

## Biological Insecticide

# Biobit® HP

## Wettable Powder



FOR ORGANIC PRODUCTION

### ACTIVE INGREDIENT:

*Bacillus thuringiensis*, subsp. *kurstaki*, strain

ABTS-351, fermentation solids, spores and

insecticidal toxins ..... 58.2%

OTHER INGREDIENTS: ..... 41.8%

TOTAL: ..... 100.0%

POTENCY: 32,000 Cabbage Looper Units (CLU) per mg of product or 14.52 billion Cabbage Looper Units (CLU) per pound of product.

The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

EPA Reg. No. 73049-54

EPA Est. No. 33762-IA-001

List No. 11379

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KEEP OUT OF REACH OF CHILDREN

## CAUTION

### 1.0

#### FIRST AID

- |                               |   |
|-------------------------------|---|
| <b>If in eyes</b>             | <ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with plenty of water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul> |
| <b>If on skin or clothing</b> | <ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>   |

#### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-892-0099 for emergency medical treatment and/or transport emergency information. For all other information, call 800-6-VALENT (682-5368).

### 2.0 PRECAUTIONARY STATEMENTS

#### 2.1 HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if absorbed through the skin. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

#### 2.2 Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### 2.3 Agricultural Use Requirements

Mixers/loaders and applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95 or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

#### 2.4 Non-Agricultural Use Requirements

Mixer/loaders and applicators not in enclosed cabs or aircraft must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

#### 2.5 User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
- Remove clothing immediately if pesticide gets inside, wash thoroughly and put on clean clothing.

## 2.6 ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

This product must not be applied aerially within 1/4 mile of any habitats of endangered species or threatened lepidoptera. No manual application can be made within 300 feet of any threatened or endangered lepidoptera.

## 3.0 DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

## 4.0 AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and the restricted entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

## 5.0 NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Keep unprotected persons out of treated areas until sprays have dried.

## 6.0 STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**Storage:** Reclose containers of unused *Biobit* HP. Store in a dry place.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## 7.0 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.

#### For Smaller Spray Volumes:

If Rate is	Use This Amount Per Gallon
1/4 lb. / acre or 100 gals.	1/2 tsp.
1/2 lb. / acre or 100 gals.	1 tsp.
1 lb. / acre or 100 gals.	2 tsps.
2 lb. / acre or 100 gals.	4 tsps.

## 8.0 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.

### 8.1 Spray Preparation

First prepare a suspension of *Biobit* HP in a mix tank. Fill tank with 1/2 to 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Add the required amount of *Biobit* HP, and then the remaining volume of water. Then set the sprinkler to deliver a minimum of 0.1 to 0.3 inch of water per acre. Start sprinkler and uniformly inject the suspension of *Biobit* HP into the irrigation water line so as to deliver the desired rate per acre. The suspension of *Biobit* HP should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing. Any questions on calibration should be directed to your State Extension Service Specialists, to equipment manufacturers or other experts.

**NOTE:** When treatment with *Biobit* HP has been completed, further field irrigation over the treated area should be avoided for 24 to 48 hours to prevent washing the material off the crop.

### 8.2 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.

## 9.0 GENERAL INSTRUCTIONS - APPLICATION RATES

### 9.1 *Biobit* HP for Typical Crops

Crop Group (Typical Crops)	Pest	Pound/Acre
<b>Root and Tuber</b> such as Carrots, Potatoes, Beets and Sugarbeets <b>Bulb</b> such as Onions (green and bulb) and Garlic <b>Leafy and Cole Crops</b> such as Lettuce (head and leaf), Kale, Celery, Spinach, Broccoli, Cabbage, Mustard Greens, Brussels Sprouts, Cauliflower, Collards, Chinese Cabbage, Endive, Kohlrabi and Parsley	Loopers	1/2-1
	Omnivorous Leafroller	1/2-1
	Hornworms	1/2-1
	Imported Cabbageworm	1/2-1
	Diamondback Moth	1/2-1
	Green Cloverworm	1/2-1
	Webworm	1/2-1
	Saltmarsh Caterpillar	1/2-1
	Armyworms*	1/2-2
	Cutworms	1/2-1

\**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.

