



jugs of spinosad

Posted by [Chris Vlitas](#)
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[Chris Vlitas](#)

[jugs of spinosad](#)

January 12, 2021 05:51PM

Edited for brevity

Registered: 10 years ago

Posts: 47

Edited 2 time(s). Last edit at 09/30/2022 05:37PM by Chris Vlitas.

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[Michael Phillips](#)

[Re: jugs of spinosad](#)

January 13, 2021 01:11AM

Moderator

Registered: 11 years ago

Posts: 621

Chris was responding to a "perfect apple reply" in a thread on [Marketing and the "Eat Ugly Apples" Campaign](#). This shift in topic deserves separate attention... and thus has been split out for discussion within Spray Nuance. Such are the powers of a forum administrator, for better or worse.

That *jugs of spinosad* reference is more about synthetically-derived formulations of this toxin than the natural products originally obtained by fermentation of *Saccharopolyspora spinosa* bacteria. Spinosyns occur in over 20 natural forms, and over 200 synthetic forms called spinosoids have been produced in the lab.

Many of us use an organic spinosad formulation to counter particular insect incursions. Entrust with its two naturally-derived spinosyns used in the clay application made between Spring3 and Spring4 targets early instar stages of European Apple Sawfly along with curculio zeroing in on apple fruit set. Another post called [spinosad subtleties](#) will bring you up to speed about formulations and rates; this post on [curculio progress](#) speaks to the strategy behind this timing. My other uses of Entrust (but not necessarily every year) are aimed at spotted wing drosophila on fall raspberries and apple maggot fly faves like Honeycrisp. Admittedly, it's impossible to avoid applying to open bloom on raspberries in late summer when faced with a burgeoning SWD infestation... otherwise all growers of whatever persuasion should be aware of protecting pollinators.

But to return to the burning question... just how smug can we be about organic spinosad?

[Lost Nation Orchard](#)

Zone 4b in New Hampshire

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[James Smith](#)

[Re: jugs of spinosad](#)

January 13, 2021 10:38AM

Registered: 2 years ago

Posts: 57

Whew! I saw Chris' post this morning in the original thread and then this afternoon it was gone, I was worried I was hallucinating again!

Thank you Michael for moving it, I was concerned my post was going to hijack the original thread, which was not my intention. Yes, this is a more appropriate place for it.

Chris, I apologise if you feel in any way I was pointing fingers or passing judgement, and I was not trying to offend. Where I live there are literally tens of thousands of acres of apple, cherry, and pear trees. During bloom truckloads of bees are brought in. When the bloom is over they are trucked away and the sprayfest begins in the quest to fill giant concrete refrigerated bunkers with 'marketable' fruit. I was able to tour one of the packing sheds last year, they don't want 'ugly' fruit. I chose Spinosad and Carbaryl as examples as they are both highly toxic to bees and both are used allopathically by large conventional and organic orchards to achieve unblemished fruit for markets. That was my point, nothing more. I was not impugning organic or holistic growers practicing IPM who determine a need to use Spinosad and take all precautions to minimise collateral damage.

Washington Okanogan Valley

Zone 6b

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[Chris Vlitas](#)

[Re: jugs of spinosad](#)

January 13, 2021 10:56PM

Edited for brevity

Registered: 10 years ago

Posts: 47

Edited 1 time(s). Last edit at 09/30/2022 05:37PM by Chris Vlitas.

[Reply Quote](#)

[Brian Caldwell](#)

[Re: jugs of spinosad](#)

January 15, 2021 05:18AM

Registered: 10 years ago

Posts: 69

I generally only use 1 spray of Entrust per year, targeted at the second generation of codling moth and lesser appleworm. For us that is in mid-July. I make an effort to encourage bee/beneficial habitat (lots of blooming broadleaf weeds) under the trees through the summer, so I do wonder whether I'm killing lots of good bugs with that spray.

Sometimes if European apple sawfly is heavy I will use Entrust against it, in mid June. I then drop Entrust from my CM/LAW program.

I consider Entrust to be the closest organic insecticide to a typical chemical one, with a fairly wide spectrum and long residual effect. It is also very subject to insect resistance. So to me it is something to use sparingly. I wonder if spraying it late in the day would reduce any unintended damage.

[Hemlock Grove Farm](#)

Zone 5 in New York

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[Mike Biltonen](#)

[Re: jugs of spinosad](#)

January 15, 2021 05:54AM

Registered: 11 years ago

Posts: 298

I will use up to 4 sprays of Entrust per year (the limit). Timing is critical as Brian alluded to and spraying it late in the day or even at night avoids any impacts to pollinators, and you get your target pests when they are out doing their thing. My first spray is timed at tight cluster/pink (before any blossoms open) to get TPB and any early PC. My second spray is timed at petal fall for EAS and PC. I always add in Surround and possibly some ThymeGuard. My third spray depends on pest pressures but is usually targeted to CM peak hatch (for that June/July period). My fourth spray also depends on pest pressures but is targeted to AM and CM. This is usually mid-August. I always set out traps for ALL insect pests - esp ones where there are models developed to set a BIOFIX and target peak hatch using DD models. For TPB it is white sticky cards to see if they are even present. Same for EAS. They usually are, but it never hurts to see what populations levels are like and when they are coming out. PC can also be trapped, but is less precise because they come out of the woods as well as from inside the orchard. CM is the best for using DD models. AM is a threshold model - when your traps meet or exceed a threshold level (depending on whether you are using lures or not), then you spray. Don't meet threshold - don't spray. By targeting only one generation of each of these pests (esp CM) you reduce the risk of resistance. As well, tank mixing with other materials (e.g., dipel for leps, PyGanic for AM) you reduce the risk of resistance. And since some of these pests are only a single generation a year, the risk of resistance is naturally low anyway. CM is the one you have to worry about because - depending on your location - you can have up to 4 generations a year. Anyway, I find Entrust the most valuable and indispensable organic insecticide, but I never rely on it alone and I always use good IPM techniques to make sure timing is "spot on."

[Mike Biltonen, Know Your Roots](#)

Zone 5b in New York

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[Michael Phillips](#)

[Re: jugs of spinosad](#)

January 15, 2021 06:33AM

Moderator

Registered: 11 years ago

Posts: 621

Back on the synthetics versus organics front...

This spinosad product is available from [Keystone Pest Solutions](#):

Radiant SC Insecticide (1 Quart) Replaces Spintor

New and improved product to replace Spintor! We call it Spintor on Steroids!

The "innovative molecule" delivering broad-spectrum control in this formulation for vegetable crops is spinetoram, delivered as a 11.7% concentration. Spinetoram is a chemically-modified fermentation product of *Saccharopolyspora spinosa*.

And apparently costs more per quart than Conserve, the organic formulation of similar concentration. Dow Agro Sciences has growers paying through the nose no matter what one's persuasion!

Determining if a synthetic chemical is more toxic than a biologically-derived formulation is a tough row to hoe. Still, I've long assumed the economic advantage definitely went to the non-organic camp.

[Lost Nation Orchard](#)

Zone 4b in New Hampshire

Edited 1 time(s). Last edit at 01/15/2021 04:49PM by Michael Phillips.

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[Molly DellaRoman](#)

[Re: jugs of spinosad](#)

January 15, 2021 09:39PM

Registered: 5 years ago

Posts: 38

We have been very hesitant to add Entrust to our spraying regime but decided this year was the year based on the pest pressure we're having. Thanks for all the valuable info on timing here! Any other tips for Entrust newbies?

5 Star Nursery and Orchard

Zone 5, Brooklin, ME

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