

73049-54

5/9/2014

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MAY 09 2014

Ms. Jayne Walz  
Regulatory Manager  
Valent BioSciences Corporation  
870 Technology Way  
Libertyville, IL 60048-6316

Re: Valent BioSciences Corporation; BioBit® HP Biological Insecticide Wettable Powder  
EPA Registration No. 73049-54  
Minor Label ("Fast Track") Amendment  
Submissions Dated 12/20/2010, 03/10/2014, and 05/06/2014  
Decision No. 443825

Dear Ms. Walz:

The U.S. Environmental Protection Agency (EPA) reviewed your request to amend the subject product registration, which included the following changes to the product label:

- 1) Correction of minor formatting inconsistencies and typographical errors.
- 2) Addition of "Manufactured For:" in front of Valent BioSciences Corporation's name and address in accordance with 40 CFR § 156.10(c).
- 3) Insertion of "Net Weight."
- 4) Modification of the Hot Line Number in the First Aid box.
- 5) Modification of certain text in the Hazards to Humans and Domestic Animals section (changes emphasized):

"Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet."

- 6) Rearrangement of certain statements in the Hazards to Humans and Domestic Animals section to ensure that these statements are organized so that the routes of exposure of most concern, as supported by toxicity category classifications, are listed first (Chapter 7, Section III(D)(3) of the EPA's Label Review Manual – Revised July 2012)

CONCURRENCES

YMBOL	751P	7511P	7511P					
URNAME	KRUSCH	Rausch	Wen					
ATE	05/07/2014	5/7/14	5/9/14					

Jayne Walz  
EPA Registration No. 73049-54

- 7) Addition of the following statement to the Personal Protective Equipment (PPE) (Agricultural Use Requirements) section:

“IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for “mixers/loaders and applicators” and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.”

- 8) Removal of the following advisory statement from the User Safety Recommendations box because it is already present in the Hazards to Humans and Domestic Animals section as a mandatory statement:

“Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.”

- 9) Modification of certain text in the Environmental Hazards section (changes emphasized):

“For terrestrial uses, except when applying aerially over the forest canopy: Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.”

“This product must not be applied aerially within ¼ mile of any habitats of threatened or endangered lepidoptera.”

- 10) Modification of the following statement in the Directions for Use (changes emphasized):

“For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.”

- 11) Insertion of explanatory text in the Directions for Use to clarify the abbreviated use of the product name throughout most of the label:

“BioBit® HP Biological Insecticide Wettable Powder (hereafter referred to as BioBit HP).”

- 12) Addition, modification, and removal of several statements in the Directions for Use for clarification purposes (e.g., tank-mixing instructions).

- 13) Revision of the crop group and commodity listings in accordance with 40 CFR § 180.41.

- 14) Removal of all postharvest uses (e.g., applications to soybean and tobacco) to continue meeting the requirements of the National Organic Program.

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Jayne Walz  
EPA Registration No. 73049-54

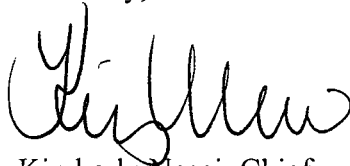
- 15) Addition of "To the extent consistent with applicable law" to both sentences in the Notice to User section to align with information presented in Chapter 12, Section IX of the EPA's Label Review Manual (Revised November 2013).

All the changes referred to above, submitted in connection with registration under section 3(c)(5) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), are acceptable provided that you submit two (2) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for further description of final printed labeling.

Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions. If you have any questions regarding this letter, please contact Ms. Jeannine Kausch of my staff by telephone (703-347-8920) or email ([kausch.jeannine@epa.gov](mailto:kausch.jeannine@epa.gov)).

A stamped copy of the label is enclosed for your records.

