

Reg # 58998 - 18

PM-18

19/16/12



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

MAY 17 1994

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Janet M. Overholt  
NOVO NORDISK A/S  
AGENT FOR: NOVO NORDISK A/S  
33 Turner Road - Box 1907  
Danbury, CT 06813

Subject: Label Amendment Submission of 07/26/93 in Response to PR Notice 93-7  
EPA Reg. No. 58998-18  
BIOBIT HPWP

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

**WHAT THIS ACCEPTANCE MEANS:**

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

**WHAT YOU NEED TO DO NEXT:**

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.

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**Recycled/Recyclable**  
Printed with Soy/Canola Ink on paper that  
contains at least 50% recycled fiber

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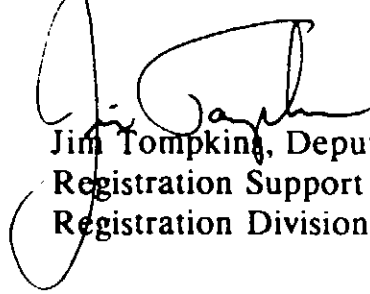
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs (7505C)  
U.S. Environmental Protection Agency  
401 M Street, SW  
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief  
Registration Support Branch  
Registration Division (7505W)

Attachment

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Biobit<sup>®</sup> is the registered Trademark of Novo Nordisk

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# KEEP OUT OF REACH OF CHILDREN CAUTION

## STATEMENTS OF PRACTICAL TREATMENT

If **Eyes:** Flush with plenty of water. Call a physician if eye irritation persists.  
**Skin:** Flush skin with plenty of soap and water. Get medical attention if irritation persists.

ACCEPTED WITH COMMENTS  
EPA Letter Decision  
MAY 17 1994  
Under the Federal Insecticide, Fungicide, and Rodenticide Act, this pesticide is registered for the pest(s) listed on the label. No other uses are registered under EPA FIFRA.

**ACTIVE INGREDIENT:** *Bacillus thuringiensis* Berliner  
subspecies *kurstaki* By Weight  
Lepidopteran Active Toxin.....6.4%  
Inert Ingredients.....93.6%  
**TOTAL**.....100.0%

**POTENCY:** 32,000 International Units (IU) per mg of product equivalent to 14.5 Billion IU per pound of product. Potency units should not be used to adjust use rates beyond those specified in the Directions For Use Section.

### PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS:** May cause eye injury irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling.

**PERSONAL PROTECTIVE EQUIPMENT:** 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.

**ENVIRONMENTAL HAZARDS:** Do not contaminate water when disposing of equipment washwaters.

For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark.

### DIRECTIONS FOR USE:

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

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. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions For Use section for information about this standard.

### Directions For Use, Cont.

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

### STORAGE AND DISPOSAL:

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

**Storage:** Store in a cool, dry place. Keep containers tightly closed when not in use. Store in temperatures above freezing and below 90 degrees F.

**Pesticide Disposal:** Pesticide waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility in accordance with federal and local regulations.

**Container Disposal:** Completely empty bag into application equipment then 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.

### HOME GARDEN USE DISPOSAL INSTRUCTIONS

**Pesticide Disposal:** Securely wrap original container in several layers of newspaper and discard in trash.

**Container Disposal:** Do not reuse bag. Discard bag in trash.

**NOTICE OF WARRANTY:** NOVO NORDISK MAKES NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PURPOSE, OR OTHERWISE, EXPRESS OR IMPLIED, concerning this product or its uses which extend beyond the use of the product under normal conditions in accord with the statements made on this label. In no case shall the seller be liable for consequential, or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer. Novo Nordisk holds U.S. registrations for the active ingredient. BIOBIT HPWP is manufactured by Novo Nordisk.

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EPA Registration No. 58998-18  
EPA Est. No. 58998-DN-002

**MANUFACTURED FOR:**  
Novo Nordisk  
33 Turner Road  
Danbury, Connecticut 06813-1907

NET CONTENTS

Pounds

BHPWP 193193-3,6,WPS1

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

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

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

#### **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 12 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.

#### **APPLICATION**

Biobit HPWP may be applied by ground or aerial equipment with quantities of water sufficient to provide thorough coverage of plant parts to be protected. The amount of water needed per acre will depend upon crop size, weather, spray equipment, and local experience.

#### **MIXING**

Fill spray or mixing tank half full of water. Begin agitation and pour Biobit HPWP into water while maintaining continuous agitation. Add other spray material (if any) and balance of water. Agitate as necessary to maintain suspension. Do not allow diluted mixture to remain in the tank for more than 48 hours.

