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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

November 17, 2016

Patricia Biggio
Regulatory Specialist
SciReg, Inc., Agent for AEF Global, Inc.
12733 Director's Loop
Woodbridge, VA 22192

Subject: Labeling Notifications per Pesticide Registration Notice (PRN) 98-10 – Addition of toll free helpline, addition of website, and change of company address
Product Name: Bioprotec PLUS
EPA Registration Number: 89046-12
Application Date: October 28, 2016
OPP Decision Number: 523062

Dear Ms. Biggio:

The U.S. Environmental Protection Agency (EPA) is in receipt of your application for notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Biopesticides and Pollution Prevention Division (BPPD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The labeling submitted with this application has been stamped "Notification" and will be placed in our records. You must submit one (1) copy of the final printed labeling with the modifications.

Since you wish to add a reference to your company's website on your label, please be aware that the website becomes labeling under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and is subject to review by the 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 false or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

If you have any questions, please contact Michael Glikes by phone at (703) 305-6231 or via email at glikes.michael@epa.gov.

Sincerely,

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

Enclosure

NOTIFICATION
89046-12
The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:
11/17/2016

MASTER LABEL

Bioprotec PLUS
AQUEOUS BIOLOGICAL INSECTICIDE

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

FOR FORESTRY, FOOD and NON-FOOD OUTDOOR USE BY COMMERCIAL APPLICATORS

Active Ingredient:

Bacillus thuringiensis ssp. *kurstaki* strain EVB-113-19……14.60%
Other Ingredients……85.40%
Total…… 100.00%

Potency: 17,500 Cabbage Looper Units (CLU) per mg of product (equivalent to 76 billion CLU per gallon)

There is no direct relationship between intended activity (potency) and the percent active ingredient by weight.

KEEP OUT OF REACH OF CHILDREN

CAUTION

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

AEF Global, Inc.
925 des Calfats
Lévis, QC
Canada
G6Y 9E8
Toll free help line: 1-866-622-3222
www.aefglobal.com

EPA Registration. NO: 89046-12
Establishment No.:

Use this product within 12 months of the date of manufacture.
Date of Manufacture: _____

Lot number: _____
Net Contents: _____

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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.

FIRST AID	
If on skin:	– 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:	– 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 further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center, doctor, or going for treatment. You may contact the National Poison Control Hotline at 1-800-222-1222 for emergency and medical information.

For information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear

- long-sleeved shirt and long pants
- waterproof gloves
- shoes plus socks
- 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. When mixing and loading, wear a chemical-resistant apron. When cleaning equipment, wear a chemical resistant apron.

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.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker protections 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 provide 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 wash hands before eating, drinking, chewing gum, using tobacco products or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. 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 ground application: Do not apply directly to water or to where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters or rinsate.

For aerial application: Except under the forest canopy, 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 cleaning equipment or disposing of equipment wash waters or rinsate.

This product must not be applied aerially within ¼ mile of any habitats of endangered species or threatened *Lepidoptera*. Do not make applications 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 applications. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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

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 intervals (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 unless wearing appropriate PPE.

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 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.

USE INFORMATION

Bioprotec PLUS is a water based formulation which 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.

Make applications early in the morning, in the evening, or during overcast conditions for best results. Make sure to apply the product when there is little or no wind. Do not make early morning application if foliage is wet with dew to the point of runoff. Avoid application when significant rainfall is imminent. Bioprotec PLUS is more effective when rain is not forecasted within 24-48 hours following application. Dry weather will allow larvae to ingest a lethal quantity of spray deposits.

MIXING

Add the recommended amount of Bioprotec PLUS to the required amount of water in the spray tank. Agitate as necessary to maintain suspension.

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

GENERAL INSTRUCTIONS

Bioprotec PLUS is toxic to select species of *Lepidopteron* larvae. Bioprotec PLUS must be ingested by susceptible larvae to be effective. Thorough coverage of target foliage where larvae are feeding is essential. **Treat larvae when they are newly hatched and actively feeding.** 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. Repeat applications, according to economic threshold, as necessary to maintain control. Thorough coverage of all foliage is essential. To improve wetting and distribution on difficult to wet foliage (e.g. crucifers), the addition of a wetting agent is recommended.

