

Spinosad Overview

- Spinosad products are **used to control a variety of insect pests**, including fruit flies, caterpillars, leaf miners, thrips, sawflies, spider mites, fire ants, and leaf beetle larvae.
- Not harmful to most beneficial insects including ladybugs, green lacewings, minute pirate bugs, and predatory mites.
- Spinosad Products are currently produced for use on  over 150 crops and ornamentals.
- Spinosad products are potent and are **typically applied at very light concentrations** per acre compared to conventional methods.
- Spinosad is **labeled with a Caution Statement**; the lowest of Washington State's Precautionary Statements.

Spinosad Products



Many producers are already switching to this compound to relieve pests and meet the new regulations being implemented by the EPA in 2012. If you aren't here is why you should...

This publication was produced with funds from the Washington State Department of Ecology, and the Washington State Conservation Commission and EPA. These entities have not reviewed this document

**“I like the ease of application and the time and labor savings. very effective in controlling Cherry Fruit Fly”
-Benton County Cherry Producer (First Year User)**

Spinosad Products have been created for use in:

- Leafy Vegetables (Leaf miners and lepidoptera)
- Apples and pears (leaf rollers, leaf miners codling moth and Apple Maggots)
- Stone fruit (Peach twig Borer and navel orange worm)
- CORN (European Corn Borer, Corn Earworm, Fall Army Worm)
- Wheat and cereals (Armyworms and Cereal leaf Beetles)
- Potatoes (Colorado Potato Beetle)
- Tomatoes
- Peppers
- Turf and Ornamentals (Lepidoptera, Thysanoptera, and Leaf Miners)
- Legumes
- Grapes (Lepidoptera)
- Soybeans
- Home and Garden (Fire Ants)

How does it work?

Spinosad products were developed in the 1980's from the fermentation of a soil bacterium found in Costa Rica. The EPA approved the registration of Spinosad products in 1997 after extensive from the United States Department of Agriculture Agricultural Research Services. Spinosad is now registered in over 150 crops in 30 countries.

Spinosad products work by the excitation of the nervous system of the pest. The Spinosad component over-stimulates the nervous system causing involuntary movements and death by exhaustion. Long term resistance is still being tested but at this time it is reported the resistance is minimal in most species.

Application of Spinosad

Most of the Spinosad Products have a precautionary label of “Caution.” Most sprays do require wearing long sleeved shirts, pants, boots, and covering of sensitive areas like the head and sometimes mouth, nose, and throat. Most Spinosad products have a **4 hour re-entry time** into fields. Producers have reported being able to spray after crews are done picking for the day and being able to easily re-enter the field the next morning to resume picking.

**“I have used Spinosad Products for three years and was concerned of whether they would work or not. They are easy to use, ...they work as advertised.”
-Benton County Apple Producer
(4 Year user for leaf roller)**

Spinosad products can be ideal for small orchard trees next to residential areas, schools, and homes with little harm to the residents.

Some Spinosad Products are a bait and kill. A syrup with bait is sprayed and consumed by the pest. These sprays might require a specialized sprayer with a larger nozzle diameter for spraying and this equipment should be accounted in the costs when considering Spinosad Sprays.

For more on the development of this pesticide class go to:
<http://www.ars.usda.gov/is/AR/archive/apr00/crop0400.htm>



How does it effect un-targeted species?

Spinosad has shown to have a low impact on beneficial insects **except pollinators.**

Pollinators were not highly effected with the dried Spinosad Product. However there is a threat to pollinators when in contact with the active (Fluid) Spinosad Product.

Limit spraying of Spinosad Products to low activity time periods.

Spinosad is not acutely toxic to birds, fish, and mammals. Aquatic Species were sensitive to long term consistent exposure to Spinosad.



Spinosad Pesticides can be a great addition to a Comprehensive Integrated Management Plan due to its low impact to beneficial insects and plants. It is also ideal due to it's limited toxicity for use in near high risk areas near residences, schools, streams, rivers and irrigation returns as examples



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