



Cone traps for PC

Posted by [Dan Lefever](#)

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[Dan Lefever](#)

[Cone traps for PC](#)

March 20, 2013 12:13PM

Registered: 10 years ago

Posts: 15

Can anyone report on their experience using cone traps to monitor or control plum curculio. What about as perimeter traps when there are wooded areas next to orchard where PC adults like to over winter. Thanks!

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[Brittany Kordick](#)

[Re: Cone traps for PC](#)

March 26, 2023 07:21PM

Registered: 4 years ago

Posts: 211

I guess the post I just made to the sprawling general curculio thread more properly belongs here, so I will repost it:

Another curculio season dawns. This year we decided to put out circle trunk traps in our historically worst-hit trees, a line of Wickson and Whitney crabapples in poor soil, bordering a woods line. Due to their less than stellar conditions, the trees are a bit stunted, so don't produce massive crops, but the few bushels the 24 or so trees do produce each year are poor quality; virtually every fruit is a hideous mass of stings. We were hoping to put traps in every one of the trees as a control mechanism, but at about \$11 per trap (for the small diameter trunk traps from Great Lakes IPM, found at [www.greatlakesipm.com]), plus the plum essence lures, decided we'd just try a few, more for monitoring purposes than anything, and to serve as potential models for making our own traps going forward. So we ended up with 6 traps spaced throughout the 24 trees.

I put them out later than hoped for, would have liked to have had them out well before the trees came out of dormancy, just for survey purposes, but still, with our earliest trees just blooming, this is well ahead of what we think of as petalfall curculio primetime. Frankly, I was not impressed with the traps upon arrival. I definitely doubted that they would be worth anything in terms of control, since it seemed like the curculios could avoid the trap opening pretty easily. But, wow! I've been monitoring the traps daily for four days now. First day, just an ant and a spider. Second day, a single curculio and some ants. Third day, 16 curculio, no other insects. Today, fourth day, 55 curculio, no other insects, and would have probably been plus 10 or so, but I failed to close the trap container properly on one trap post-check yesterday!

I am shocked that these traps are working this well, and while I'm sure there must be curculios evading the opening on the upward trek to the canopy, I always check the trees visually, particularly around the plum essence lure hung above and outside the trap, and have not seen any curculios in the trees, outside the traps, to date. Bloom is 0-20% in these trapped trees, currently. The plum essence lure is presumably what's attracting the curculios to these trees, rather than the stage of the apple trees, but I am still surprised at this level of activity, and assume daily trap captures will only go up for the next month. If that's the case, it sure seems like we'd be dealing the curculios a good pre-season hit here, and hopefully, at least improving the overall quality of fruit in the trees containing traps. I'll report back on trap activity later in the season, as well as the state of the crop in these trees this summer.

Making these traps would be fairly simple, if the plastic trap containers could be purchased or approximated in some way. For larger trunked trees, you can purchase larger traps from Great Lakes IPM. You can also use multiple traps per tree on your first scaffolds, but we're just attaching a single trap to the approximately 2 inch diameter trunks of our trapped trees, and hanging the plum essence sachet above the nose of the trap on the lowest scaffold limb.

[Kordick Family Farm](#)

Westfield, NC

Zone 7a

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[Brittany Kordick](#)

[Re: Cone traps for PC](#)

April 22, 2023 04:07PM

Registered: 4 years ago

Posts: 211

It has been a month since we deployed our cone trunk traps for plum curculio, so wanted to follow up with some results. We put the six traps out on March 21st, when our earliest apples were already starting to bloom this early year. For the first three days, we did not catch any curculio, then on March 24th caught our first one. Daily catch has been all over the map in the ensuing weeks for a grand total of 520 individuals. There has been one further zero catch day and the outlier high has been 75. For the past two weeks, when we have reached petal fall in most varieties, catch has ranged from 1 to 14 daily. For the previous two weeks, catch ranged from 0 to 75 daily and encompassed higher catch overall, with several days at 55, 75, 46, 42, 40, and 48 pushing the average up.

I check the traps fairly consistently around 8 am every morning. I have come to expect lower captures surrounding cold days or nights, as well as high captures surrounding warm (higher than 65 degrees) days, but that association appears to be somewhat loose, as there are plenty of instances that defied those expectations. Clearly, there has been consistent movement into trees for a month, however. As mentioned in a previous post, I try to check the overall trees as best I can for evidence of curculio. In the particular trees with trap placement, they were not quite in bloom when traps were deployed, but reached full bloom within a week and a half. I noticed leaf and bud chew damage before placement consistent with what I know curculio to be capable of, so I suspect that had we put traps out sooner, as intended, we would have found that curculio were moving into the trees surprisingly early.

According to our NEWA modelling, linked to our on-site weather station, curculio activity should be declining, adults should cease moving into trees, and we sit at 245 degree days from our first in-orchard petal fall (though petal fall in the trap trees began later), getting close to the 308 degree day mark when the NEWA model says control shouldn't be necessary any longer. As mentioned in the previous post, we were hoping not only to monitor our curculio population somewhat, but also provide some control in some of our worst hit trees. I've found various ranges for the number of eggs female curculio deposit each season, from 60 up to 400, but 150 was mentioned more than once, as both the start and end of a range, so I'm using that as a working number to say that we have perhaps prevented 78,000 stings in our fruitlets (although obviously, not all of these individuals were females, so who knows what a realistic number would be). I consider that well worth the cost and labor of purchasing, deploying, and checking these traps. However, I am dismayed to see the amount of damage in our trap trees and those surrounding them. To the eye, it looks normal, as it is already hard to find a fruitlet without oviposition, and many have several stings. Given that these are small crabapples, we already know that the quality of the fruit is shot.

I really wish we had been able to get our traps out sooner to see if we could have prevented more damage, as I suspect that much or most of it is due to individuals already in the trees before the traps were deployed, although the traps are unlikely to catch 100% of curculio walking up trunks. It's hard to imagine the damage being any worse than it is, even accounting for 520 more individuals in trees, yet I feel good about taking so many out of the mix with a mere 6 traps. We will definitely plan to deploy more and earlier in the season to our worst-hit trees next year. We will change out our plum essence lures in coming weeks and continue to monitor for the remainder of the season, and add any interesting updates to this thread.

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