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

Ground Application:
Use recommended amount of Bioprotec PLUS in a minimum of 31.25 gallons per acre, depending on the type of equipment and crop. This minimum can be lower with ultra-low volume sprayers. Use diluted spray mixtures within an 18 hours period.

DO NOT apply by any type of irrigation system.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Aerial Application:
Apply undiluted Bioprotec PLUS with aerial equipment. Dilute with water to improve deposit. In the Western U.S., use a normal minimum of 5-10 gallons per acre; in the Eastern regions, use a normal minimum of 2-3 gallons per acre. Best results can be expected when Bioprotec PLUS is applied to dry foliage with calibrated aircraft capable of obtaining droplet sizes below 300 microns and preferably in the range of 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 recommended amount of Bioprotec PLUS to the tank or plane hopper and agitate until uniformly suspended. Continuous mixing is not necessary when using undiluted product.

FOR AGRICULTURAL USES:

CROP	TARGET PESTS	Rate (Pint/acre)
FORAGE, FODDER, HAY		
Alfalfa (Hay and seed) Hay and Other Forage Crops	Armyworm[1]	1.0-3.5
	Alfalfa Caterpillar loopers European Skipper (Essex skipper) Loopers	1.0-2.0
FRUITS AND NUT		
Pome and Stone fruits such as : Apples, Pears, Quince, Prunes, Apricots, Cherries, Nectarine, Peaches, Plums, Prunes **Nut Trees** such as : Almonds, Filbert, Chestnuts, Walnuts, Pecans	Pandemis Leafroller[2] European grapevine moth[1] (crymax) Hickory shuckworm	0.8-3.1
	Citrus Cutworm Navel Orangeworm Redhumped Caterpillar Tent Caterpillar Omnivorous leafroller[2] Tortrix Moth Cankerworm Peach twig borer Fruittree leafroller[2] Gypsy moth Tufted Apple Budmoth Fall Webworm Variegated Leafroller[2] Redbanded Leafroller[2] Walnut Caterpillar Codling moth Cutworms Filbert Leafroller[2] Oblique Banded Leafroller[2]	1.0-3.5

	Cankerworms Fruitworms[2]	
	Winter moth (Apples only)	0.4
Citrus	Orangedog	0.5-2.0
	Fruittree leafroller[2] Citrus Cutworm	1.0-3.5
	Amorbia[3]	2.0-2.5
Small fruits and Berries such as : Blackberries, Blueberries, Currants, Grapes, Raspberries, Strawberries, Cranberries	Gypsy moth Blueberry leafroller[2] Loopers Fruittree leafroller[2] Grape berry moth[4] Oblique Banded Leafroller[2] Achema Sphinx Moth (Hornworm)	1.0-2.0
	Green and Brown Spanworm	0.4-0.8
	Bagworms [5]	1.5
	White marked Tussock Moth[6]	2.2
	Armyworm*	1.0-3.5
	Tobacco Budworm	3.5
	Cherry Fruitworm[2] Green Fruitworm[2]	0.5-1.0
	Grape Leafroller[7] Grapeleaf Skeletonizer Omnivorous leafroller[2] Orange Tortrix Saltmarsh caterpillar	1.0-2.5
	Grape leaffolder Roughskinned cutworm	0.8-1.5
Lowbush blueberries[8]	Blueberry spanworm (*Itame argillacearia*)	0.4-0.8
	Chainspotted Geometer (*Cingilia catenaria*)	
	Rannoch Looper (*Itame brunneata*)	
Highbush blueberries[9]	Cranberry Fruitworm[2] Cherry Fruitworm[2]	0.8-1.5
OTHER FRUITS		
Bananas	Banana skipper	1.0-2.0
Tropical Fruits	Hornworms Leafrollers[2] Loopers Omnivorous Looper	1.0-3.5