Sincerely,



Kimberly Nesci, Chief  
Microbial Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511P)

Enclosures (2):

- BioBit® HP Biological Insecticide Wettable Powder Stamped, Accepted Label
- A-79 Enclosure

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ACCEPTED

MAY 09 2014

**BIOBIT® HP  
BIOLOGICAL INSECTICIDE  
WETTABLE POWDER**

Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended, for  
the pesticide registered under  
EPA Reg. No. 73049-54

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.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

Manufactured For:  
Valent BioSciences Corporation  
870 Technology Way  
Libertyville, IL 60048

EPA Registration No.: 73049-54  
EPA Est. No.: 33762-IA-1

Batch Code: \_\_\_\_\_  
Net Weight: \_\_\_\_\_

<b>FIRST AID</b>	
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open, and rinse slowly and gently with 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>
<b>HOT LINE NUMBER</b>	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-315-9819 (24 hours) for emergency medical treatment and/or transportation emergency information. For all other information, call 1-800-323-9597.</p>	

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**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

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

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and other handlers must wear:

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

Follow the 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.

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.

**IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "mixers/loaders and applicators" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

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.

**USER SAFETY RECOMMENDATIONS**

Users should:

- 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. Then wash thoroughly and put on clean clothing.

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## ENVIRONMENTAL HAZARDS

For terrestrial uses, except when applying aerially over the forest canopy: Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

This product must not be applied aerially within ¼ mile of any habitats of threatened or endangered lepidoptera. No manual application can be made within 300 feet of any threatened or endangered lepidoptera.

## 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 State or Tribal agency responsible for pesticide regulation.

BioBit® HP Biological Insecticide Wettable Powder (hereafter referred to as BioBit HP).

### 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 restricted-entry interval. 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

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### 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.

### 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 uses.

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 and pest combinations (i.e., grapeleaf skeletonizer, saltmarsh caterpillar, and omnivorous leafroller on berries and small fruit), directed drop nozzles by ground machine are required.
- Under heavy pest population pressure, use the higher label application rates, shorten the spray interval, and/or raise spray volume 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 crops, should be added for hard-to-wet crops, such as cole crops, or to improve weather-fastness of the spray deposits.
- BioBit HP may be tank mixed with other labeled insecticides to enhance control. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures. Do not mix BioBit HP with any product containing a label prohibition against such mixing. Do not exceed label dosage rates. Before mixing BioBit HP with other labeled products, including spreader-stickers check for tank mix compatibility.

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 volume 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 determines 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:

<u>If Application Rate is</u>	<u>Use This Amount of BioBit HP Per Gallon of Water</u>	
1/4 lb BioBit HP/acre (crop) or 100 gals. water	1/2 tsp.	(0.04 oz)
1/2 lb BioBit HP/acre (crop) or 100 gals. water	1 tsp.	(0.08 oz)
1 lb BioBit HP/acre (crop) or 100 gals. water	2 tsps.	(0.16 oz)
2 lb BioBit HP/acre (crop) or 100 gals. water	4 tsps.	(0.32 oz)

### CHEMIGATION USE DIRECTIONS

ATTENTION: BioBit HP may be applied by chemigation ONLY in Florida and ONLY to the following crops: flowers, bedding plants, ornamentals, and greenhouse/shadehouse and outdoor nursery crops. 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 system. Do not connect an irrigation system (including greenhouse systems) used for pesticide applications to a public water system.

#### 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 application 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 ensure adequate mixing. Any questions on calibration should be directed to your State Extension Service Specialists, to equipment manufacturers or to 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.

**Precautions for Applications Through Sprinkler Irrigation Systems**

Maintain continuous agitation in the mix tank during mixing and application to ensure 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, when system connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product must be dismantled and drained.

