



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

**OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION**

December 23, 2020

Fred Smith
Authorized Agent to AEF Global Inc.
SciReg, Inc.
12733 Director's Loop
Woodbridge, VA 22192

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment – To Add New Crops/Crop Groups, Add New Pests, Update Selected Application Rates, Add New Wording, Add Modifications in the Application and Mixing Instructions, and Make Other Changes, Including Those Requested by the EPA (e.g., Revise the Additional Instructions for Leek Moths on Shallots)
Product Name: Bioprotec PLUS
EPA Registration Number: 89046-12
Application Date: 08/12/2020
Action Code Case No.: 00141825

Dear Mr. Smith:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the U.S. Environmental Protection Agency (EPA). If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims

made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains statements or claims substantially differing from statements or claims made in connection with obtaining a FIFRA section 3 registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact me by phone at (703) 347-8920 or via email at kausch.jeannine@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jeannine Kausch', with a stylized flourish at the end.

Jeannine Kausch, Product Manager 92
Microbial Pesticides Branch
Biopesticides and Pollution
Prevention Division (7511P)
Office of Pesticide Programs

Enclosure: Bioprotec PLUS Stamped, Accepted Label

MASTER LABEL

Bioprotec PLUS
AQUEOUS BIOLOGICAL INSECTICIDE

Alternate brand names: VermeGard, BREVA HP, BREVA HC, Bioprotec AG,
Bioprotec HC

**FOR OUTDOOR FOOD, OUTDOOR NON-FOOD, AND GREENHOUSE
USE**

 FOR ORGANIC PRODUCTION



Active Ingredient:

Bacillus thuringiensis ssp. *kurstaki* strain EVB-113-19

fermentation solids, spores, and insecticidal toxins 14.49%*

Other Ingredients 85.51%

Total 100.00%

*Potency: 76 billion Cabbage Looper Units (CLU) per gallon 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

[See back/inside/side panel for additional first aid and precautionary statements.]

Manufactured [for][by]:

AEF Global, Inc.
925 des Calfats
Lévis, QC
Canada
G6Y 9E8

EPA Registration No.: 89046-12

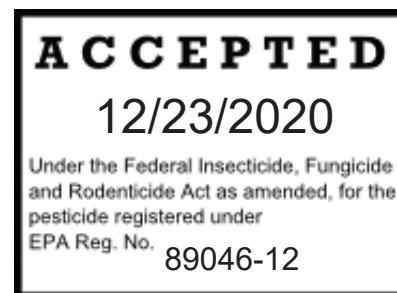
Establishment No.:

Use this product within 18 months of the date of manufacture.

Date of Manufacture: _____

Lot number: _____

Net Contents: _____



FIRST AID	
If on skin or clothing:	<ul style="list-style-type: none"> – Take off contaminated clothing. – Rinse skin immediately with plenty of water for 15-20 minutes. – Call a poison control center or doctor for treatment advice.
If in eyes:	<ul style="list-style-type: none"> – Hold eye open, and rinse slowly and gently with water for 15-20 minutes. – Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. – Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER	
<p>Have the product container or label with you when calling a poison control center or doctor or when going for treatment. For information on this pesticide product (including general health concerns or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378, Monday through Friday, 8:00 AM to 12:00 PM Pacific Time. In the event of a medical emergency, call your poison control center at 1-800-222-1222.</p>	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Harmful if absorbed through skin. Causes moderate eye irritation. 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
- protective eyewear

Mixers/loaders and applicators must wear a NIOSH-approved particulate respirator with any R or P filter with NIOSH approval number prefix TC-84A; or a NIOSH-approved powered air purifying respirator with an HE filter with NIOSH approval number TC-21C. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

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.

ENGINEERING CONTROLS

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 170.607(d), (e), and (f)], 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 breakdown.

USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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

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. Do not contaminate water when disposing of equipment wash water or rinsate.

This product must not be applied aerially within ¼ mile of any habitats of threatened or endangered *Lepidoptera*. No manual applications 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. 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. For any requirements specific to your State or Tribe, consult the State or Tribal 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 (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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
- Protective eyewear

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.

