

73049-50

9/8/2008

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UN. STATES ENVIRONMENTAL PROTECT. AGENCY



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Biopesticides and Pollution Prevention Division (7611P)
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

EPA Reg. Number: 73049-50
Date of Issuance: 9/8/08

Term of Issuance: Unconditional

Name of Pesticide Product: Biobit HP II Biological Insecticide Wettable Powder

NOTICE OF PESTICIDE:
Registration
[X] Reregistration (under FIFRA, as amended)

Name and Address of Registrant (Include ZIP Code):

Valent Biosciences Corporation
870 Technology Way
Suite 100
Libertyville, IL 60048

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

Based on your response to the Reregistration Eligibility Document, EPA has reregistered the product listed above, subject to the terms listed below. This action is taken under the authority of section 4(g)(2)(C) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended. Reregistration under this section does not eliminate the need for continual reassessment of pesticides. EPA may require submission of data at any time to maintain registration of your product.

A copy of the approved label for the product is enclosed for your records.

Signature of Approving Official: Janet L. Andersen, Ph.D., Director, Biopesticides and Pollution Prevention Division (7511P)

Date: 9/8/08

EPA Form 8570-6

CONCURRENCES

Table with 7 columns and 3 rows. Row 1: SYMBOL 7511P, SURNAME Reynolds, DATE 9/8/08. Other cells are empty.

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**BIOBIT® HP II BIOLOGICAL INSECTICIDE  
WETTABLE POWDER  
For the Control of Lepidopterous Larvae**

Active Ingredient:

<i>Bacillus thuringiensis</i> subsp. <i>kurstaki</i> strain ABTS-351 fermentation solids, spores, and insecticidal toxins.....	34.11%
Other Ingredients.....	65.89%
Total.....	100%

Potency: 32,000 Cabbage Looper Units (CLU) per mg (14.5 billion CLU per pound)

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

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

Valent BioSciences Corporation  
870 Technology Way, Suite 100  
Libertyville, IL 60048

EPA Registration No. 73049-50  
EPA Est. No. 33762-IA-1

Batch Code: \_\_\_\_\_

Net Content: \_\_\_\_\_

**ACCEPTED**

SEP 08 2008

Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended, for  
the pesticide registered under  
EPA Reg. No. 73049-50

<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>HOTLINE NUMBER</b>	
<p>Have the product container 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 1-800-6-Valent.</p>	

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

Causes moderate eye irritation. Avoid breathing dust or spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove contaminated clothing and wash before reuse.

**Personal Protective Equipment (PPE):**

Applicators and other handlers must wear:

- Long-sleeved shirt
- Long pants
- Waterproof gloves.
- Shoes plus socks.

Mixer/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.

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.

**Engineering Controls:**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements

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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 "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment break-down.

**User Safety Recommendations**

- Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- User 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.

**ENVIRONMENTAL HAZARDS**

Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

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

Do not apply this product through any type of irrigation system.

Refer to the Directions for Use Booklet attached to this container for further directions.

**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.

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses 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 the treated areas until sprays have dried.

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### **STORAGE AND DISPOSAL**

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

**Storage:** Reclose containers of unused Biobit HP II. Store in a dry place inaccessible to children and out of sunlight.

**Pesticide Disposal:** Completely empty bag into application equipment. 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. If recycling is not available dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

### **DIRECTIONS FOR USE**

Do not apply this product through any type of irrigation system.

**Sites:** Biobit HP II may be used for any labeled pest in both field and greenhouse use.

Biobit HP II is an insecticide for use against listed caterpillars (larvae) of lepidopterous insects. Close scouting and early attention to infestations is highly recommended. Larva must eat deposits of Biobit HP II to be affected. Always follow these directions:

- Treat when larvae are young (early instars) before the crop is damaged.
- Larvae must be actively feeding on treated, exposed plant surfaces.
- Thorough spray coverage is needed to provide a uniform deposit of Biobit HP II at the site of larval feeding. Use overhead and drop nozzles to obtain good spray coverage on both sides of foliage. Use sufficient spray volume to insure uniform deposition on all plant surfaces.
- Under heavy pest population pressure, use the higher label 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, and 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 crop damage occurs.
- Use a spreader-sticker which has been approved for use on growing and harvested crops for hard-to-wet crops such as cabbage, or to improve weather-fastness of the spray deposits.
- Biobit HP II is a non-restricted use pesticide and does not require a restricted use permit for purchase and use.

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Biobit HP II may be tank mixed with other labeled insecticides to enhance control. Use of the resulting tank mix must be in accordance with the more restrictive label limitations and precautions. No dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing. Before tank mixing Biobit HP II with other labeled products, including spreader stickers, check for tank mix compatibility.