## 9.1 *Biobit* HP for Typical Crops (Cont.)

Crop Group (Typical Crops)	Pest	Pound/ Acre
<b>Fruiting Vegetables</b> such as Tomatoes, Peppers and Eggplant	Loopers	1/2 - 1
	Hornworms	1/2 - 1
	Tomato Fruitworm	1/2 - 1
	Variegated Cutworm	1/2 - 1
	Saltmarsh Caterpillar	1/2 - 1
	Armyworms*	1/2 - 2
	Pinworm	1 - 2
<b>Cucurbit Vegetables</b> such as Melons, Cucumbers and Squash	Loopers	1/2 - 1
	Melonworms	1/2 - 1
	Rindworm complex	1/2 - 1
	Armyworms*	1/2 - 2
<b>Legume Vegetables</b> such as Beans, Peas, Lentils and Soybeans	Loopers	1/2 - 1
	Soybean Looper	1/2 - 1
	Green Cloverworm	1/2 - 1
	Velvetbean Caterpillar	1/2 - 1
	Armyworms*	1/2 - 2
	Podworms*	1/2 - 1
<b>OTHER CROPS:</b>		
<b>Tobacco</b>	Tobacco Budworm	1/2 - 1
	Hornworms	1/4 - 1/2
	Loopers	1/2 - 1
<b>Safflower</b>	Loopers	1/2 - 1
	Saltmarsh Caterpillar	1/2 - 1
	Armyworms*	1/2 - 2
<b>Sunflower</b>	Loopers	1/2 - 1
	Head Moth	1/2 - 1
<b>Peanuts</b>	Loopers	1/2 - 1
	Velvetbean Caterpillar	1/2 - 1
	Green Cloverworm	1/2 - 1
	Podworms*	1/2 - 1
<b>Alfalfa</b> (Hay and Seed) Hay and Other Forage Crops	Loopers	1/2 - 1
	Alfalfa Caterpillar	1/2 - 1
	European Skipper (Essex Skipper)	1/2 - 1
	Armyworms*	1/2 - 2
<b>Cotton</b>	Tobacco Budworm**	1/2 - 2
	Cotton Bollworm**	1/2 - 2
	Loopers	1/2 - 1
	Saltmarsh Caterpillar	1/2 - 1
	Armyworms*	1/2 - 2

\**Biobit* HP may be used to control small armyworms and/or podworms (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.

\*\*Use to control light to moderate populations of newly hatched worms in integrated pest management conditions. Repeat treatments at 4 to 5 day intervals as long as necessary and results are acceptable. Use in combination with ovicidal rates of labeled *Heliothis* ovicides.

Crop Group (Typical Crops)	Pest	Pound/ Acre
<b>Avocado</b>	Amorbia Moth	1/2 - 2
	Omnivorous Leafroller	1/2 - 2
	Omnivorous Looper	1/2 - 2
	Orange Tortrix	1/2 - 2
	Spanworm	1/2 - 2
<b>Malanga</b>	Saltmarsh Caterpillar	1/2 - 1
	Armyworms*	1/2 - 2
<b>Watercress</b>	Loopers	1/2 - 1
	Armyworms*	1/2 - 2
	Diamondback Moth	1/2 - 1
<b>Kiwifruit</b>	Omnivorous Leafroller	1/2 - 2
<b>Hops</b>	Loopers	1/2 - 1
	Armyworms*	1/2 - 2
<b>Bananas</b>	Banana Skipper	1/2 - 1
<b>Asparagus</b>	Armyworms*	1/2 - 2
<b>Corn</b> (Sweet and Field) and Sorghum	Armyworms*	1/2 - 2
	Headworms	1/2 - 1
<b>Rape</b>	Loopers	1/2 - 1
	Armyworms*	1/2 - 2
	<i>Heliothis</i>	1/2 - 2
<b>Herbs, Spices and Mints</b> such as Basil, Chives, Dill, Leeks, and Peppermint	Loopers	1/2 - 1
	Saltmarsh Caterpillar	1/2 - 1
	Armyworms*	1/2 - 2
<b>Pineapple</b>	Gummosos- Batrachedra comosae (Hodges)	1/4 - 1/2
	Thecla-Thecla basilides (Geyr)	
<b>Turf</b>	Sod Webworm	1 - 2
<b>Flowers, Bedding Plants and Ornamentals**</b> (Note: Aerial application should be applied in a minimum of 5 gallons per acre)	Loopers	1/4 - 1/2
	Tobacco Budworm	1/4 - 1/2
	Omnivorous Looper	1/4 - 1/2
	Omnivorous Leafroller	1/4 - 1/2
	Diamondback Moth	1/4 - 1/2
	Armyworms*	1/2 - 2
	Ello Moth (Hornworm)	1/4 - 1/2
	Io Moth	1/4 - 1/2
	Oleander Moth	1/4 - 1/2
	Azalea Caterpillar	1/4 - 1/2
<b>Greenhouse/ Shadehouse and Outdoor Nursery Crops**</b> such as Leafy, Herbs, Brassica and Fruiting groups	Loopers	1/2 - 1
	<i>Heliothis</i>	1/2 - 2

\**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.