PRODUCT INFORMATION

Bioprotec PLUS is a water-based formulation that may be applied undiluted or diluted with water. Dilute with minimal quantities of water to improve coverage. The amount of water needed per acre will depend upon crop size, weather, spray equipment, and local experience.

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.

Apply the product when wind conditions allow good spraying coverage. Do not make applications when significant rainfall is imminent. It is best to allow 48 hours without rain after the application to retain activity.

MIXING

Add the specified amount of Bioprotec PLUS to the required amount of water in the spray tank. Agitate as needed to maintain suspension. The pH of the water must be between 4 and 8 before the addition of Bioprotec PLUS and remain within this pH range into the tank.

DO NOT store spray mixture in spray equipment for more than 18 hours.

APPLICATION INSTRUCTIONS (OTHER THAN LAWN APPLICATIONS)

Bioprotec PLUS is toxic to select species of *Lepidopteran* larvae. Bioprotec PLUS must be ingested by susceptible larvae to be effective. Thorough coverage of target foliage where larvae are feeding is essential. After ingestion, larvae cease feeding within a few hours and death occurs in 2-5 days.

Apply at first signs of infestation when larvae are small, when possible. Repeat applications according to economic threshold, as necessary to maintain control, usually 7-14 days, depending on plant growth rate, pest activity and rainfall after treating. If attempting to control a pest with a single spray, make the treatment when egg hatch is essentially complete, but before crop damage occurs. If crop is in rapid growth phase or if ongoing egg laying and overlapping pest generations are occurring, increase frequency of application to 3-7 days. Thorough coverage of all foliage is essential. To improve the quality of coverage on difficult to wet foliage (e.g., crucifers), the addition of a spreader surfactant is recommended.

Bioprotec PLUS may be applied up to and on the day of harvest.

Use diluted spray mixtures within an 18-hour period.

Aerial Application:

In most situations, apply undiluted Bioprotec PLUS with aerial equipment. Dilute with minimal quantities of water only when required to improve deposit. In the Western U.S., use a normal minimum of 5-10 gallons of water per acre; in the Eastern U.S., use a normal minimum of 2-3 gallons of water per acre. Best results can be expected when Bioprotec PLUS is applied to dry foliage with calibrated aircraft capable of obtaining droplet sizes above 50 U.S. mesh (below 300 microns) and preferably in the range of 270-100 U.S. mesh (50-150 microns).

To dilute, fill the mix tank or plane hopper with the desired quantity of water. Start the mechanical or hydraulic agitation to provide moderate circulation before adding Bioprotec PLUS. Add the specified amount of Bioprotec PLUS to the tank or plane hopper and agitate until uniformly suspended. Continuous mixing is not necessary when using undiluted product.

Chemigation Information:

Apply this product only through sprinkler irrigation systems. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide applications to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. 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.

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 back flow.

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 that 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.

Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. Prepare a suspension of this product 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 this product and then the remaining volume of water. 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 this product into the irrigation water line so as to deliver the desired rate per acre. The suspension of this product must be injected with a positive displacement pump into the main line and ensure adequate mixing.

NOTE: When treatment with this product has been completed, do not allow further field irrigation over the treated area for 48 hours to prevent washing the material off the crop.

FOR AGRICULTURAL USES:

CROP	TARGET PESTS	RATE OF BIOPROTEC PLUS (PINT/ACRE)
FORAGE, FODDER, STRAW AND HAY CROPS		
<p>Crop group 16[*] Forage, Fodder and Straw of Cereal Grains and Crop group 17 Grass Forage, Fodder, and Hay, including [but not limited to]: Corn, Wheat, Other Cereal Grain Crops, Bermudagrass, Bluegrass, and Bromegrass, Fescue</p> <p>Crop group 18 Nongrass Animal Feeds, including [but not limited to]: Alfalfa</p>	Armyworms ¹	1.00-3.50
	Alfalfa Caterpillar European Skipper (Essex Skipper) Loopers Webworm	1.00-2.00

