

# FAQ: MOLT-X<sup>®</sup>

## What is Molt-X?

Botanically based Molt-X is an EPA-registered insecticide/nematicide, approved for use in organic production. This emulsifiable concentrate contains 3% azadirachtin active ingredient, providing broad spectrum control of foliar and soil-borne pests.

## What are the Molt-X modes of action?

Molt-X interferes with the key molting hormone, ecdysone, preventing insects from progressing from one life stage to the next. As an insect growth regulator, Molt-X causes insects to fail to mature and reproduce, eliminating populations over time, or keeping them at acceptable levels. In addition, Molt-X:

- Acts as an anti-feedant; insects will feed less or not at all on treated plant tissue. Foliage is not damaged, and insects ultimately starve to death.
- Shows repellent action towards some adult species (highly dose-dependent)
- Reduces insect resistance by interference with insect enzyme metabolism
- Enhances susceptibility of pests to insecticides by reducing physical and physiological fitness
- Is anti-ovipository and repellent; the likelihood of insect infestation is decreased in treated plants.

This also adds a preventive aspect to your control program.

These multiple modes of action make it a highly effective tool for resistance management.

## Isn't Molt-X just neem oil?

No, Molt-X is not neem oil and contains no neem oil. It is an emulsifiable concentrate formulation with azadirachtin as the active ingredient. Neem oil contains no azadirachtin, and azadirachtin contains no neem oil. Both neem oil and azadirachtin come from the neem tree, but that is where the similarity ends.

## What pests does Molt-X control?

Aphids	Flies	Mealybugs	Scales
Beetles	Fungus gnats	Nematodes	Thrips
Borers	Leafhoppers	Psyllids	True bugs
Caterpillars	Leafminers	Sawflies	Weevils
			Whiteflies

## What insect growth stage is most susceptible to Molt-X?

Molt-X acts on and kills larval stages of insects. Insects typically die between larval to larval, larval to pupal, nymph to nymph molts, or during adult eclosion (emergence of the adult from its pupal case.)

## Is Molt-X safe for beneficial insects?

Molt-X is safe to use with many Biological Control Agents (BCAs, or beneficial insects.)

For more details see: [molt-x-compatibility.pdf](#).

## Is Molt-X systemic?

It has some systemic activity within the roots and leaves but is not fully systemic. Full spray coverage is key.

**Is Molt-X compatible in a tank mix?**

Yes, it is an excellent tank mix partner with other biopesticides, including oils, and traditional chemistries. Molt-X's mode of action can enhance the effects of other insecticides. Recommended to tank mix with an adulticide to kill both adults and larvae. A surfactant may be added to improve performance. See: [molt-x-compatibility.pdf](#).

**Are there any phytotoxicity issues with Molt-X?**

Molt-X has been shown to be safe on most plant species when used as directed by the label. Some species have shown slight phytotoxicity on blooms and very tender species may be sensitive. A test spray on a small number of plants is recommended prior to application on the entire crop.

**When should Molt-X applications be made?**

- First application should be made at the first sign of insect pests
- Spray directly on insects for maximum effectiveness
- Apply in early to mid-morning or late afternoon. This is especially important with whitefly adults which are typically sedentary on the undersides of leaves at that time.

**What is the rate range and recommended application interval for Molt-X?**

Rate range: 8–10 oz for insect pests, or 8–15 oz for nematodes (per 100 gal. indoors or per acre outdoors) Recommended interval is 2–3 applications, 7–10 days apart, unless otherwise specified on the label.

**Is there a pH limit for Molt-X?**

Recommended pH range is 5.5–6.5, with 7.0 maximum before the product will break down in solution.

**What are the labeled use sites and crops?**

- For ornamental greenhouses, shadehouses, interiorscapes and nursery use
- For use on turfgrass, outdoor shrubs, trees, and ornamentals
- For use on outdoor and greenhouse food crops

**What type of application equipment can be used?**

Apply Molt-X using any powered or manual pesticide application equipment, including high-volume, low-volume, ultra-low volume, electrostatic, fogging, and chemigation.

**What PPE is required when applying Molt-X?**

- Long-sleeved shirt and long pants
- Socks and shoes
- Chemical-resistant gloves (ex.: barrier laminate, butyl, nitrile, neoprene, polyvinyl chloride, or viton)

**After mixing Molt-X, how long can it sit in the spray tank before use?**

After mixing with water, Molt-X must be used within 8 hours. Do not allow mixed Molt-X solutions to remain overnight in the spray tank.

**May Molt-X be used in organic production?**

Yes, Molt-X is OMRI-Listed.

**Are there any environmental concerns with Molt-X?**

Molt-X is toxic to fish and aquatic invertebrates.