



A prolific pest in every apple.. what to do?

Posted by [John Steed](#)

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[John Steed](#)

[A prolific pest in every apple.. what to do?](#)

May 01, 2017 04:22AM

Registered: 6 years ago

Posts: 1

Over the course of 2 years my orchard has become home to some kind of pest that takes up residence in the blossom end of 95% of the apples in the orchard. It doesn't seem to be codling moth, because the worm or larvae is small and doesn't head to the core. But I know next to nothing, so I could well be mistaken. It started in the few "King" trees a few years ago (King of Tompkins County, I think-- A very firm, large red with white speckles, delicious apple) but last year was in every piece of fruit and I couldn't sell anything but cider because all of the fruit had frass and damage at the blossom end.

[Photos of the apples and little grub](#)

I'd love to know what I'm dealing with and how to control it in the least-toxic way possible. Thanks in advance!

Some background. I have a 120 tree orchard, I've sort of stumbled into managing. Location is coastal Maine. There is nearby spruce/fir/cedar forest land and few houses.

The varieties are, as far as I can figure, mostly gravenstein, cortland, mac, Jonathan, Northern Spy and some "Kings." From 1970 until 2008 the orchard was sprayed heavily with conventional poisons. I'm not sure what. From 2008-2014, it sat fallow and grew big sucker shoots on all of the trees. I moved back to Maine and thought it would be nice to restore the orchard, so asked the owners (heirs of the couple that planted and ran the place) if I could run it. I've done some pruning and I replaced the fence, but otherwise haven't sprayed or fertilized. It is densely planted. 120 trees on around an acre. I think the root stock is semi-dwarf and full sized.

There are 3 pear trees and 6 peach trees that are old and near the end.

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[David Maxwell](#)

[Re: A prolific pest in every apple.. what to do?](#)

May 01, 2017 03:53PM

Registered: 11 years ago

Posts: 197

I would say either European Apple Sawfly or Codling Moth. (Both have orange larvae which burrow into the blossom end like this). You won't have any larvae available at present to count missing legs. (And doing this is darned difficult in the first place.) But one simpler clue is the presence of winding surface scars on some of the fruit (primary damage), caused by the first instar of EAS. Another distinguishing feature is the timing of attack - EAS has little punctures in the fruitlet visible by petal fall, before the CM starts..

Now I have to qualify my opinion here. Nether EAS nor CM typically cause the extensive surface damage visible on this fruit in my experience. (They work more "underground" in the fruit). The other caveat is that we seldom see curculio here in Nova Scotia, (either plum or apple), and I have no experience with what curc damage looks like.

And, finally, I am very far from competent in ID of any of these things. I have only my own limited experience to go on. Our Ag Agents do not wish to work with anybody other than commercial growers, so I have been unable to get confirmation of my own IDs. I hesitated to post in the first place because I am such a weak source of valid information. But then I decided that, since nobody else was willing to pipe up, if nothing else I might be able to precipitate an impassioned rebuttal of my suggestions by people who do know what they are talking about. And then both John and I will know what this really is, (and why it isn't either EAS or CM).

What to do? (which was actually your question). Probably depends on ID. But if EAS, Quassia amara extract does seem to be effective - if you could get it, (which you can't). I don't know about neem oil - Michael may be able to comment on this. CM is, I believe effectively controlled with Surround, (I suspect EAS attack is less easily controlled by Surround, since the female is laying her eggs in the open flower bud, and spraying kaolin clay into the flowers may not foster effective pollination). Virosoft is an excellent solution, as being highly specific and focused. But it is very expensive, and not a good idea unless you are certain that you are dealing with CM. (Both of these, at least in Canada, need a Pesticide Applicator Certificate to be able to purchase). Again, we need people who know what they are talking about to weigh in.

[Broomholm Orchard](#)

Zone 5b in Nova Scotia

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[Michael Phillips](#)

[Re: A prolific pest in every apple.. what to do?](#)

May 02, 2017 12:20AM

Moderator

Registered: 11 years ago

Posts: 621

Lesser Appleworm (LAW) is the culprit. Cousin to codling moth (CM), and along with Oriental Fruit Moth (OFM), the three make up the internal lep grouping. LAW is prevalent further north and totally noted for calyx surface damage like this. This is the second generation presenting itself in fruit at harvest. First generation eggs hatch about the same time period as CM, perhaps just a tad later, somewhere between 10 to 21 days after petal fall, continuing for two weeks or so. You won't particularly notice damage to fruitlets, and it's equally outside the orchard on hawthorn and wild cherry and the like. You probably are addressing that post petal fall period in some fashion, given the reality of curculio and sawfly. Holistic applications that include pure neem oil are my ticket for keeping this toned down. Each female emerging from that first round is going to lay between 30 to 100 eggs in the next round, starting in mid-July in northern New England and continuing into early August. There are multiple options for moths, as you can read in [The Lepidoptera Complex](#). Given that I continue to use neem oil in my comprehensive and summer applications, LAW is not an issue here. Go just beyond managed trees, however, and it's prevalent in feral apples. Consider Grandveo if you wish to do something more, or spinosad if you opt to spend big money on apple maggot fly at the same time. A pheromone trap for LAW allows you to monitor the timing of 2nd flight and then use degree day modeling to get spray timing exact. But just to repeat, summer holistic sprays at 10 to 14 day intervals, made for multiple purposes, gets this done in Lost Nation.

[Lost Nation Orchard](#)

Zone 4b in New Hampshire

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[Peter Fisher](#)

[Re: A prolific pest in every apple.. what to do?](#)

May 02, 2017 04:48AM

Registered: 10 years ago

Posts: 82

If you do not have a copy already, I would suggest getting the Tree Fruit Field Guide to Insect, Mite and Disease Pests of Eastern North America. Pictures of the pests, the larvae, and the damage they inflict, as well as what trees they attack and when, and approaches to control. It's published by NRAES, in Ithaca NY.

If you want to monitor them Great Lakes IPM has the traps and pheromone lures. One trap is sufficient for an orchard your size.

Turkey Creek Orchard

Solon, Iowa (zone 5A)

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