CROP	TARGET PESTS	RATE OF BIOPROTEC PLUS (PINT/ACRE)
FRUITS AND NUTS		
<p>Crop groups 11, 11-10, 12, and 12-12[*] Pome and Stone Fruits, including [but not limited to]: Apples, Pears, Quince, Prunes (fresh), Apricots, Cherries, Nectarines, Peaches, Plums</p> <p>Crop groups 14 and 14-12[*] Tree Nuts, including [but not limited to]: Almonds, Filberts, Chestnuts, Walnuts, Pecans, Pistachios[*]</p>	Pandemis Leafroller European Grapevine Moth Hickory Shuckworm	0.80-3.10
	Citrus Cutworm ¹ Navel Orangeworm Redhumped Caterpillar Tent Caterpillar Omnivorous Leafroller Tortrix Moth Peach Twig Borer Fruittree Leafroller Gypsy Moth Tufted Apple Budmoth Fall Webworm Variegated Leafroller Redbanded Leafroller Walnut Caterpillar Codling Moth Cutworms ¹ Filbert Leafroller Oblique Banded Leafroller Cankerworms Fruitworms Oriental Fruit Moth Spring Cankerworm Lesser Appleworm[*] Fall Cankerworm Pecan Nut Casebearer[*] Saddle Prominent Caterpillar	1.00-3.50
<p>Crop groups 10[*] and 10-10 Citrus Fruits, including [but not limited to]: Oranges, Lemons, Limes, Grapefruit</p>	Winter Moth	0.40
	Orangedog	0.50-2.00
	Fruittree Leafroller Citrus Cutworm ¹ Beet Armyworm ¹ [*] Western Tussock Moth Variegated Leafroller	1.00-3.50
	Amorbia ³	2.00-2.50

CROP	TARGET PESTS	RATE OF BIOPROTEC PLUS (PINT/ACRE)
<p>Crop groups 13[*] and 13-07 Small Fruits and Berries, including [but not limited to]: Blackberries, Currants, Grapes, Raspberries, Strawberries, Cranberries, Lowbush⁸ and Highbush⁹ Blueberries, Kiwifruit</p>	Light Brown Apple Moth	2.75
	Gypsy Moth, Blueberry Leafroller Loopers, Fruittree Leafroller Grape Berry Moth ⁴ Oblique Banded Leafroller Achema Sphinx Moth (Hornworm)	1.00-3.00
	Green and Brown Spanworm	0.40-0.80
	Bagworm ⁵	1.50
	White Marked Tussock Moth ⁶	2.20
	Pandemis Leafroller Blossom Worm[*] Sparganothis Fruitworm[*] Fireworm[*] Armyworms ¹ Tent Caterpillars Looper Black Cutworm ¹ [*] Variegated Leafroller Three-lined Leafroller[*] Black-headed Fireworm[*] Cranberry Fruitworm Sparganothis Fruitworm[*] Variegated Spanworm[*] Saddle Prominent Caterpillar	1.00-3.50
	Tobacco Budworm (<i>Heliothis virescens</i>) ¹²	3.50
	Cherry Fruitworm Green Fruitworm	0.50-1.00
	Grape Leafroller ⁷ Grapeleaf Skeletonizer Omnivorous Leafroller Orange Tortrix Saltmarsh Caterpillar	1.00-3.50
	Grape Leafroller Roughskinned Cutworm ¹	0.80-3.50
	Blueberry Spanworm (<i>Itame argillacearia</i>)	0.40-0.80
	Chainspotted Geometer (<i>Cingilia catenaria</i>)	
	Rannoch Looper (<i>Itame brunneata</i>)	
	Cranberry Fruitworm Cherry Fruitworm	1.50-2.20

