



## **A New Product for Organic Vegetable and Fruit Growers**

‘Entrust 80W’ (a spinosad product)

This relatively new spinosad product, “Entrust 80W”, is now registered and available to Canadian organic growers. The active ingredient, Spinosad, is a fermented by-product derived from a soil dwelling bacteria, *Saccharopolyspora spinosa*. In New Brunswick, Entrust 80W (Naturalyte) received an emergency registration in 2004 (only) for use in organic potato production for the control of Colorado potato beetle (CPB) and European corn borer (ECB).

The first spinosad product was registered in Canada a few years ago but, unfortunately, could not be used by organic producers. The organic or OMRI listed version of this product was reformulated by its manufacturer Dow AgroSciences. Entrust 80W has already been registered in the US for a few years and the organic growers are pleased with the product’s efficacy.

Entrust 80W is a very effective wettable powder used at relatively low application label rates. Application rates vary from 50 to 120 grams of product per hectare depending on the crop and the target insect. The product is sold in packages of 450 grams containing 4 packets of 113g each.

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. For optimal results, since this insecticide controls larvae, it is recommended to apply the product when insect thresholds are reached and when peak egg hatch is occurring.

Entrust 80W is a relatively broad spectrum insecticide (larvacide) registered on several crops, such as:

### **Potatoes:**

To control the Colorado potato beetle larvae and European corn borer larvae.

### **Some pome fruits** (including apple, crabapple, pear, Oriental pear, quince)

To control the obliquebanded leafroller, threelined leafroller, fruittree leafroller, European leafroller and eyespotted budmoth larvae.

### **Some root and tuber vegetables** (including horseradish, rutabaga, turnip, radish):

To control of cabbage looper, imported cabbageworm and diamondback moth larvae.

### **Some brassica leafy vegetables** (including cauliflower, cabbage, broccoli, Brussels sprouts):

To control the cabbage looper, imported cabbageworm and diamondback moth larvae.

### **Some leafy vegetables** (including arugula, head and leaf lettuce, parsley, spinach celery):

To control the cabbage looper, imported cabbageworm and diamondback moth larvae.

**Some fruiting vegetables, except cucurbit** (including eggplant, groundcherry, bell pepper, Chili pepper, nonbell pepper, sweet pepper, tomatillo, tomato):

To control the larvae of the Colorado potato beetle, European corn borer, cabbage looper, imported cabbageworm and diamondback moth larvae.

**Sweet corn:**

To control the European corn borer larvae.

Manufacturer has indicated that they hope to expand the Entrust 80W label (registration) to include other crops and insect pests.

Days to harvest interval is quite variable; from 1 day to 14 days depending on the crop; but on average, 3 days for most edible crops. Look at the label for application rates and additional information regarding days to harvest interval and re-entry times.

Entrust is considered to have low toxicity to mammals, birds, fish and crustaceans. It is important to note, however, that it is highly toxic to bees. Avoid direct application and spray drift onto bees and bee colonies. Also avoid using the product when crop is in full bloom. The label also states that the product is highly toxic to aquatic invertebrates, harmful to parasitoids and predatory 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 are individuals that may already be resistant to the active ingredient. Repetitive treatments with the same product may encourage the proliferation of these individuals. Rotating spinosad (group 5 insecticide) with another insecticide from a different chemical group is highly recommended. Bt products may be a good option to alternate with spinosad products, depending on the crop and targeted insect.

Before using Entrust 80W, please check with your organic certifiers to make sure it is permitted for use. Even though Entrust 80W is allowed for use by most organic certifiers, be aware that the spinosad product may be a restricted material. Check with your certifier.

This product will be sold by several distributors located in Atlantic Canada including Cavendish Agri Services, Co-op Atlantic and McCains Fertilizers. Although the spinosad product is a naturalyte, growers are required to have their pesticide applicator's licence in order to purchase the pesticide.

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