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**APPLICATION INSTRUCTIONS/RATES FOR BIOBIT HP**

<b>CROP OR CROP GROUP</b>	<b>PESTS</b>	<b>POUND/ACRE</b>
<p><b>Vegetable, root and tuber (Crop group 1)</b>            Including: Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; beet, garden; beet, sugar; burdock, edible; canna, edible; carrot; cassava, bitter and sweet; celeriac; chayote (root); chervil, turnip-rooted; chicory; chufa; dasheen (taro); ginger; ginseng; horseradish; leren; parsley, turnip-rooted; parsnip; potato; radish; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret; sweet potato; tanier; turmeric; turnip; yam bean; yam, true.</p>	<p>Loopers            Omnivorous Leafroller            Hornworms            Imported Cabbageworm            Diamondback Moth            Green Cloverworm            Webworm            Saltmarsh Caterpillar            Armyworms*            Cutworms</p>	<p>1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 2            1/2 - 1</p>
<p><b>Vegetable, bulb (Crop group 3-07)</b>            Including: Chive, fresh leaves; chive, Chinese, fresh leaves; daylily, bulb; elegans hosta; fritillaria, bulb; fritillaria, leaves; garlic, bulb; garlic, great-headed, bulb; garlic, serpent, bulb; kurrat; lady's leek; leek; leek, wild; lily, bulb; onion, Beltsville bunching; onion, bulb; onion, Chinese, bulb; onion, fresh; onion, green; onion, macrostem; onion, pearl; onion, potato, bulb; onion, tree, tops; onion, Welsh, tops; shallot, bulb; shallot, fresh leaves; cultivars, varieties, and/or hybrids of these.</p>	<p>Loopers            Omnivorous Leafroller            Hornworms            Imported Cabbageworm            Diamondback Moth            Green Cloverworm            Webworm            Saltmarsh Caterpillar            Armyworms*            Cutworms</p>	<p>1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 2            1/2 - 1</p>
<p><b>Vegetable, leafy, except brassica (Crop group 4)</b> Including: Amaranth (Chinese spinach); arugula (roquette); cardoon; celery; celery, Chinese; celtuce; chervil; chrysanthemum, edible-leaved; chrysanthemum, garland; corn salad; cress, garden; cress, upland; dandelion; dock (sorrel); endive (escarole); fennel, Florence; lettuce, head and leaf; orach; parsley; purslane, garden; purslane, winter; radicchio (red chicory); rhubarb; spinach, New Zealand; spinach, vine; Swiss chard.</p>	<p>Loopers            Omnivorous Leafroller            Hornworms            Imported Cabbageworm            Diamondback Moth            Green Cloverworm            Webworm            Saltmarsh Caterpillar            Armyworms*            Cutworms</p>	<p>1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 2            1/2 - 1</p>

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CROP OR CROP GROUP	PESTS	POUND/ACRE
<p><b>Vegetable, brassica (cole) leafy (Crop group 5)</b> Including: Broccoli; broccoli, Chinese (gai lon); broccoli raab (rapini); Brussels sprouts; cabbage; cabbage, Chinese (bok choy); cabbage, Chinese (napa); cabbage, Chinese mustard (gai choy); cauliflower; cavalo broccolo; collards; kale; kohlrabi; mizuna; mustard greens; mustard spinach; rape greens.</p>	<p>Loopers Omnivorous Leafroller Hornworms Imported Cabbageworm Diamondback Moth Green Cloverworm Webworm Saltmarsh Caterpillar Armyworms* Cutworms</p>	<p>1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 2 1/2 - 1</p>
<p><b>Legume vegetables (succulent or dried) (Crop group 6)</b> Including: Bean (<i>Lupinus</i> spp.) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin); bean (<i>Phaseolus</i> spp.) (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean); bean (<i>Vigna</i> spp.) (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean); broad bean (fava); chickpea (garbanzo); guar; jackbean; lablab bean; lentil; Pea (<i>Pisum</i> spp.) (includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea); pigeon pea; soybean; soybean (immature seed); sword bean.</p>	<p>Loopers Soybean Looper Green Cloverworm Velvetbean Caterpillar Armyworms* Podworms*</p>	<p>1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 2 1/2 - 1</p>
<p><b>Vegetable, fruiting, except cucurbits (Crop group 8-10)</b> Including: African eggplant; bush tomato; bell pepper; cocona; currant tomato; eggplant; garden huckleberry; goji berry; groundcherry; martynia; naranjilla; okra; pea eggplant; pepino; nonbell pepper; roselle; scarlet eggplant; sunberry; tomatillo; tomato; tree tomato; cultivars, varieties, and/or hybrids of these.</p>	<p>Loopers Hornworm Tomato Fruitworm Variegated Cutworm Saltmarsh Caterpillar Armyworms* Pinworm</p>	<p>1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 2 1 - 2</p>