	Fall Webworm	0.80
CROP	TARGET PESTS	RATE OF BIOPROTEC PLUS (PINT/ACRE)
OTHER FRUITS		
Crop group 24 Tropical and Subtropical Fruits (Inedible Peel) , including [but not limited to]: Sugar Apples, Dragon Fruit, Lychee, Passionfruit, Prickly Pear, Avocados, Bananas, Persimmons[*], Pineapples, Pomegranates	Hornworms Leafrollers Loopers Omnivorous Looper	1.00-3.50
	<i>Batrachedra comosae</i> (Hodges) <i>Thecla basilides</i> (Geyr)	0.50-1.00
	Banana Skipper Banana Moth ²	1.00-2.00
	Fall Webworm Filbert Webworm[*]	1.00-2.00
	Omnivorous Leafroller Redhumped Caterpillar Tent Caterpillar	
	Citrus Cutworm ¹	1.00-3.50
VEGETABLES AND COLE CROPS		
Crop group 1 Root & Tuber Vegetables Crop group 2 Leaves of Root & Tuber Vegetables , including [but not limited to]: Beets, Carrots, Horseradish, Radish, Potatoes, Sweet Potatoes, Turnips, Sugar Beets	Diamondback Moth Imported Cabbageworm Green Cloverworm	0.50-2.00
	Hornworms	0.25-2.00
	Cutworms ¹ Loopers Webworms Saltmarsh Caterpillar Omnivorous Leafroller	1.00-3.50
	Armyworms ¹	1.00-3.50
	European Corn Borer	2.00-2.50
	Alfalfa Caterpillar	0.25-0.50

CROP	TARGET PESTS	RATE OF BIOPROTEC PLUS (PINT/ACRE)	
Crop groups 3[*] and 3-07 Bulb Vegetables , including [but not limited to]: Garlic, Leeks, Onions, Shallots	Saltmarsh Caterpillar Omnivorous Leafroller Cutworms ¹ Webworms	1.00-3.50	
	Hornworms	0.25-2.00	
	Leek Moth ¹⁰	0.80-1.50	
	Imported Cabbageworm Green Cloverworm Loopers	0.50-2.00	
	Armyworms ¹	1.00-3.50	
	Diamondback Moth	0.50-1.00	
	European Corn Borer	2.00-2.50	
	Corn Earworm, Cotton Bollworm, Tomato Fruitworm <i>(Helicoverpa zea)</i> ¹² Tobacco Budworm <i>(Heliothis virescens)</i> ¹²	2.00-3.50	
	Crop groups 8[*] and 8-10 Fruiting Vegetables , including [but not limited to]: Eggplant, Peppers, Tomatoes	Imported Cabbageworm Loopers Diamondback Moth Green Cloverworm	0.50-2.00
		Hornworms	0.25-2.00
Cutworms ¹ Loopers Webworms Saltmarsh Caterpillar Tomato Fruitworm <i>(Helicoverpa zea)</i> ¹² Omnivorous Leafroller ²		1.00-3.50	
Armyworms ¹		1.00-3.50	
European Corn Borer ¹¹		2.00-2.50	
Pinworm		1.50-3.50	

CROP	TARGET PESTS	RATE OF BIOPROTEC PLUS (PINT/ACRE)	
<p>Crop group 6 Legume Vegetables</p> <p>Crop group 7 Foliage of Legume Vegetables, including [but not limited to]: Lentils, Peas, Beans, Soybeans</p>	Diamondback Moth Loopers	0.50-2.00	
	Hornworms	0.25-1.00	
	Podworms Imported Cabbageworm Green Cloverworm Saltmarsh Caterpillar Soybean Loopers Velvetbean Caterpillar	1.00-2.00	
	Armyworms ¹	1.00-3.50	
	European Corn Borer ¹¹	2.00-2.50	
	Cutworms ¹	1.00-3.50	
	<p>Crop groups 4 and 4-16[*] Leafy Vegetables (Except Brassica Vegetables), including [but not limited to]: Lettuce, Spinach, Celery, Endive, Parsley</p> <p>Crop groups 5 and 5-16[*] Brassica (Cole) Leafy Vegetables, including [but not limited to]: Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Kohlrabi</p>	Hornworms	0.25-2.00
		Webworms Loopers Cutworms ¹ Saltmarsh Caterpillar Omnivorous Leafroller	1.00-3.50
Diamondback Moth Imported Cabbageworm Green Cloverworm Cross Striped Cabbageworm		0.50-2.00	
Armyworms ¹		1.00-3.50	
European Corn Borer		2.00-2.50	
<p>Crop group 9 Cucurbit Vegetables, including [but not limited to]: Cucumbers, Melons, Pumpkins, Squash, Watermelon</p>		Imported Cabbageworm Green Cloverworm Diamondback Moth	0.50-2.00
	Loopers Saltmarsh Caterpillar Melonworm Pickleworm Rindworm Complex		
	Armyworms ¹	1.00-3.50	
	European Corn Borer	2.00-2.50	
	Hornworms	0.25-1.00	