After ingesting a lethal dose of Biobit HP II, larvae stop feeding within the hour, and will die within several hours to 3 days. Mortality varies with larval size (instar), lepidopteran species, and dose consumed. Following ingestion, larvae become sluggish, discolor, then shrivel, blacken and die. Smaller larvae die more quickly.

Biobit HP II may be applied in conventional ground or aerial equipment with quantities of water sufficient to provide uniform coverage of infested plant parts. The volume of water needed per acre will depend on crop development, relative humidity, spray equipment, and local experience. Usually, selection of moderate to high spray volume will provide the best results in most equipment. For optimal results, use at least 3 gallons of water per acre by air; exception arid areas, where 5 to 10 gallons are required. Add water to the mix tank and provide moderate agitation. With agitating, add the required amount of Biobit HP II. Continue agitation, and add other spray materials, if any. Add remaining water, if any, and agitate until fully mixed. Maintain the suspension with moderate agitation while loading and spraying. Do not mix more Biobit HP II than can be used in a 3 day 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 are responsible for considering all of these factors when making decisions.

For Smaller Spray Volumes:

<u>If Rate is</u>	<u>Use This Amount</u>	
	<u>Per Gallon (wt)</u>	
0.5 lb/acre	1 tsp.	(0.08 oz)
1 lb./acre	2 tsps.	(0.16 oz)
2 lb./acre	4 tsps.	(0.32 oz)

**SPRAY VOLUME**

**Aerial Application:** Use recommended amount of Biobit HP II in a minimum of 5 gallons of water per acre. Apply early morning or evening when air is calm.

**Ground Application:** Use recommended amount of Biobit HP II in a minimum 20 gallons of water per acre.

**Ground Application to Trees and Vines:** Apply specific dosage per acre of Biobit HP II in a minimum 100 gallons of water per acre for dilute applications. Wet foliage thoroughly with spray but not to the point of excessive runoff. For mist blower, use recommended amount of Biobit HP II in a minimum of 20 gallons of water per acre.

**PREHARVEST INTERVAL**

Biobit HP II may be applied up to and on the day of harvest.

**APPLICATION RATES**

Crop Group	Pest	Rate (lbs/A)
<b>Forage, Fodder, Hay</b>		
Alfalfa (Hay & Seed) and Other Non-grass Animal Feeds, Grasses Grown for Feed (pasture, ranges, hay or silage)	Alfalfa Caterpillar Loopers  Armyworm*  European Skipper (Essex Skipper)	0.25 – 1.0   0.5 – 2.0  0.5 – 1.0
<b>Fruits &amp; Nuts</b>		
Pome and Stone Fruit Trees such as: Apples, Pears, Quince, Apricots, Cherries, Nectarines, Peaches, Plums	Redhumped Caterpillar Tent Caterpillars Omnivorous Leafroller Tortrix Moths Cankerworms Peach Twig Borer Fruittree Leafroller Gypsy Moth Tufted Apple Budmoth Fall Webworm Variegated Leafroller Redbanded Leafroller Filbert Webworm Codling Moth Cutworms Filbert Leafroller Oblique Banded Leafroller Walnut Caterpillar	0.5 – 2.0
Nut Trees such as: Almonds, Filbert, Chestnuts, Walnuts, Pecans	Citrus Cutworm Roughskinned Cutworm	0.25 – 0.5
<b>Citrus</b>	Orangedog  Fruittree Leafroller Citrus Cutworm  Amorbia**	0.25 – 1.0  0.5 – 2.0  1.0 – 1.5





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Crop Group	Pest	Rate (lbs/A)
<b>Vegetable, root and tuber</b>  Root & tuber vegetables and leaves of Root and Tuber vegetables such as: Beets, Carrot, Horseradish, Radish, Potato, Sweet Potato, Turnip and Turnip Greens, Sugarbeets	Imported Cabbageworm Green Cloverworm	0.25 – 1.0
	Hornworms	0.125 – 1.0
	Cutworms	0.5 – 1.0
	Loopers	
	Webworms	
	Saltmarsh Caterpillar	
	Omnivorous Leafroller	
	Armyworm*	0.5 – 2.0
	Diamondback Moth	0.25 – 2.0
European Corn Borer	1.0 – 1.5	
Alfalfa Caterpillar	0.125 – 0.25	
<b>Vegetable, bulb</b> such as: Garlic, Leeks, Onions, Shallot	Saltmarsh Caterpillar Omnivorous Leafroller Webworms Cutworms	0.5 – 1.0
	Hornworms	0.125 – 1.0
	Imported Cabbageworm Green Cloverworm Loopers	0.25 – 1.0
	Armyworm*	0.5 – 2.0
	Diamondback Moth	0.25 – 2.0
	European Corn Borer	1.0 – 1.5
	<i>Helicoverpa zea</i> <i>Heliothis virescens</i>	1.0 – 1.5