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CROP OR CROP GROUP	PESTS	POUND/ACRE
<p><b>Vegetable, cucurbit (Crop group 9)</b>            Including: Chayote (fruit); Chinese waxgourd (Chinese preserving melon); citron melon; cucumber; gherkin; gourd, edible (includes hyotan, cucuzza, hechima, Chinese okra); <i>Momordica</i> spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); muskmelon (includes cantaloupe); pumpkin; squash, summer; squash, winter (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash); watermelon.</p>	<p>Loopers            Melonworms            Rindworm complex            Armyworms*</p>	<p>1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 2</p>
<p><b>Fruit, citrus (Crop group 10-10)</b>            Including: Australian desert lime; Australian finger lime; Australian round lime; Brown River finger lime; calamondin; citron; citrus hybrids; grapefruit; Japanese summer grapefruit; kumquat; lemon; lime; Mediterranean mandarin; Mount White lime; New Guinea wild lime; orange, sour; orange, sweet; pummelo; Russell River lime; Satsuma mandarin; sweet lime; tachibana orange; Tahiti lime; tangelo; tangerine (mandarin); tangor; trifoliate orange; uniq fruit; cultivars, varieties, and/or hybrids of these.</p>	<p>Fruittree Leafroller            Orangedog            Citrus Cutworm****</p>	<p>1/2 - 2            1/4 - 1            1/2 - 2</p>
<p><b>Fruit, pome (Crop group 11-10)</b>            Including: Apple; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; quince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or hybrids of these.</p>	<p>Redhumped Caterpillar            Tent Caterpillars            Omnivorous Leafroller            Fall Webworm            Walnut Caterpillar            Cankerworms            Gypsy Moth            Variegated Leafroller            Redbanded Leafroller            Tufted Apple Budworm            Fruittree Leafroller            Filbert Leafroller            Obliquebanded Leafroller            Codling Moth            Cutworms</p>	<p>1/2 - 2            1/2 - 2            1/2 - 2            1/2 - 2            1/2 - 2            1/2 - 2            1/2 - 2            1/2 - 2            1/2 - 2            1/2 - 2            1/2 - 2            1/2 - 2            1/2 - 2            1/2 - 2</p>

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CROP OR CROP GROUP	PESTS	POUND/ACRE
<b>Fruit, stone (Crop group 12)</b> Including: Apricot; cherry, sweet; cherry, tart; nectarine; peach; plum; plum, Chickasaw; plum, Damson; plum, Japanese; plumcot; prune (fresh).	Redhumped Caterpillar Tent Caterpillars Omnivorous Leafroller Fall Webworm Walnut Caterpillar Cankerworms Gypsy Moth Variegated Leafroller Redbanded Leafroller Tufted Apple Budworm Fruittree Leafroller Filbert Leafroller Obliquebanded Leafroller Codling Moth Cutworms	1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2

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CROP OR CROP GROUP	PESTS	POUND/ACRE
<p><b>Berry and small fruit (Crop group 13-07)</b>            Including: Amur river grape; aronia berry; bayberry; bearberry; bilberry; blackberry (<i>Rubus</i> spp.) (includes Andean blackberry, arctic blackberry, bingleberry, black satin berry, boysenberry, brombeere, California blackberry, Chesterberry, Cherokee blackberry, Cheyenne blackberry, common blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, evergreen blackberry, Himalayaberry, hullberry, lavacaberry, loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, mora, mures deronce, nectarberry, Northern dewberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, Southern dewberry, tayberry, youngberry, zarzamora, and cultivars, varieties and/or hybrids of these); blueberry, highbush; blueberry, lowbush; buffalo currant; buffaloberry; che; Chilean guava; chokecherry; cloudberry; cranberry; cranberry, highbush; currant, black; currant, red; elderberry; European barberry, gooseberry; grape; honeysuckle, edible; huckleberry; jostaberry; Juneberry (Saskatoon berry); kiwifruit, fuzzy; kiwifruit, hardy; lingonberry; maypop; mountain pepper berries; mulberry; muntries; native currant; partridgeberry; phalsa; pincherry; raspberry, black and red; riberry; salal; schisandra berry; sea buckthorn; serviceberry; strawberry; wild raspberry; cultivars, varieties, and/or hybrids of these.</p>	<p>Grapeleaf Skeletonizer (ground application only)            Grape Leaffolder            Achema Sphinx Moth (Hornworm)            Saltmarsh Caterpillar (ground application only)            Omnivorous Leafroller (ground application only)            Loopers            Orange Tortrix            Obliquebanded Leafroller            Armyworms*            Tobacco Budworm            Grape Berry Moth</p>	<p>1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 1            1/2 - 2            1/2 - 2            1/2 - 1</p>