CROP	TARGET PESTS	RATE OF BIOPROTEC PLUS (PINT/ACRE)
OTHER VEGETABLES		
Globe Artichoke	Artichoke Plume Moth	1.00-2.50
	Armyworms ¹	
	Loopers	0.50-2.50
Asparagus	Armyworms ¹	1.00-3.50
	Diamondback Moth Green Cloverworm Imported Cabbageworm	0.50-1.00
	Loopers	0.50-2.00
Malanga	Armyworms ¹	1.00-3.50
	Saltmarsh Caterpillar	1.00-2.00
HERBS, SPICES, MINTS		
Crop group 19 Herbs & Spices , intended for human consumption, including [but not limited to]: Basil, Dill, Oregano, Thyme, Peppermint	Loopers ¹³	0.50-2.00
	Diamondback Moth Green Cloverworm Imported Cabbageworm	0.50-1.00
	Armyworms ¹	1.00-3.50
	European Corn Borer	2.00-2.50
	Saltmarsh Caterpillar	0.80-1.50
OTHER CROPS		
Rice	Armyworms ¹	1.00-3.50
	Loopers Saltmarsh Caterpillar	1.00-2.00
	Green Cloverworm Velvetbean Caterpillar	0.50-1.00
	Corn Earworm, Cotton Bollworm (<i>Helicoverpa zea</i>) ¹²	2.00-3.50
	Tobacco Budworm (<i>Heliothis virescens</i>) ¹²	

CROP	TARGET PESTS	RATE OF BIOPROTEC PLUS (PINT/ACRE)
Cotton	Cotton Leaf Perforator Cotton Leafworm Saltmarsh Caterpillar Loopers	1.00-2.00
	Armyworms ¹ Cotton Bollworm (<i>Helicoverpa zea</i>) ¹⁵ Variegated Leafroller Tobacco Budworm (<i>Heliothis virescens</i>) ¹⁵	1.00-3.50
Coffee	Banana Moth ²	1.50-3.00
Canola/Rapeseed	Diamondback Moth	0.50-1.00
	Loopers	1.00-2.00
	Armyworms ¹ Corn Earworm, Cotton Bollworm (<i>Helicoverpa zea</i>) ¹² Tobacco Budworm (<i>Heliothis virescens</i>) ¹²	1.00-3.50
Crop group 15 Cereal Grains, including [but not limited to]: Barley, Millet, Oats, Rye, Wheat, Corn (field, sweet, popcorn)	Armyworms ¹ Corn Earworm (<i>Helicoverpa zea</i>) ¹² Western Bean Cutworm ¹ [*] Variegated Cutworm ¹ Webworms Fall Armyworm ¹ [*]	1.00-3.50
	European Corn Borer (Whorl Stage Only) Southern Cornstalk Borer	1.00-2.50
	Southwestern Corn Borer	2.00-2.50

CROP	TARGET PESTS	RATE OF BIOPROTEC PLUS (PINT/ACRE)
Hemp[*]	Loopers Cabbage Looper Leafrollers	1.50-2.10
	European Corn Borer	0.75-1.50
	Corn Earworm (<i>Helicoverpa zea</i>) ¹² Budworms[*] Cutworms ¹ Hemp Borer[*] Armyworms ¹	1.00-3.50
Hops	Armyworms ¹ Common Gray Moth[*] Oblique Banded Leafroller	1.00-3.50
	Omnivorous Leaf-tier Spotted Cutworm ¹	1.00-2.00
	European Corn Borer	1.00-2.50
Jojoba	Loopers (<i>Anacamptodes</i> spp.)	1.00-2.00
Peanuts	Green Cloverworm Loopers Velvetbean Caterpillar Podworms	1.00-2.00
	Armyworms ¹	1.00-3.50
	Corn Earworm, Cotton Bollworm (<i>Helicoverpa zea</i>) ¹²	2.00-3.50
	Tobacco Budworm (<i>Heliothis virescens</i>) ¹²	