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Crop Group	Pest	Rate (lbs/A)
<b>Vegetable, leafy</b> such as: Celery, Lettuce (Head and Leaf), Parsley, Endive, Spinach, Kale	Imported Cabbageworm Green Cloverworm Loopers	0.25 – 1.0
	Hornworms	0.125 – 1.0
	Cutworms Webworms	0.5 – 1.0
	Diamondback Moth	0.25 – 2.0
	Saltmarsh Caterpillar Omnivorous Leafroller	0.5 – 2.0
	Armyworm*	0.5 – 2.0
	European Corn Borer	1.0 – 1.5
<b>Vegetable, legume</b> such as: Lentils, Peas, Beans, Soybeans	Loopers	0.25 – 1.0
	Hornworms	0.125 – 1.0
	Podworms Imported Cabbageworm Green Cloverworm Saltmarsh Caterpillar Soybean Loopers	0.5 – 1.0
	Armyworm*	0.5 – 2.0
	Diamondback Moth Velvetbean Caterpillar	0.25 – 2.0
	European Corn Borer	1.0 – 1.5
	Cutworm	0.5 – 1.5
<b>Vegetable, fruiting</b> such as: Eggplant, Peppers, Tomatoes	Imported Cabbageworm Green Cloverworm	0.25 – 0.5
	Diamondback Moth	0.25 – 2.0
	Hornworms	0.125 – 1.0
	Tomato Fruitworm ( <i>Helicoverpa zea</i> ) Variegated Cutworm Saltmarsh Caterpillar Loopers	0.5 – 1.0
	Armyworm*	0.5 – 2.0
	European Corn Borer	1.0 – 1.5

Crop Group	Pest	Rate (lbs/A)
<b>Vegetable, leafy, brassica</b> such as: Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Kohlrabi	Diamondback Moth	0.25 – 2.0
	Hornworms	0.125 – 1.0
	Webworms	0.5 – 1.0
	Loopers	
	Cutworms	
	Saltmarsh Caterpillar	
	Omnivorous Leafroller	
<b>Vegetable, cucurbit</b> such as: Cucumbers, Melons, Pumpkins, Squash, Watermelon	Imported Cabbageworm	0.25 – 1.0
	Green Cloverworm	
	Loopers	
	Diamondback Moth	0.25 – 2.0
	Saltmarsh Caterpillar	0.25 – 1.0
	Melonworm	
	Pickleworm	
<b>Other Vegetables</b> Artichokes	Rindworm Complex	
	Armyworm*	0.5 – 2.0
	European Corn Borer	1.0 – 1.5
Asparagus	Hornworms	0.125 – 0.5
	Artichoke Plume Moth	0.5 – 1.25
	Armyworm*	0.5 – 1.5
	Loopers	0.25 – 1.25
Malanga	Armyworm*	0.5 – 2.0
	Diamondback Moth	0.25 – 2.0
	Green Cloverworm	0.25 – 0.5
Imported Cabbageworm	Imported Cabbageworm	
	Loopers	0.25 – 1.0
	Armyworm*	0.5 – 2.0
Saltmarsh Caterpillar	Saltmarsh Caterpillar	0.5 – 1.0

Crop Group	Pest	Rate (lbs/A)
Watercress	Loopers Diamondback Moth  Armyworm*  Green Cloverworm Imported Cabbageworm  Saltmarsh Caterpillar  European Corn Borer	0.25 – 2.0   0.5 – 2.0  0.25 – 0.5   0.5 – 1.0  1.0 – 1.25
Sweet Corn	(see Other Crops, Corn)	
<b>Herbs, Spices, Mints</b> such as: Basil, Dill, Oregano, Thyme, Peppermint	Loopers  Diamondback Moth  Green Cloverworm Imported Cabbageworm  Armyworm*  European Corn Borer	0.25 – 1.0  0.5 – 2.0  0.25 – 0.5   0.5 – 2.0  1.0 – 1.5
<b>Other Crops</b> Avocados	Loopers  Orange Tortrix Omnivorous Leafroller Omnivorous Looper Spanworm  Amorbia**	1.0 – 1.25   0.5 – 2.0    0.5 – 2.0
Rice	Armyworm*  Loopers Saltmarsh Caterpillar  Cutworms  Green Cloverworm Velvetbean Caterpillar  <i>Helicoverpa zea</i> <i>Heliothis virescens</i>	0.5 – 1.5  0.5 – 1.0   0.5 – 1.5  0.25 – 0.5   1.0
Cotton (Except CA & AZ)	Loopers  Armyworm*  Cotton Bollworm Tobacco Budworm	0.5 – 1.0  0.5 – 2.0  0.25 – 2.0

