlier this season, in line with the 2-3 week early bloomtime. And across the board, the fruit is abnormally bitter in flavor. We have sampled fruit from our earliest 5 varieties, 'Bevan's Favorite,' 'Red Astrakhan,' 'Duchess of Oldenburg,' 'Early Harvest,' and 'Red Gravenstein.' The seeds are all brown; the skin color indicates ripeness; some of the fruits are even soft and mealy already on the most fleeting varieties, indicating overripeness (we have not tested for brix or done a starch test, however, but plan to). Physical clues, beyond the stunted size and misshapeness that we attribute to developmental damage as a result of the freeze, were not in evidence; the apples we tasted did not show signs of infection due to cedar apple rust, bitter rot nor bitter pit.

As we struggled to understand why our fruit might be abnormally bitter, we contacted a researcher at VA Tech whom we consider an expert in apple tree physiology. We told him that we thought we might have more tannins in our fruit than we should because of some disruption to the ripening process, ultimately resulting from our three day freeze event back in March. He shared a theory with us that our trees had produced an excess of phenolic compounds, such as tannins, as a result of the stress of the freeze event and potentially also the very early bloom. Whereas the production of phenolic compounds would usually produce the characteristic flavor of a particular apple, in this case, the balance was thrown completely off and the result was an excess of bitter flavor.

We have not heard whether or not other regional growers are experiencing similar off flavors in early apples. It will be interesting to see if this is a pronounced taste trend this season, and if so, if it extends to the entire crop. The VA Tech researcher is aware that we grow a lot of cider apples and he mused that in apples that already produce more tannins than other varieties, bitterness may be particularly pronounced this season. It makes us wonder if an inherent benefit to cider vs. dessert apple production in erratic climactic conditions that will potentially lead to stress and thus phenolic compound imbalance, is their already high tannin content. So long as any bonus tannins don't come at the expense of brix values, perhaps they would be welcome to some cidemakers. Dessert varieties are, of course, another story. I'm sure I'm way oversimplifying in the hope of finding a silver lining here, given that there are many types of tannins and you can't necessarily predict how hard cider made from overly bitter *tasting* apples is going to turn out, but whereas a grower might have to trash a crop of bitter-tasting 'Gala' apples, seems like there might be more market flexibility with a cider apple that is pushing the limits on bitter. I

found an interesting bit of unpublished research from Andrew Lea's UK cider site, documenting the variability in tannins over a ten-year period vs. the variability in sugar: [www.cider.org.uk]. I did not realize that "tannin values from the same tree may vary +/- 50% around the average value over successive years." Wow.

[Kordick Family Farm](#)

Westfield, NC

Zone 7a

Edited 3 time(s). Last edit at 06/20/2023 12:59AM by Brittany Kordick.

[Reply Quote](#)

[Carol Gudz](#)

[Re: The Big Freeze of 2023](#)

June 25, 2023 03:39PM

Registered: 1 year ago

Posts: 21

Really interesting to hear what sounds like you have found is the impact of unusual cold events on your apples. I wonder if your apples are also somewhat astringent due to high tannins? Some of my plums have very high tannins particularly in the pits and skins but less in the flesh-I wonder if that is also true for your apples, in which case peeling them might help? Hard to peel plums unfortunately. I tried unsuccessfully various home-based approaches to remove the astringency of the cooked plums with skin on(baking soda, extra sugar) . Also tried removing the skin by gentle heating- my results were similarly unsuccessful as those I saw from others online (some even created carbon dioxide chambers filled with the gas in a Soda Stream to alter the ripening). One challenge seems to be that tannins (at least plum tannins) are very soluble. My Aronia berries also are astringent but the astringency is noticeably reduced after the berries have been put in the freezer for a few weeks.

Interesting note-this year my only plum tree that set fruit was the one that produces the most astringent plums - lots of fruit on that tree.

[Reply Quote](#)

[Shane Patrick](#)

[Re: The Big Freeze of 2023](#)

September 28, 2023 02:05PM

Registered: 2 years ago

Posts: 22

Hi Gang,

Now that it should be peak harvest season here in Maine, I have one observation to share with the group. The amount of wood that the trees put on this summer is quite impressive. Most of the trees look like they weren't pruned last winter.

Last spring we started top-working some of the more chemically dependent cultivars. We top-worked more this spring. The difference in growth YoY is astounding. On the whip and tongue grafts on rootstock, I see no difference. But the cleft grafts in the top-worked areas is obvious. Scion wood that was pencil thin in March is thicker than my thumb and new growth on this year's scions is well beyond two feet on all of them and some go past three feet and put out several laterals.

Anyone else notice this or is wishful thinking fueling my imagination?

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