CROP	TARGET PESTS	RATE OF BIOPROTEC PLUS (PINT/ACRE)
Safflower	Armyworms ¹	1.00-3.50
	Loopers Saltmarsh Caterpillar	1.00-2.00
Sorghum	Headworm	1.00-2.00
Sugarcane	Sugarcane Borer	1.00-2.50
Sunflowers	Sunflower Head Moth ¹⁴ Loopers Banded Sunflower Moth[*] Variegated Leafroller	1.00-2.00
Tobacco	Tobacco Hornworm	0.25-1.00
	Loopers	0.50-2.00
	Tobacco Budworm (<i>Heliothis virescens</i>) ³	2.00
FLOWERS, BEDDING PLANTS AND ORNAMENTALS		
Ornamentals, Flowers, Bedding Plants	Armyworms ¹ Box Tree Moth[*] Mimosa Webworm[*] Saddle Caterpillar Variegated Leafroller Tobacco Budworm (<i>Heliothis virescens</i>) ¹²	1.00-3.50
	White Marked Tussock Moth ⁶	2.20
	Azalea Moth Diamondback Moth Ello Moth (Hornworm) Io Moth Loopers Oleander Moth Omnivorous Leafroller Omnivorous Looper	0.50-1.00

CROP	TARGET PESTS	RATE OF BIOPROTEC PLUS (PINT/ACRE)
GREENHOUSE AND OUTDOOR NURSERY CROPS		
Ornamental Plants, Flowers, Leafy Vegetables (Except Brassica Vegetables) and Brassica (Cole) Leafy Vegetables (Crop groups 4, 4-16[*], 5, and 5-16[*]) (e.g., Lettuce and Broccoli), Fruiting Vegetables (Crop groups 8[*] and 8-10) (e.g., Peppers), Herbs & Spices (Crop group 19) (e.g., Basil)	Tomato Hornworm	0.50-1.00
	Omnivorous Leafroller	1.00
	<i>Duponchelia fovealis</i> <i>Opogona sacchari</i>	0.90
	Armyworms ¹ Corn Earworm, Cotton Bollworm, Tomato Fruitworm (<i>Helicoverpa zea</i>) ¹² Tobacco Budworm (<i>Heliothis virescens</i>) ¹²	1.00-3.50
	Loopers	1.00-2.00

[*Not registered for use in California].

¹Armyworms and Cutworms Control: Use to control small armyworms and cutworms (1st and 2nd instar) when populations are light and full coverage sprays are applied. Repeat treatment as necessary. If mature larvae or heavy populations are present, the use of higher rates is recommended. You may achieve greater control by adding a contact insecticide.

²Banana Moth: Drench the bark and the newly emerging verticals shortly after pruning and periodically thereafter as needed to achieve economic control.

³Suppression Only (Amorbia, Tobacco Budworm on Tobacco): Use to aid in control of light to moderate populations of 1st and 2nd instar in Integrated Pest Management conditions. Repeat treatments at 4- to 5-day intervals. Use an additional ovicidal or larvicidal insecticide to aid in control.

⁴Grape Berry Moth: Start applications before egg hatch and after seeing adult flight. Ensure complete coverage. Repeat application if needed every 7-10 days (6 total applications maximum per growing season).

⁵Grape Bagworm: Make 1 application when larvae are observed feeding on grapes.

⁶White Marked Tussock Moth: Make 2 applications. Apply the first application at peak 2nd instar larval development. Apply second application 2-5 days later.

⁷Grape Leafroller: Repeat application if needed every 3-14 days (4 total applications maximum per growing season).

⁸Lowbush Blueberries: Apply in a minimum of 31.25 gallons of water per acre. Apply when larvae are in the 1st or 2nd instar and are present at or above the economic threshold.

⁹Highbush Blueberries: Apply by adjusting the application rate within this range as a function of the density of larvae or the density of the foliage to treat, i.e., when crop canopy is dense in late summer, the higher rate may be required. Allow 5-10 days between applications. Monitor for the

pests and apply at hatching, when larvae are small. Apply from petal fall to green fruit stage. Weekly applications may be necessary if egg hatch is asynchronous. Ground application by boom sprayer or mist blower: Apply in a minimum of 31.25 gallons of water per acre. Sprays are most effective when no rain occurs within 48 hours after application, allowing time for larvae to ingest a lethal quantity of spray deposits.