Kiwi	Omnivorous Leafroller[2]	1.0-3.5
Pineapple	*Gummosos-Batrachedra commosae* (Hodges) *Thecla-Thecla basilides* (Geyr)	0.5-1.0

Crop group	Pest	Rate (Pint/acre)
VEGETABLES AND COLE CROPS		
Root & Tuber Vegetables and leaves of Root and Tuber vegetables such as: Beets, Carrot, Horseradish, Radish, Potato, Sweet Potato, Turnip and Turnip Greens, Sugar beets	Diamondback moth Imported Cabbageworm Green cloverworm	0.50-2.00
	Hornworms	0.25-2.00
	Cutworms Loopers Webworms Saltmarsh caterpillar Omnivorous Leafroller[2]	1.00-2.00
	Armyworm[1]	1.00-3.50
	European corn borer	2.00-2.50
	Alfalfa caterpillar	0.25-0.50
Bulb vegetables such as: Garlic, Leek, Onions, Shallots	Saltmarsh caterpillar Omnivorous leafroller[2] Cutworms Webworms	1.00-2.00
	Hornworms	0.25-2.00
	Leek Moth[10]	0.80-1.50
	Imported Cabbageworm Green Cloverworm Loopers	0.50-2.00
	Armyworm[1]	1.0-3.5
	Diamondback moth	0.50-1.00
	European corn borer	2.00-2.50
	Helicoverpa zea *Heliothis virescens*	2.00
Fruiting Vegetables such as: Eggplant, Peppers, Tomatoes	Imported Cabbageworm Loopers Diamondback moth Green cloverworm	0.50-2.00
	Hornworms	0.25-2.00
	Cutworms Webworms Saltmarsh caterpillar Omnivorous leafroller[2]	1.00-2.00

	Armyworm[1]	1.00-3.50
	European corn borer[11]	2.00-2.50
Legume and foliage of legume vegetables such as : Lentils, Peas, Beans, Soybeans	Diamondback moth Loopers	0.50-2.0
	Hornworms	0.25-1.00
	Podworms Imported Cabbageworm Green cloverworm Saltmarsh caterpillar Soybean loopers Velvetbean caterpillar	1.00-2.00
	Armyworm[1]	1.00-3.50
	European corn borer[11]	2.00-2.50
	Cutworm	1.00-2.50
Fruiting Vegetables such as : Eggplant, Peppers, Tomatoes	Imported Cabbageworm Diamondback moth Green cloverworm	0.50-1.00
	Hornworms	0.25-2.00
	Tomato fruitworm[12] (*Helicoverpa zea*) Variegated cutworm Saltmarsh caterpillar Loopers	1.00-2.00
	Armyworm[1]	1.00-3.50
	Pinworm	1.50-3.50
	European corn borer[7]	2.00-2.50
Brassica (cole) vegetables such as : Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Kohlrabi	Hornworms	0.25-2.00
	Webworms Loopers Cutworms Saltmarsh caterpillar Omnivorous leafroller[2]	1.00-2.00
	Diamondback moth Imported Cabbageworm Green cloverworm	0.50-2.00
	Armyworm[1]	1.00-3.50
	European corn borer	2.00-2.50
Cucurbit vegetables such as : cucumbers, melons, pumpkins, squash, watermelon	Imported Cabbageworm Green cloverworm Diamondback moth Loopers Saltmarsh caterpillar Melonworm Pickleworm	0.50-2.00