\*\*Chemigation applications only in the state of Florida for flowers, bedding plants, ornamentals, greenhouse/shadehouse and outdoor nursery crops.

**CONTINUED**



## 9.2 *Biobit* HP for Small Fruits and Grains

Crop	Pest	Pound/ Acre
<b>Small Fruit and Berries</b> such as Grapes, Strawberries, Blackberries and Cranberries	Grapeleaf Skeletonizer (ground only)	1/2 - 1
	Grape Leafroller	1/2 - 1
	Achema Sphinx Moth (Hornworm)	1/2 - 1
	Saltmarsh Caterpillar (ground only)	1/2 - 1
	Omnivorous Leafroller (ground only)	1/2 - 1
	Loopers	1/2 - 1
	Orange Tortrix	1/2 - 1
	Oblique Banded Leafroller	1/2 - 1
	Armyworms*	1/2 - 2
	Tobacco Budworm	1/2 - 2
	Grape Berry Moth	1/2 - 1
<b>Small Grains</b>	Loopers	1/2 - 1
	Armyworms*	1/2 - 2

\**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.

## 9.3 *Biobit* HP for Tree Fruits, Nuts, Citrus and Tropical Fruit

Crop	Pest	Pound/ Acre
<b>Stone Fruit</b> such as Cherries, Plum, Peach, Prune and Nectarine <b>Pome Fruit</b> such as Apples and Pears <b>Tree Nuts</b> such as Almonds, Pecan, Walnut and Filbert <b>Pomegranates</b>	Redhumped Caterpillar	1/2 - 2
	Tent Caterpillars	1/2 - 2
	Omnivorous Leafroller	1/2 - 2
	Fall Webworm	1/2 - 2
	Walnut Caterpillar	1/2 - 2
	Cankerworms	1/2 - 2
	Gypsy Moth	1/2 - 2
	Variegated Leafroller	1/2 - 2
	Redbanded Leafroller	1/2 - 2
	Tufted Apple Budworm	1/2 - 2
	Fruittree Leafroller	1/2 - 2
	Filbert Leafroller	1/2 - 2
	Oblique Banded Leafroller	1/2 - 2
	Codling Moth	1/2 - 2
	Cutworms	1/2 - 2
<b>Citrus</b>	Fruittree Leafroller	1/2 - 2
	Orangedog	1/4 - 1
	Citrus Cutworm*	1/2 - 2
<b>Tropical Fruits</b>	Hornworms	1/2 - 2
	Leafrollers	1/2 - 2
	Omnivorous Looper	1/2 - 2
	Loopers	1/2 - 2

\*Apply to light to moderate populations of newly-hatched worms.

## 9.4 *Biobit* HP For Stored Agricultural Commodities Grains, Soybeans, Sunflower Seed, Crop Seed, Condimental Seeds, Spices, Herbs, Birdseed,<sup>1</sup> and Popcorn<sup>1</sup>

Pest	Rate
Indian Meal Moth	3/8 lb./100 bu.
Almond Moth	(undiluted and diluted)*

\*As a surface treatment, apply 1/2 lb. *Biobit* HP in 5-10 gal. of water per 500 sq. ft. of grain surface area, mix into top 4 inches.\*\*

### <sup>1</sup>For all states except California

For the control and prevention of these pests, apply *Biobit* HP in a constantly agitated water suspension to the top four inch surface layer of grain in the bin. Use a sprinkler can or sprayer to apply the dosage into the grain stream as the last (top) four inch layer is augered into the bin. Mix 1/20 lb. *Biobit* HP per gallon of water. Apply 0.6 pint of this mixture per bushel as grain is augered into storage. Or, sprinkle the dosage into the surface of the grain in the bin and mix thoroughly with a scoop or rake to the depth of four inches. More thorough coverage may be achieved by dividing the recommended dosage into three applications and mixing the grain between applications.

For the protection of bagged grain including popcorn, apply the dosage to the entire grain mass and mix thoroughly prior to bagging.

Treatments can be applied to stored grain at any time, but for best results, make application immediately after harvest before moth activity occurs. In areas where late fall harvested grain is not subject to infestation because of low temperatures, application can be delayed until late winter or early spring before moth activity begins. Control for a full storage season should normally be expected; however, repeat application if infestation recurs.

This treatment controls the moth larvae. If an infestation is present when the grain is treated, moth emergence may continue for several days. If immediate control of severe infestations is desired, grain should be fumigated prior to application of this treatment. *Biobit* HP will not control weevils or other beetles.