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CROP OR CROP GROUP	PESTS	POUND/ACRE
<p><b>Nut, tree (Crop group 14)</b> Including: Almond; beech nut; Brazil nut; butternut; cashew; chestnut; chinquapin; filbert (hazelnut); hickory nut; macadamia nut; pecan; walnut, black and English.</p>	<p>Redhumped Caterpillar Tent Caterpillars Omnivorous Leafroller Fall Webworm Walnut Caterpillar Cankerworms Gypsy Moth Variegated Leafroller Redbanded Leafroller Tufted Apple Budworm Fruittree Leafroller Filbert Leafroller Obliquebanded Leafroller Codling Moth Cutworms</p>	<p>1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2</p>
<p><b>Grain, cereal (Crop group 15)</b> Including: Barley; buckwheat; corn; millet, pearl; millet, proso; oats; popcorn; rice; rye; sorghum (milo); teosinte; wheat; wild rice.</p>	<p>Loopers Armyworms* Headworms</p>	<p>1/2 - 1 1/2 - 2 1/2 - 1</p>
<p><b>Grass forage, fodder, and hay (Crop group 17)</b> Including: Any grass, <i>Gramineae</i> family (either green or cured) except sugarcane and those included in the cereal grains group, that will be fed to or grazed by livestock, all pasture and range grasses and grasses grown for hay or silage.</p>	<p>Loopers Alfalfa Caterpillar European Skipper (Essex Skipper) Armyworms*</p>	<p>1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 2</p>
<p><b>Nongrass animal feeds (forage, fodder, straw, and hay) (Crop group 18)</b> Including: Alfalfa; bean, velvet; clover; kudzu; lespedeza; lupin; sainfoin; trefoil; vetch; vetch, crown; vetch, milk.</p>	<p>Loopers Alfalfa Caterpillar European Skipper (Essex Skipper) Armyworms*</p>	<p>1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 2</p>

CROP OR CROP GROUP	PESTS	POUND/ACRE
<b>Herbs and spices (Crop group 19) and mint</b> Including: Allspice; angelica; anise; anise, star; annatto (seed); balm; basil; borage; burnet; chamomile; caper buds; caraway; caraway, black; cardamom; cassia bark; cassia buds; catnip; celery seed; chervil (dried); chive; chive, Chinese; cinnamon; clary; clove buds; coriander leaf (cilantro or Chinese parsley); coriander seed (cilantro); costmary; culantro (leaf); culantro (seed); cumin; curry (leaf); dill (dillweed); dill (seed); fennel (common); fennel, Florence (seed); fenugreek; grains of paradise; horehound; hyssop; juniper berry; lavender; lemongrass; lovage (leaf); lovage (seed); mace; marigold; marjoram; mustard (seed); nasturtium; nutmeg; parsley (dried); pennyroyal; pepper, black; pepper, white; peppermint; poppy (seed); rosemary; rue; saffron; sage; savory, summer and winter; sweet bay; tansy; tarragon; thyme; vanilla; wintergreen; woodruff; wormwood.	Looper Saltmarsh Caterpillar Armyworms*	1/2 - 1 1/2 - 1 1/2 - 2
<b>Oilseed (Crop group 20)</b> Including: Borage; calendula; castor oil plant; Chinese tallowtree; cottonseed; crambe; cuphea; echium; euphorbia; evening primrose; flax seed; gold of pleasure; hare's ear mustard; jojoba; lesquerella; lunaria; meadowfoam; milkweed; mustard seed; niger seed; oil radish; poppy seed; rapeseed (canola); rosehip; safflower; sesame; stokes aster; sunflower; sweet rocket; tallowwood; tea oil plant; veronia; cultivars, varieties, and/or hybrids of these.	Loopers Armyworms* Tobacco Budworm** Cotton Bollworm** Saltmarsh Caterpillar Head Moth <i>Heliothis</i>	1/2 - 1 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 1 1/2 - 1 1/2 - 2
<b>Asparagus</b>	Armyworms*	1/2 - 2
<b>Avocado</b>	Amorbia Moth Omnivorous Leafroller Omnivorous Looper Orange Tortrix Spanworm	1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2
<b>Corn (Sweet and Field) and Sorghum</b>	Armyworms* Headworms	1/2 - 2 1/2 - 1