	Rindworm complex	
	Armyworm[1]	1.00-3.50
	European corn borer	2.00-2.50
	hornworms	0.25-1.00
OTHER VEGETABLES		
Artichokes	Artichoke Plume moth Armyworm[1]	1.00-2.50
	Loopers	0.50-2.50
Asparagus	Armyworm[1]	1.00-3.50
	Diamondback moth Green cloverworm Imported Cabbageworm	0.50-1.00
	Loopers	0.50-2.00
Malanga	Armyworm[1]	1.00-3.50
	Saltmarsh caterpillar	1.00-2.00
Watercress	Loopers Diamondback moth	0.50-1.70
	Armyworm[1]	1.00-3.50
	Green cloverworm Imported Cabbageworm	0.50-1.00
	Saltmarsh caterpillar	1.00-2.00
	European corn borer	2.00-2.50
HERBS, SPICES, MINTS		
Basil, Dill, Oregano, Thyme, Peppermint	Loopers[13]	0.50-2.00
	Diamondback moth Green cloverworm Imported Cabbageworm	0.50-1.00
	Armyworm[1]	1.00-3.50
	European corn borer	2.00-2.50
	Saltmarsh Caterpillar	0.80-1.50
OTHER CROPS		
Avocados	Loopers	2.00-2.50
	Orange Tortrix Omnivorous Leafroller[2] Omnivorous Looper spanworm Amorbia[3]	1.00-3.50
	Cutworms	1.00-2.50
Rice	Armyworm[1]	
	Loopers Saltmarsh caterpillar	1.00-2.00

	Green Cloverworm Velvetbean caterpillar	0.50-1.00
	Helicoverpa zea	2.00
	Heliothis virescens	
Cotton	Loopers	1.00-2.00
	Armyworm[1]	1.00-3.50
	Cotton Bollworm Tobacco Budworm	0.50-3.50

For early season management of *Heliothisl* and *Helicoverpa* species, initiate applications at pinhead square stage when eggs are present. For best results, time applications to coincide with egg hatch. Continue applications on 5 day intervals. Consider the use of an ovicide for additional benefit. When selecting an ovicide, consider the preservation of beneficial insects. Continue applications of Bioprotec PLUS throughout the season, as needed. As the larval population increases through the season, increase rates of Bioprotec PLUS, and tank-mix with other larvicides for increased control. When the crop canopy is dense and larvae are feeding in the lower canopy, aerial application of Bioprotec PLUS may not provide adequate deposit for acceptable control. Before mixing Bioprotec PLUS with other products, identify possible problems with 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 labels limitations and precautions. Do not mix this product with any product containing label prohibition against such mixing. Do not exceed label dosage rates.

Cotton	Cotton leaf perforator Cotton Leafworm Saltmarsh caterpillar Loopers	1.0-2.0
	Armyworm[1] Cotton Bollworm Tabacco Budworm	1.0-3.5

Repeat as necessary throughout the season to maintain control. If egg laying frequency indicates future moderate to heavy larval populations, time application to coincide with the second instar larvae. During period 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 ⅔ portion of the plant, aerial application of Bioprotec PLUS may not provide adequate deposit to achieve acceptable control.

Canola/Rape Seed	Diamondback moth	0.50-1.00
	Loopers	1.00-2.00
	Armyworm[1] *Helicoverpa zea* *Heliothis virescens*	1.00-3.50
Corn such as : Field, Sweet, Popcorn	Armyworm[1]	1.00-3.50
	European corn borer (whorl stage only)	1.00-2.50
	Southwestern Corn Borer	2.00-2.50

Hops	Armyworm[1]	1.00-3.50
	Loopers	0.50-2.00
	Omnivorous Leaftier Spotted cutworm Oblique Banded Leafroller[2]	1.00-2.00
Jojoba	Loopers (*Anacamptodes spp*.)	1.00-2.00
Peanuts	Green cloverworm Loopers Velvetbean caterpillar Podworms	1.00-2.00
	Helicoverpa zea	2.00
	Heliothis virescens	
Persimmons, Pomegranate	Fall Webworm Filbert Webworm Omnivorous Leafroller[2] Redhumped Caterpillar Tent Caterpillar	1.00-2.00
	Citrus Cutworm	1.00-2.50
Safflower	Armyworm[1]	1.00-3.50
	Loopers Saltmarsh caterpillar	1.00-2.00
Sorghum	Headworm	1.00-2.00
Sunflowers	Headmoth[14] Loopers	1.00-2.00
Small Grains	Armyworm[1]	1.00-3.50
	Loopers	1.00-2.00
Tobacco	Tobacco hornworm	0.25-1.00
	Loopers	0.50-2.00
	Tobacco Budworm[3]	2.00
FLOWERS, BEDDING PLANTS AND ORNEMENTALS		
Ornamental, Flowers, Bedding plants	Armyworm[1]	1.00-3.50
	White marked Tussock Moth	2.20
	Azalea Moth Diamondback moth Ello Moth (Hornworm) Io Moth Loopers Oleander Moth	0.50-1.00