¹⁰Leek Moth (Shallots): The use of pheromone traps on the site of treatment is critical to determine the initial application timing. Apply 7-10 days following a peak leek moth flight to synchronise application with egg hatching and repeat at 5-day intervals.

¹¹European Corn Borer: Beans: Apply 2.00-2.50 pints per acre. Adjust the rate per acre within this range as a function of the density of the foliage to treat, i.e., when crop canopy is dense in late summer, the higher dosage may be required. Allow 5-10 days between applications. Timing: Monitor for the pest and apply at hatching, before larvae bore into the plant tissues. Peppers: Apply to young larvae at first signs of infestation; repeat application 2-4 times as necessary to maintain control of young larvae; application interval is 7-10 days.

¹²Helicoverpa spp. and Heliothis spp.: Apply every 5-7 days based on pest monitoring. Use the higher rates for lepidopterans belonging to these two genera.

¹³Herbs and Spices Loopers: Adjust the rate per acre as a function of the density of larvae or the density of the foliage to be treated. When crop canopy is dense in late summer, a higher rate may be required. Allow 5-10 days between applications (5 total applications maximum per growing season). Use diluted spray mixture within 18-hour period. Adjust timing by monitoring target pests to apply at hatching, when larvae are small.

¹⁴Sunflower Head Moth: Apply aerially when 20-50% heads in bloom. Thorough coverage of larval feeding sites within flowers is necessary for adequate control.

¹⁵For early season management, begin applications at pinhead square cotton stage when eggs are present. Time applications to coincide with egg hatch. Apply at 5-day intervals based on pest monitoring. Continue applications throughout the season, as needed. If additional activity is required, increase rates and/or tank mix with other larvicides. Before mixing, evaluate physical compatibility by mixing all components in a small container in appropriate quantities. Use and mix this product with other pesticides only in accordance with the most restrictive labeling limitations and precautions. Do not mix this product with any product containing label prohibition against such mixing. Do not exceed label application rates.

LAWN APPLICATION INSTRUCTIONS

Not for use on turf being grown for sale, other commercial use, for commercial seed production, or for research purposes.

For applications that will use irrigation, use 50 to 100 gallons of spray volume per acre of turf. Do not apply this product through the irrigation system. The treated area must be irrigated after spray application ($\frac{1}{8}$ inch of water) to increase penetration of turf surface. If irrigation is not possible, use a spray volume of 200 gallons per acre of turf. Best results are obtained if applications are made in the evening.

CROP	TARGET PESTS	RATE OF BIOPROTEC PLUS (PINT/ACRE)
LAWNS	Cutworms ¹	3.00
	Armyworms ¹ Sod Webworm Tropical Sod Webworm	1.50-3.00

¹Armyworms and Cutworms Control: Use to control small armyworms and cutworms (1st and 2nd instar) when populations are light and full coverage sprays are applied. Repeat treatment as necessary. If mature larvae or heavy populations are present, the use of higher rates is recommended. You may achieve greater control by adding a contact insecticide.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store Bioprotec PLUS in the original container between 39°F (4°C) and 68°F (20°C) to ensure microbial purity and potency. Use product within 18 months of the date of manufacture. Store container upright and keep tightly closed when not in use. After extended storage, shake or stir contents to assure a uniform suspension.

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:

For containers equal to 5 gallons or less:

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 and drain for 10 seconds after the flow begins to drip. 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.

For containers greater than 5 gallons:

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. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration.

For 264-gallon containers and/or larger returnable mini-bulk and bulk containers:

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Return empty container for reuse, offer for recycling if available, or puncture and dispose of in a sanitary landfill or by

incineration or by other procedures approved by state and local authorities.

WARRANTY

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. User assumes all risks of use, storage or handling not in accordance with accompanying directions.

[Optional Marketing/ Advertising Claims]

- Look for other AEF Global products at www.aefglobal.com