The use of a spreader-sticker is recommended for hard to wet crops such as cole crops or to improve weather-fastness of the spray deposits. Combinations with commonly used spray tank adjuvants are generally not deleterious to Biobit HPWP if the mix is used promptly. Before mixing in the spray tank, it is advisable to test physical compatibility by mixing all components in a small container in proportionate quantities.

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For smaller spray volumes mix the proper number of teaspoons of Biobit HPWP from the following chart to attain the desired rates:

If the rate is:      Add this amount per gallon of mix:

0.5 lb/acre	1 teaspoons
1.0 lb/acre	2 teaspoons
2.0 lb/acre	4 teaspoons

The above rate calculations assume that the final mix will be applied to runoff on the target crop and that thorough coverage will be obtained.

**SPRAY VOLUMES**

**Aerial Application:** Use recommended amount of Biobit HPWP 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 HPWP in a minimum of 20 gallons of water per acre.

**Ground applications to trees and vines:** Apply specific dosage per acre of Biobit HPWP in a minimum of 100 gallons of water per acre for dilute applications. Wet foliage thoroughly with spray but not to the point of excessive runoff. For mist blowers, use recommended amount of Biobit HPWP (per acre rate) in a minimum of 20 gallons of water per acre.

**GENERAL USE INSTRUCTIONS**

Biobit HPWP is a highly selective biological insecticide specific for the control of lepidopterous larvae. Biobit HPWP must be ingested by the larvae to be effective. For consistent control, apply at first sign of newly hatched larvae (1st and 2nd instar larvae). Susceptible larvae that ingest Biobit HPWP cease feeding within a few hours and die within 2-5 days.

For maximum effectiveness the following is recommended:

Monitor fields to detect early infestations.

Apply Biobit HPWP when eggs start hatching and larvae are small (early instars) and before significant crop damage occurs. Larvae must be actively feeding to be affected.

Repeat applications every 3 to 14 days to maintain control and protect new plant growth. Factors affecting spray interval include rate of plant growth, weather conditions, and reinfestation. Monitor populations of pests and beneficials to determine proper timing of applications.

Under conditions of heavy pest pressures or when large worms are present use the higher rate, shorten the application interval, and/or improve spray coverage to enhance control. When these conditions are present a contact insecticide should be used to enhance control.

Thorough coverage is essential for optimum performance. Ground applicators equipped with directed drop nozzles can improve coverage.

**PREHARVEST INTERVAL**

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

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**APPLICATION RATES:**

CROP GROUP				
FORAGE, FODDER, HAY				
	Crop	Pests	Rate (lbs./acre)	Special Instructions
	Alfalfa (Hay & Seed) and Other Non-grass Animal Feeds, Grasses Grown For Feed (pasture, ranges, hay or silage)	Alfalfa Caterpillar Loopers	0.25-1.0	
		Armyworm	0.5-2.0	*
		European Skipper (Essex Skipper)	0.5-1.0	

CROP GROUP				
FRUITS & NUTS				
	Crop	Pests	Rate (lbs./acre)	Special Instructions
	Pome and Stone Fruit Trees such as:  Apples, Pears, Quince, Apricots, Cherries, Nectarines, Peaches, Plums, Prunes.  Nut Trees such as:  Almonds, Filbert, Chestnuts, Walnuts, Pecans.	Redhumped Caterpillars 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	
		Citrus Cutworm Roughskinned Cutworm	0.25-0.5	

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CROP GROUP				
<b>FRUITS &amp; NUTS Cont'd</b>				
Citrus	Orangedog		0.25-1.0	
	Fruittree Leafroller Citrus Cutworm		0.5-2.0	
	Amorbia		1.0-1.5	Suppression Only **
Small Fruit and Berries such as:  Blackberries, Blueberries, Currants Raspberries, Strawberries Cranberries,  Grapes	Gypsy Moth Blueberry Leafroller Loopers Fruittree Leafroller Grape Berry Moth Oblique Banded Leafroller Achema Sphinx Moth (Hornworm)		0.5-1.0	
	Armyworm		0.5-2.0	*
	Tobacco Budworm		2.0	
	Cherry Fruitworm Green Fruitworm		0.25-0.5	
	Grape Leaf folder Grapeleaf Skeletonizers Omnivorous Leafroller Orange Tortrix Saltmarsh Caterpillar		0.5-1.25	