	Omnivorous Leafroller[2] Omnivorous Looper Tobacco Budworm	
GREENHOUSE AND OUTDOOR NURSERY CROPS		
Ornamental plants, Flowers, Brassicas, Fruiting Groups, Vegetable groups, Herbs and Spices, Leafy vegetables	Tomato hornworm	0.50-1.00
	Omnivorous leafroller[2]	1.00
	Duponchelia fovealis *Opogona sacchari*	0.90
	Armyworm[1] *Helicoverpa zea* *Heliothis virescens*	1.00-3.50
	Loopers	1.00-2.00

[1]Armyworm Control: Use Bioprotec PLUS 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.

[2]Leafrollers and Fruitworms: Apply at pink stage and, if populations are heavy, at petal fall using an airblast orchard sprayer. For high volume sprayers, add recommended volume of Bioprotec PLUS Aqueous Biological Insecticide to water at ratio between 1:50 to 1:500. Weekly applications may be necessary if egg hatch is asynchronous. Leafrollers in small fruits and berries: Treat when larvae are young (early instar) before crop is damaged. Repeat applications at an interval sufficient to maintain control, usually 3 – 14 days. Spray volume: Apply in a minimum of 31.25 gallons/acre; use higher spray volumes may be used for berry crops with larger plant stature.

[3] Suppression only: Use to aid in control of light to moderate populations of first and second instar in Integrated Pest Management conditions. Repeat treatments at four to five day intervals. Use an additional ovicidal or larvicidal insecticide to aid in control.

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

[5]Grapes Bagworms: Make one application when larvae are observed feeding on grapes.

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

[7]Grape Leafrollers: Repeat application if needed every 3 to 14 days (4 total applications maximum).

[8]Lowbush blueberries: Apply in a minimum of 31.25 gallons/acre. Apply when larvae in the first or second instar are present at or above the economic threshold.

[9]Highbush blueberries: Apply Bioprotec PLUS 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 through to green fruit stage. Weekly applications may be necessary if egg hatch is asynchronous. Ground application by boom sprayer or mist blower. Use a minimum of 31.25 gallons per acre. Bioprotec

PLUS is more effective when no rain occurs within 24-48 hours after application, allowing time for larvae to ingest a lethal quantity of spray deposits.

[10]Leek moth-shallots: The use of pheromone traps on site of treatment is critical to application timing. Since application is targeted at the larval stages, a period of 7-10 days following peak flight helps to ensure maximal egg hatch.

[11]European Corn Borer: Beans: Apply 1.5-2.2 pint of Bioprotec PLUS /acre. Adjust the dosage per hectare, 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.

[12]Tomato Fruitworm: Apply every 5 - 7 days.

[13]Herbs and spice Loopers: Adjust the dosage per hectare 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 dosage may be required. Allow 5-10 days between applications. Do not make more than 5 applications. Use diluted spray mixture within 12 hour period. Adjust timing by monitoring target pests to apply at hatching, when larvae are small.

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

FORESTRY INSTRUCTIONS

Consult with recognized forest pest management authority or AEF Global representative regarding appropriate timing and method of application. The timing and number of applications required for effective forest protection will depend upon target pest, target foliage development, pest pressure and larval activity. Correspond applications with sufficient foliage development (shoot elongation or leaf expansion) to ensure maximum spray deposit. To the extent possible, apply treatments after egg hatch has been completed to assure that the maximum number of larvae is present during the treatment period. In conditions where egg hatch is extended and/or larval development is significantly advanced and/or larval populations are high, use of higher rates and/or additional applications, 3 - 10 days apart, is recommended. See dose rate table for pest specific recommendations.

