

Specific Activity and Targeted Control of Damaging Gypsy Moth Larvae.

The gypsy moth, *Lymantria dispar* (Linnaeus), is one of the most devastating forest pests. It feeds on the foliage of hundreds of species of plants in North America — especially oaks and aspen. Gypsy moth populations can explode, causing severe defoliation and even death to the tree.

Confirm[®] 2F insecticide provides targeted control of gypsy moth and other Lepidopteran insects. Confirm 2F contains tebufenozide, a highly specific and effective active ingredient with a unique mode of action that is a very suitable tool for gypsy moth control programs:

- Low risk to beneficial and predatory insects that feed on gypsy moth larvae as well as other nontarget organisms
- Mode of action and specificity make Confirm 2F well-suited for IPM programs



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USDA APHIS PPO Archive, USDA APHIS PPO, Bugwood.org

Confirm 2F Insecticide — Specific Mode of Action

- Mimics ecdysone, the insect-molting hormone
- Binds to the ecdysone receptor site of larvae in the Lepidoptera order
- Treated larvae undergo a premature, nonreversible lethal molt. Larvae stop feeding within hours and die within one to three days after ingesting Confirm 2F
- Does not affect beneficial and predatory insects, which are key elements in an integrated pest management (IPM) program



Advantages of Confirm® 2F Insecticide

Confirm 2F insecticide can be used in forests¹ and trees² at the rate of 4 to 8 fl. oz./acre (0.06 to 0.12 lb ai/acre) for control of gypsy moth, providing several advantages over other insecticides.

Advantages over *Bt* (*Bacillus thuringiensis*)

- Superior efficacy
- Longer residual — *Bt* requires repeat applications for effective control
- Fewer timing issues — *Bt* requires applications to early instar larvae when foliage development is a minimum of 20 percent

Advantages over Dimilin

- Not a Restricted Use Pesticide — Confirm 2F has a CAUTION label
- Larvae stop feeding within hours of ingesting Confirm 2F

Advantages over carbaryl

- Superior efficacy
- Longer residual — carbaryl requires repeat applications for effective control
- Mode of action of Confirm 2F is specific to gypsy moth and other Lepidopteran larvae — carbaryl kills insects in the Lepidoptera (worms), Coleoptera (beetles) and Hemiptera (bugs) orders.

Tips for Using Confirm® 2F Insecticide

- Because Confirm 2F must be ingested by the larvae, thorough and uniform coverage is essential.
- To ensure optimal performance, applications of Confirm 2F should be timed to allow six hours of drying time before the onset of precipitation.
- Use agricultural oils in the spray mix of Confirm 2F to improve initial spray deposits, redistribution and weatherability.
- May be applied via air or ground spray equipment.
- Confirm 2F should not be applied through any type of irrigation system on forests or trees.
- Do not apply directly to water or to areas where surface water is present³

¹Forests include commercial, private and public forestland; conifer release sites; shelterbelts and windbreaks, and forest plantings. Not registered for use on forests in the state of California.

²Trees include Christmas trees, nurseries and plantations, conifer seed orchards, and ornamental and shade trees.

³From specimen label of Confirm® 2F insecticide:

For terrestrial uses, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark, except under forest canopy when aerially applied to control forest pests. This pesticide demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

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