Grain treated with *Biobit* HP can be used at any time after treatment for any use.

\*\*For commodities coarser than shelled corn, increase depth of treatment according to the habit of the pest.

## 9.5 *Biobit* HP For Peanuts

Pest	Rate
Indian Meal Moth	1/4 lb./ton*
Almond Moth	

\*Apply this rate to the top four to eight feet of nuts when filling the warehouse.

To prevent and control these pests, spray an even coating of *Biobit* HP on the farmer stock peanuts while filling the warehouse. To make the spray solution, mix 3-3/4 lbs. *Biobit* HP per 5 gallons of water. Apply to 15 tons of commodity. Do not pre-mix more spray solution than will be used within 12 hours. Keep the spray suspension agitated during application, and use pressures and nozzles sufficient to handle this suspension.

Before filling the warehouse, clean thoroughly, then spray interior of the facility with a *Biobit* HP suspension at the rate of 1/2 lb. *Biobit* HP per 100 gallons water. Spray enough suspension to wet all cracks and crevices.

For bagged peanuts, treat the whole mass of commodity at the rate indicated above.

## 9.6 *Biobit* HP For Flue-Cured Tobacco

Pest	Rate
Tobacco Moth	0.2 oz./100 lbs.*

\*Apply 0.2 ounce (approximately 2-1/2 teaspoons) of *Biobit* HP in one quart of water per 100 pounds of tobacco as a fine mist spray. Avoid overwetting. Tobacco should have just enough moisture to be handled without shattering at the time of application.

### Tobacco to be Stored up to Twelve Months

Spray loose leaves as the tobacco is being bundled from the curing barn. For tobacco on sticks, treat both sides of leaves.

### Stored Tobacco

For tobacco which is to be carried over, rebundle or restack sticks, fluff up tobacco and spray loose leaves.

For tobacco that has been stored over three weeks, apply at first signs of infestation, promptly open bundles, spray loose leaves, then bundle.

### Treatment of Storage Barns

If tobacco has been treated, or is going to be treated, treatment of the floors and walls may be made to aid in control. Sweep out the area, especially cracks and corners, and all of the loose tobacco pieces in which the moth might breed. Make a spray mixture containing 1/2 oz. *Biobit* HP per 2-1/2 gallons of water. Apply this at a rate of 1/2 gallon per 1000 sq. ft. of surface area. Be sure to spray into cracks and between floorboards.

## 9.7 *Biobit* HP for Trees and Forests (Forest, Shade, Sugar Maple Trees and Ornamentals)

Pest	Pounds/ 100 gallons* (Ground Equipment)	Pounds/ Acre (Aerial** Application)
Gypsy Moth	1/4 - 3/4	1/2 - 1-1/2
Bagworm	1/4 - 3/4	1/2 - 1-1/2
Redhumped Caterpillar	1/4 - 3/4	1/2 - 1-1/2
Spring & Fall Cankerworm	1/4 - 3/4	1/2 - 1-1/2
Fall Webworm	1/4 - 3/4	1/2 - 1-1/2
Elm Spanworm	1/4 - 3/4	1/2 - 1-1/2
Tent Caterpillars	1/4 - 3/4	1/2 - 1-1/2
California Oakworm	1/4 - 3/4	1/2 - 1-1/2
Pine Butterfly	1/4 - 3/4	1/2 - 1-1/2
Spruce Budworms	1/4 - 3/4	1/2 - 1-1/2
Saddle Prominent Caterpillar	1/4 - 3/4	1/2 - 1-1/2
Douglas Fir Tussock Moth	1/4 - 3/4	1/2 - 1-1/2
Western Tussock Moth	1/4 - 3/4	1/2 - 1-1/2
Fruittree Leafroller	1/4 - 3/4	1/2 - 1-1/2
Blackheaded Budworm	1/4 - 3/4	1/2 - 1-1/2
Mimosa Webworm	1/4 - 3/4	1/2 - 1-1/2
Jackpine Budworm	1/4 - 3/4	1/2 - 1-1/2
Saddleback Caterpillar	1/4 - 3/4	1/2 - 1-1/2
Greenstriped Mapleworm	1/4 - 3/4	1/2 - 1-1/2

\*Rate for hydraulic sprayer. For mist blowers, mix the applicable amount (lbs.) in 10 gallons of water.

\*\*For aerial application, use in one to five gallons of water depending on type and density of trees. For best results, spray systems which deliver droplet size of LESS THAN 150 microns should be used.

## 10.0 NOTICE TO USER

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