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Crop Group	Pest	Rate (lbs/A)
	<p><u>Special Instructions:</u> For early season management of <i>Helicoverpa</i> species. initiate applications when 50% of plants are at pinhead square cotton stage independent of <i>Heliothis</i> egg and larval counts or at first egg lay, whichever occurs earlier. Continue applications on a five day spray interval up to the pyrethroid spray window.</p>	
Cotton (CA & AZ)	Armyworm*  Cotton Leaf Perforator Cotton Leafworm Saltmarsh Caterpillar  Loopers  Cotton Bollworm Tobacco Budworm	0.5 – 2.0  0.5 – 1.0  0.5 – 1.0  0.5 – 2.0
	<p><u>Special Instructions:</u> Repeat as necessary throughout the season to maintain control. If egg laying frequency indicate future moderate to heavy larval populations, time application spray to coincide with the second instar larvae. During periods of high temperatures larvae will progress through first to third instars very rapidly and early application timing is necessary for control. When plant cover is dense and larvae are feeding in the lower 2/3 portion of the plant, aerial application of Biobit HP II may provide adequate control.</p>	
Canola/Rape Seed	Armyworm*	0.5 – 2.0
	Diamondback Moth	0.25 – 2.0
	Loopers	0.5 – 1.0
	<i>Helicoverpa zea</i>	0.5 – 2.0
	<i>Heliothis virescens</i>	
Corn such as: Field, Sweet, Popcorn	Armyworm*	0.5 – 2.0
	European Corn Borer (whorl stage only)	0.5 – 2.0
	Southwestern Corn Borer	1.0 – 1.5
Hops	Armyworm*	0.5 – 2.0
	Loopers	0.25 – 1.0
	Omnivorous Leaf-tier	0.5 – 1.0
	Spotted Cutworm	
	Oblique Banded Leafroller	
Jojoba	Looper ( <i>Anacamptodes</i> spp)	0.5 – 1.0

Crop Group	Pest	Rate (lbs/A)
Peanuts	Green Cloverworm Loopers Velvetbean Caterpillar Podworms	0.5 - 1.0
	<i>Helicoverpa zea</i> <i>Heliothis virescens</i>	1.0
Persimmons, Pomegranate	Fall Webworm Filbert Webworm Omnivorous Leafroller Redhumped Caterpillar Tent Caterpillars	0.5 - 1.0
	Citrus Cutworm	0.5 - 1.25
Safflower	Armyworm*	0.5 - 2.0
	Loopers Saltmarsh Caterpillar	0.5 - 1.0
Sorghum	Headworm	0.5 - 1.0
Soybeans	(see Vegetable Crops, Legumes)	
Sunflowers	Headmoth Loopers	0.5 - 1.0
Small Grains	Armyworm*	0.5 - 2.0
	Loopers	0.5 - 1.0
Tobacco	Tobacco Hornworm	0.125 - 0.5
	Loopers	0.25 - 1.0
	Tobacco Budworm**	2.0
<b>Flowers, Bedding Plants, and Ornamentals</b> Ornamental, Flowers, Bedding Plants	Diamondback Moth Armyworm*	.5 - 2.0
	Azalea Moth Ello Moth (Hornworm) Io Moth Loopers Oleander Moth Omnivorous Leafroller Omnivorous Looper Tobacco Budworm	0.25 - 0.5
<b>Greenhouse, Shade Trees, and Outdoor Nursery Crops</b> Such as: Brassica, Fruiting Groups, Herbs and Leafy	Armyworm*	0.5 - 2.0
	Loopers	0.5 - 1.0

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Crop Group	Pest	Rate (lbs/A)
Turf	Sod Webworm	1.0 - 20
	Tropical Sod Webworm	1.0
	Armyworm*	1.0

**Special Instructions**

\*Armyworm Control: Use Biobit HP II to control small armyworms (first and second instar) when populations are light and full coverage sprays are applied. Repeat treatment as necessary. If mature larvae or heavy populations are present, achieve greater control by adding a contact insecticide.

\*\*Suppression Only: Use to aid in control of light to moderate populations of first and second instars in Integrated Pest Management conditions. Repeat treatments at four to five day intervals. Use an additional ovicidal or larvicidal insecticide to aid in control.

**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 the label. User assumes all risk of use, storage or handling not in strict accordance with accompanying directions.

Biobit® is a registered trademark of Valent BioSciences Corporation

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