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CROP OR CROP GROUP	PESTS	POUND/ACRE
<b>Cotton</b>	Tobacco Budworm** Cotton Bollworm** Loopers Saltmarsh Caterpillar Armyworms*	1/2 - 2 1/2 - 2 1/2 - 1 1/2 - 1 1/2 - 2
<b>Flowers, Bedding Plants and Ornamentals***</b>  (Note: Aerial application should be applied in a minimum of 5 gallons per acre)	Loopers Tobacco Budworm Omnivorous Looper Omnivorous Leafroller Diamondback Moth Armyworms* Ello Moth (Hornworm) Io Moth Oleander Moth Azalea Caterpillar	1/4 - 1/2 1/4 - 1/2 1/4 - 1/2 1/4 - 1/2 1/4 - 1/2 1/2 - 2 1/4 - 1/2 1/4 - 1/2 1/4 - 1/2 1/4 - 1/2
<b>Fruit, tropical (grown in U.S.A.)</b> Including: Anonna; banana/plantain; caimito; carambola (star fruit); guava; longan; sapodilla; papaya; passion fruit; mango; lychee; jakfruit; dragon fruit; mamey sapote; coconut; cherimoya; canistel; monstera; wax jambu; rambutan; pulasan; Pakistani mulberry; langsung; chempedak; durian; fig; pineapple; jaboticaba; mountain apples.	Banana Skipper Hornworm Leafrollers Loopers Omnivorous Leafroller Omnivorous Looper <i>Batrachedra comosae</i> (Hodges) Thecla Moth	1/2 - 1 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/4 - 1/2 1/4 - 1/2
<b>Hops</b>	Loopers Armyworms*	1/2 - 1 1/2 - 2
<b>Malanga</b>	Saltmarsh Caterpillar Armyworms*	1/2 - 1 1/2 - 2
<b>Peanuts</b>	Loopers Velvetbean Caterpillar Green Cloverworm Podworms*	1/2 - 1 1/2 - 1 1/2 - 1 1/2 - 1

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CROP OR CROP GROUP	PESTS	POUND/ACRE
<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
	Obliquebanded Leafroller	1/2 - 2
	Codling Moth	1/2 - 2
Cutworms	1/2 - 2	
<b>Tobacco</b>	Tobacco Budworm	1/2 - 1
	Hornworms	1/4 - 1/2
	Loopers	1/2 - 1
<b>Turf</b>	Sod Webworm	1 - 2
<b>Water Cress</b>	Loopers	1/2 - 1
	Armyworms*	1/2 - 2
	Diamondback Moth	1/2 - 1
<b>GREENHOUSE/SHADEHOUSE AND OUTDOOR NURSERY</b>		
Crops including, but not limited to: Vegetable, leafy, except brassica ( <b>Crop group 4</b> ); Vegetable, brassica (cole) leafy ( <b>Crop group 5</b> ); Vegetable, fruiting, except cucurbits ( <b>Crop group 8-10</b> ); Herbs and spices ( <b>Crop group 19</b> )**	Loopers <i>Heliothis</i>	1/2 - 1 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.

\*\*\* BioBit HP may be applied by chemigation ONLY in Florida and ONLY to the following crops: flowers, bedding plants, ornamentals, and greenhouse/shadehouse and outdoor nursery crops.

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

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### BIOBIT HP FOR TREES AND FORESTS

Crop	Pest	Pounds/100 Gallons (Ground Application)*	Pounds/Acre (Aerial Application)**
Forest, Shade, Sugar Maple Trees and Ornamentals	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
	Jack Pine 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	

\*BioBit HP application rate for hydraulic sprayer. For mist blowers, mix the applicable amount of BioBit HP (pounds) 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 that deliver droplet size of LESS THAN 150 microns should be used.

**STORAGE AND DISPOSAL**

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

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

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

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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, offer for recycling if available or 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.

**NOTICE TO USER**

To the extent consistent with applicable law, Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on this label. To the extent consistent with applicable law, User assumes all risks of use, storage or handling not in accordance with accompanying directions.

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