Ground application

Dilute required amount of Bioprotec PLUS with water only to the volume required to provide thorough coverage. Do not wet foliage to the point of excessive runoff.

For mist blower applications, add Bioprotec PLUS to water at a ratio of 1:20 to 1:50. Recommended maximum volume of spray mixture is 26.4 gallons per hectare.

For high volume hydraulic sprayers, add Bioprotec PLUS to water at a ratio of 1:50 to 1:500. Recommended maximum volume of spray mixture is 264 gallons per hectare.

Aerial application

Apply only by fixed-wing or rotary aircraft equipment that has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label. Label rates, conditions and precautions are product specific.

Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment. Ensure uniform application by using appropriate marking devices and/or electronic guidance equipment.

Undiluted applications are highly recommended for most labeled pests. To improve coverage, Bioprotec PLUS may be diluted with water and applied at the rates indicated in the dose rates table. Total volume of spray material to be applied per hectare depends upon target pest, target foliage, weather, spray equipment and droplet size. Best results are expected when Bioprotec PLUS is applied undiluted to dry foliage with well calibrated aircraft and appropriate spray systems capable of delivering droplets in the range of 30-80 microns for coniferous foliage and 50-150 microns for broadleaf foliage.

FOR NON-AGRICULTURAL USES:

Not for use on trees being grown for sale or other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes, except wide-area public pest control programs sponsored by government entities, such as mosquito abatement, gypsy moth control, and Mediterranean fruit fly eradication.

Crop group	Pest	Rate[1] (Pint/acre)
FORESTS, SHADE TREES, ORNAMENTALS, SHRUBS, SUGAR MAPLE TREES		
Forests, Shade trees, Ornamentals, Shrubs, Sugar Maple Trees, Ornamental Fruit, Nut & Citrus trees	Gypsy moth[2]	1.3-2.2
	Bagworm Jackpine Budworm Elm Spanworm Fall Spanworm Eastern Spruce Budworm[3]	0.9-1.3
	Eastern & Western Hemlock Western Spruce Budworm[3]	1.3-1.7
	Spruce Budworm[3] Browntail moth Douglas fir tussock moth Coneworm Buck moth	0.8-3.2
	Satin Moth Tussock moths	2.2
	Pine butterfly Loopers Orangestriped Oakworm Blackheaded budworm Saddled prominent Saddleback Caterpillar Leafrollers Tortrix Moth Mimosa Webworm	0.6-1.7
	Tent Caterpillar	0.5-0.9
	Forest tent caterpillar Greenstriped mapleworm	0.4-1.2
	Redhumped Caterpillar Spring & Fall Cankerworm	0.5-0.9

	California Oakworm Fall Webworm	
	Eastern Tent Caterpillar	
	Oakmoth larvae	0.8-1.5

[1]Use the higher rates on advanced larval stages or under high density larval populations.

[2]Gypsy moths: In treating infested trees and shrubs in urban, rural, and semi-rural areas, exposure of non-target vegetation including, but not limited to, native and ornamental species and food or feed crops is permitted. This product can be mixed and used with other pesticides only in accordance with the most restrictive of label limitations and precautions. This product cannot be mixed with any product containing a label prohibition against such mixing. No label dosage rates may be exceeded. Apply first application when larvae are in 2nd and 3rd instar and leaf expansion reaches 40-50%. If egg hatch is extended or re-infestation occurs, 2 or more applications, 7 -10 days apart, may be required. Use higher rates for heavy infestations.

[3]Spruce Budworms: Treat prior to fifth instar larval development, when bud flush/shoot development is sufficient to ensure good deposit on emerging needles. For heavy infestations, higher rates and a second application are recommended. In mountainous terrain, higher rates and volumes may be required to ensure adequate coverage. For forest stands with a high spruce component, in addition to fir, a second application may be necessary, after the spruce buds have opened.

