

# **HOPS - ARMYWORMS**

## General Information

### APPLICATION DIRECTIONS

Days to Harvest: There are no restrictions on applying Biobit HP up to the time of harvest.

Sites: Biobit HP may be used for any labeled pest in both field and greenhouse use. Biobit HP is a highly selective insecticide for use against listed caterpillars (larvae) of lepidopterous insects. Close scouting and early attention to infestations is highly recommended. Larvae must eat deposits of Biobit HP to be affected. Always follow these directions:

- Treat when larvae are young (early instars) before the crop is extensively damaged.
- Larvae must be actively feeding on treated, exposed plant parts.
- Thorough spray coverage is needed to provide a uniform deposit of Biobit HP at the site of larval feeding. For some crops directed drop nozzles by ground machine are required.
- Under heavy pest population pressure, use the higher label rates, shorten the spray interval, and/or raise gallonage to improve spray coverage.
- Repeat applications at an interval sufficient to maintain control, usually 3 to 14 days depending on plant growth rate, moth activity, rainfall after treating, and other factors. If attempting to control a pest with a single spray, make the treatment when egg hatch is essentially complete, but before extensive crop damage occurs.
- A spreader-sticker which has been approved for use on growing and harvested crops should be added for hard-to-wet crops such as cole crops, or to improve weather-fastness of the spray deposits.
- Biobit HP is a non-restricted use pesticide and does not require a restricted use permit for purchase and use. After eating a lethal dose of Biobit HP, larvae stop feeding within the hour, and will die within several days. Dying larvae move slowly,

discolor, then shrivel, blacken and die. Biobit HP may be applied in conventional ground or aerial equipment with quantities of water sufficient to provide thorough coverage of infested plant parts. The amount of water needed per acre will depend on crop size, weather, spray equipment, and local experience. Unless otherwise indicated, use at least 2 gallons of water per acre by air; except in the Western U.S., where 5 to 10 gallons is the usual minimum. Add water to the spray or mixing tank at the level that provides maximum agitation. With the agitator running, slowly sprinkle in the Biobit HP. Continue agitation. Then add other spray materials (if any).

Add the balance of the water and agitate until mixed. Maintain the suspension while loading and spraying. Do not mix more Biobit HP than can be used in a 12-hour period.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower/treatment coordinator are responsible for considering all of these factors when making decisions.

#### CHEMIGATION USE DIRECTIONS

Chemigation directions apply only to the state of Florida and to the following crop categories: Flowers, bedding plants, ornamentals, greenhouse/shadehouse and outdoor nursery crops. Refer to these label sections under General Instructions for application rate information when chemigation is used.

Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation systems. Do not connect an irrigation system (including greenhouse systems) used for pesticide applications to a public water system.

#### General Precautions For Applications Through Sprinkler Irrigation Systems

Maintain continuous agitation in the mix tank during mixing and application to insure a uniform suspension. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume for a more dilute solution per unit time.

Crop injury, lack of effectiveness, or illegal residues in the crop can result from non-uniform distribution of treated water. A person knowledgeable of the chemigation

system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment. Do not apply when wind speed favors drift, when system connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product must be dismantled and drained.

## Limitations, Restrictions, and Exceptions

### HOPS

Armyworms: Biobit HP may be used to control small armyworms (1st and 2nd instar) when populations are light and full coverage sprays are applied. Repeat treatment as necessary. If mature worms or heavy populations are present a contact insecticide should be used to enhance control.

### Method

[Broadcast/Foliar Air](#)

Broadcast/Foliar Ground

Rates

field\_rates 0

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Restricted Entry Interval

4 hours

Timings

Treat when larvae are young (early instars) before the crop is extensively damaged.