

Entrust 80W Naturalyte Insect Control Product for Organic and Conventional Fruit and Vegetable Production

Entrust 80W Naturalyte Insect Control Product is available to organic and conventional fruit and vegetable growers in Canada. The active ingredient in Entrust 80W is spinosad, a fermented by-product from a soil-dwelling bacterium *Saccharopolyspora spinosa*.

The first Spinosad product was registered in Canada a few years ago but, unfortunately, organic producers in Canada were not allowed to use it. The product was then reformulated by its manufacturer. Organic certifiers in Canada are now allowing the use of the Entrust WP and it is listed by the Organic Materials Review Institute (OMRI). Entrust 80W has already been registered in the USA for a few years and the organic growers there are pleased with the product's efficacy.

Entrust 80W is a very effective wettable powder which is used in small amounts. Application rates vary from 50 to 120 grams of product per hectare depending on the crop and insect pest. The product is sold in packages of 450 grams, divided into 4 packets of 113 grams.

This insecticide causes a rapid excitation of the insect nervous system, leading to involuntary muscle contractions, prostration with tremors, and paralysis. The insecticide has a rapid contact and ingestion activity. Insects will cease feeding and paralysis may occur a few minutes after ingestion, resulting in insect death one to three days after ingestion. Since this insecticide is applied against larvae, it is recommended that the product is applied when insect larval thresholds are reached or when peak egg hatch occurs, depending upon the pest, for optimal results.

The days to harvest interval varies from 1 to 14 days, depending on the crop, but is 3 days for most crops. Refer to the label for application rates, days to harvest interval and re-entry times.

Entrust is considered to have low toxicity to mammals, birds, and fish. It is important to note, however, that it is highly toxic to bees. Do not apply this product or allow it to drift to blooming plants if bees are visiting the treatment area. Also avoid using the product when the crop is in full bloom. The product is highly toxic to aquatic invertebrates, harmful to insect parasitoids (beneficial insects) and predatory (beneficial) mites and slightly harmful to foliage-dwelling predators.

It is important to note that proper resistance management strategies are recommended because, within any insect population, there may be individuals that are already resistant to the active ingredient. Repetitive treatments of the same product may encourage the proliferation of these individuals. Rotating spinosad (group 5 insecticide) with an insecticide from a different group is highly recommended. It may be a good option to alternate a *Bacillus thuringiensis* (B.t.) product with spinosad, depending upon the suitability of the crop and insect pest.

Although the spinosad product is a naturalyte, growers are required to have their pesticide applicator's licence in order to purchase and apply the pesticide.

Entrust 80W is a relatively broad spectrum insecticide and is registered on various crops for various insect pests. Some of these crops and pests are listed below:

Pome fruits (including apple, crabapple, pear, Oriental pear, Quince):

Pests: For control of obliquebanded leafroller larvae, threelined leafroller larvae, fruittree leafroller larvae, European leafroller larvae, eyespotted budmoth larvae.

Potato:

Pests: For control of Colorado potato beetle larvae and European corn borer larvae.

Root and tuber vegetables (including horseradish, radish, rutabaga, turnip):

Pests: For control of cabbage looper, imported cabbageworm and diamondback moth larvae.

Brassica leafy vegetables (including cauliflower, cabbage, broccoli, Brussels sprouts):

Pests: For control of cabbage looper, imported cabbageworm and diamondback moth larvae. For suppression of crucifer flea beetle.

Leafy vegetables, except Brassica (including arugula, head and leaf lettuce, parsley, spinach, celery):

Pests: For control of cabbage looper, imported cabbageworm and diamondback moth larvae.

Fruiting vegetables, except cucurbit (including eggplant, groundcherry, bell pepper, chili pepper, nonbell pepper, sweet nonbell pepper, tomatillo, tomato):

Pests: For control of Colorado potato beetle larvae, European corn borer larvae, cabbage looper, imported cabbageworm and diamondback moth larvae.

Sweet corn:

Pest: For control of European corn borer larvae.

Cranberry (Emergency registration only, from June 15 to August 15, 2006):

Pest: Cranberry fruitworm.

This fact sheet is provided for general information only. Always consult the product label before use.

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