CROP GROUP				
<b>OTHER FRUITS</b>				
Bananas	Banana Skipper		0.5-1.0	
Tropical Fruits	Hornworms Leafrollers Loopers Omnivorous Leafroller		0.5-2.0	
Kiwi	Omnivorous Leafroller		0.5-2.0	
Pineapple	Gummosos-Batrachedra commosae (Hodges) Thecla-Thecla basilides (Geyr)		0.25-0.5	
Melons	(see Vegetable Crops, Curcubits)			

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CROP GROUPS				
VEGETABLES AND COLE CROPS				
	Crop	Pests	Rate (lbs./acre)	Special Instructions
	Root & Tuber Vegetables, and leaves of Root and Tuber vegetables such as Beet, 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 Loopers Webworms Saltmarsh Caterpillar Omnivorous Leafroller	0.5-1.0	
		----- Armyworm	0.5-2.0	*
		----- Diamondback Moth	0.25-2.0	
		----- European Corn Borer	1.0-1.5	
		----- Alfalfa Caterpillar	0.125- 0.25	
		Bulb Vegetables  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	
	----- Helicoverpa (Heliothis) sp		1.0	Suppression Only **

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	Crop	Pests	Rate (lbs./acre)	Special Instructions
	Fruiting Vegetables  such as: Eggplant, Peppers, Tomatoes	Imported Cabbageworm Green Cloverworm ----- Diamondback Moth ----- Hornworms ----- Tomato Fruitworm(Heliothis) Variegated Cutworm Saltmarsh Caterpillar Loopers ----- Armyworm ----- European Corn Borer	0.25-0.5  0.25-2.0  0.125-1.0  0.5-1.0  0.5-2.0  1.0-1.5	        *
	Brassica (cole) vegetables such as: Broccoli, Brussels sprouts, Cabbage, Cauliflower, Collards, Kohlrabi,	Diamondback Moth ----- Hornworms ----- Webworms Loopers Cutworms Saltmarsh Caterpillar Omnivorous leafroller ----- Imported Cabbageworm Green Cloverworm ----- Armyworms ----- European Corn Borer	0.25-2.0  0.125-1.0  0.5-1.0  0.25-1.0  0.5-2.0  1.0-1.5	        *
	Cucurbit vegetables such as: Cucumbers,  Melons, Pumpkins, Squash, Watermelon	Imported Cabbageworm Green Cloverworm Loopers ----- Diamondback Moth ----- Saltmarsh Caterpillar Melonworm Pickleworm Rindworm complex ----- Armyworm ----- European Corn Borer ----- Hornworms	0.25-1.0  0.25-2.0  0.25-1.0  0.5-2.0  1.0-1.5  0.125-0.5	        *

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CROP GROUP				
OTHER VEGETABLES				
	Crop	Pests	Rate (lbs./acre)	Special Instructions
	Artichokes	Artichoke Plume Moth	0.5-1.25	
		Armyworm	0.5-1.5	*
		Loopers	0.25-1.25	
	Asparagus	Armyworms	0.5-2.0	*
		Diamondback Moth	0.25-2.0	
		Green Cloverworm Imported Cabbageworm	0.25-0.5	
		Loopers	0.25-1.0	
	Malanga	Armyworms	0.5-2.0	*
		Saltmarsh Caterpillar	0.5-1.0	
	Watercress	Loopers Diamondback Moth	0.25-2.0	
		Armyworms	0.5-2.0	*
		Green Cloverworm Imported Cabbageworm	0.25-0.5	
		Saltmarsh Caterpillar	0.5-1.0	
		European Corn Borer	1.0-1.25	
		Sweet Corn	(see Other Crops, Corn)	

CROP GROUP				
HERBS, SPICES, MINTS				
such as Basil, Dill, Oregano, Peppermint, Tyme	Loopers	0.25-1.0		
	Diamondback Moth	0.5-2.0		
	Green Cloverworm Imported Cabbageworm	0.25-0.5		
	Armyworm	0.5-2.0	*	
	European Corn Borer	1.0-1.5		

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CROP GROUP				
OTHER CROPS				
	Crop	Pests	Rate (lbs./acre)	Special Instructions
	Avocadoes	Loopers	1.0-1.25	
		Orange Tortrix Omnivorous Leafroller Omnivorous Looper Spanworm	0.5-2.0	
		Amorbia	0.5-2.0	Suppression Only **
	Rice	Armyworms	0.5-1.5	*
		Loopers Saltmarsh Caterpillar,	0.5-1.0	
		Cutworm	0.5-1.5	
		Green Cloverworm, VelvetBean Caterpillar	0.25-0.5	
		Helicoverpa (Heliothis) spp	1.0	Suppression Only **