FOR AGRICULTURAL USES:

For use on trees being grown for sale or other commercial use, such as for commercial seed production or research purposes.

Crop group	Pest	Rate[1] (Pint/acre)
FORESTS, SHADE TREES, ORNAMENTALS, SHRUBS, SUGAR MAPLE TREES		
Forests, Shade trees, Ornamentals, Shrubs, Sugar Maple Trees, Seed Orchards, Ornamental Fruit, Nut & Citrus trees	Gypsy moth[2]	1.3-2.2
	Bagworm Jackpine Budworm Elm Spanworm Fall Spanworm Eastern Spruce Budworm[3]	0.9-1.3
	Eastern & Western Hemlock Western Spruce Budworm[3]	1.3-1.7
	Spruce Budworm[3] Browntail moth Douglas fir tussock moth Coneworm Buck moth	0.8-3.2
	Satin Moth Tussock moths	2.2
	Pine butterfly Loopers Orangestriped Oakworm Blackheaded budworm	0.6-1.7

	Saddled prominent Saddleback Caterpillar Leafrollers Tortrix Moth Mimosa Webworm	
	Tent Caterpillar	0.5-0.9
	Forest tent caterpillar Greenstriped mapleworm	0.4-1.2
	Redhumped Caterpillar Spring & Fall Cankerworm California Oakworm Fall Webworm	0.5-0.9
	Eastern Tent Caterpillar	
	Oakmoth larvae	0.8-1.5

[1]Use the higher rates on advanced larval stages or under high density larval populations.

[2]Gypsy moths: In treating infested trees and shrubs in urban, rural, and semi-rural areas, exposure of non-target vegetation including, but not limited to, native and ornamental species and food or feed crops is permitted. This product can be mixed and used with other pesticides only in accordance with the most restrictive of label limitations and precautions. This product cannot be mixed with any product containing a label prohibition against such mixing. No label dosage rates may be exceeded. Apply first application when larvae are in 2nd and 3rd instar and leaf expansion reaches 40-50%. If egg hatch is extended or re-infestation occurs, 2 or more applications, 7 -10 days apart, may be required. Use higher rates for heavy infestations.

[3]Spruce Budworms: Treat prior to fifth instar larval development, when bud flush/shoot development is sufficient to ensure good deposit on emerging needles. For heavy infestations, higher rates and a second application are recommended. In mountainous terrain, higher rates and volumes may be required to ensure adequate coverage. For forest stands with a high spruce component, in addition to fir, a second application may be necessary, after the spruce buds have opened.

Other pests: Apply after egg hatch is complete, when early instar larvae are feeding on exposed foliage. For broadleaf foliage, apply when leaf expansion reaches 40 - 50%. For coniferous foliage, apply when bud flush/shoot development is sufficient to ensure good deposit. If egg hatch is extended or larval populations are high, higher rates and/or additional applications, 3 -10 days apart, may be required.

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

Use 50 to 100 gallons of spray volume per acre. The treated area must be irrigated after application (⅛ inch of water) to increase penetration of turf surface. If irrigation is not possible use a spray volume of 200 gallons per acre. Best results are obtained if applications are made in the evening.

Crop group	Pest	Rate (Pint/acre)
LAWNS	Cutworm	3.0
	Armyworm Sod Webworm Tropical Sod Webworm	1.5-3.0

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

STORAGE AND DISPOSAL

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

Storage: Store Bioprotec PLUS in the original container between 39°F (4°C) and 59°F (15°C) to ensure microbial purity and potency. Use product within 12 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 may 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. Clean container promptly after emptying. Triple rinse as follows: Empty 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 flow begins to drip. Repeat this procedure two more times. 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.

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. Recap 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:

Return empty container for reuse. 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 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, then offer for recycling if available or puncture and dispose in a sanitary landfill or by incineration or by other procedure approved by state and local authorities.

[Optional Marketing/ Advertising Claims]

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