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	Crop	Pests	Rate (lbs./acre)	Special Instructions
	Cotton (Except CA & AZ)	Loopers	0.5-1.0	
		Armyworm	0.5-2.0	*
		Cotton bollworm Tobacco budworm	0.25-2.0	see below
		<u>Special Instructions:</u> For early season management of Helicoverpa species. Initiate applications when 50% of plants are at pinhead square cotton stage independent of Heliothis 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.		
	Cotton (CA & AZ)	Armyworm	0.5-2.0	*
		Cotton Leaf Perforator Cotton Leafworm Saltmarsh Caterpillar	0.5-1.0	
		Loopers	0.5-1.0	
		Cotton Bollworm Tobacco Budworm	0.5-2.0	See Below
		<u>Special Instructions:</u> Repeat as necessary throughout the season to maintain control. If egg laying frequency indicates 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 HPWP may not provide adequate control.		
	Canola/Rape Seed	Armyworm	0.5-2.0	*
		Diamondback Moth	0.25-2.0	
		Looper	0.5-1.0	
		Helicoverpa (Heliothis)	0.5-2.0	
	Corn  Field, Sweet, Popcorn	Armyworms	0.5-2.0	*
		European Corn Borer (whorl Stage Only)	0.5-2.0	
		Southwestern Corn Borer	1.0-1.5	Aids in Control

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Crop	Pests	Rate (lbs./acre)	Special Instructions
Hops	Armyworm	0.5-2.0	*
	Loopers	0.25-1.0	
	Omnivorous Leaf-tier Spotted Cutworm Oblique Banded Leafroller	0.5-1.0	
Jojoba	Looper (Anacamptodes spp.)	0.5-1.0	
Peanuts	Green Cloverworm Loopers Velvetbean Caterpillar Podworms	0.5-1.0	
	Helicoverpa (Heliothis) spp	1.0	Suppression Only **
Persimmons, Pomegranate	Fall Webworm Filbert Webworm Omnivorous Leafroller Redhumped Caterpillar Tent Caterpillar	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	Armyworms	0.5-2.0	*
	Loopers	0.5-1.0	
Tobacco	Tobacco Hornworm	0.125-0.5	
	Looper	0.25-1.0	
	Tobacco Budworm	2.0	Suppression Only **

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**CROP GROUP**

**FLOWERS, BEDDING PLANTS, AND ORNAMENTALS**

Crop	Pests	Rate lbs./acre	Special Instructions
Ornamentals, Flowers, Bedding plants	Diamondback Moth Armyworm	0.5-2.0	*
	Azalea Moth Ello Moth (Hornworm) Io Moth Loopers Oleander Moth Omnivorous Leafroller Omnivorous Looper Tobacco Budworm	0.25-0.5	

**CROP GROUP**

**GREENHOUSE, SHADE TREES, AND OUTDOOR NURSERY CROPS**

Crop	Pests	Rate (lbs./acre)	Special Instructions
Such as Brassica, Fruiting Groups, Herbs, and Leafy	Armyworms	0.5-2.0	*
	Loopers	0.5-1.0	

**CROP GROUP**

**TURF**

Crop	Pests	Rate (lbs./acre)	Special Instructions
Turf	Sod Webworm	1.0-2.0	
	Tropical Sod Webworm	1.0	
	Armyworm	1.0	*

**CROP GROUP**

Crop	Pests	Rate (lbs./acre)	Special Instructions
Home Garden Use	Biobit HPWP may be used for any labeled pest and crop using the rates, mixing, and general use instructions specified on this label. Thorough applications to spray runoff should be made.		

CROP GROUP				
Forests, Shade Trees, Ornamentals, Shrubs, Sugar Maple Trees				
	Crop	Pests	Rate (lbs./acre)	Special Instructions
	Forests, Shade Trees, Ornamentals, Shrubs, Sugar Maple Trees	Gypsy Moth Spruce Budworm Browntail Moth -----	0.5-1.25	
		Tussock Moths Pine Butterfly Bagworm Leafrollers Tortrix Moths Mimosa Webworm Tent Caterpillars Jackpine Budworm Blackheaded Budworm Elm Spanworm Saddled Prominent Saddleback Caterpillars -----	0.5-1.0	
		Redhumped Caterpillar Spring Cankerworm Fall Cankerworm California Oakworm Fall Webworm	0.25-0.5	

**Special Instructions**

\* Biobit HPWP may be used 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, a contact insecticide should be used to enhance control.

\*\* Supression 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. The use of additional ovicidal or larvicidal insecticide will aid in control.

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