

## BIOPROTEC CAF

GROUP	<b>11</b>	INSECTICIDE
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### AQUEOUS BIOLOGICAL INSECTICIDE

**FOR USE ON AGRICULTURAL and GREENHOUSE CROPS, FORESTS, WOODLANDS,  
ORNAMENTALS, RESIDENTIAL and OTHER TREED AREAS**

**SUSPENSION**

**COMMERCIAL**

**POTENTIAL SENSITIZER**

**READ THE LABEL BEFORE USING**

**GUARANTEE:**

**Active Ingredient:** *Bacillus thuringiensis* subspecies *kurstaki*, strain HD-1, at a potency of 11, 400 International Units (IU) per mg., equivalent to 12.7 BIU (Billion International Units) per litre.

**REGISTRATION NO: 26854**

**PEST CONTROL PRODUCTS ACT**

**Net Contents : 10 litres**

**Lot No.**

**Date of Manufacture:**

**This product should be used within 6 months of the date of manufacture.**

**AEF Global, Inc.  
201, Mgr-Bourget  
Lévis (Québec)  
G6V 9V6  
Canada**

**Toll-free Help-line:**

**1-866-622-3222**

**[www.aefglobal.com](http://www.aefglobal.com)**

## **GENERAL DIRECTIONS FOR USE**

Bioprotec CAF Aqueous Biological Insecticide is selectively toxic to some species of lepidopteran larvae. It is a stomach intoxicant only; to be effective, deposits of Bioprotec CAF Aqueous Biological Insecticide must be ingested by susceptible larvae. Thorough coverage of target foliage where larvae are feeding is essential. In general, larvae should be treated when they are newly hatched and actively feeding. After ingestion of a sufficient dose, larvae cease feeding within a few hours and death occurs in 2 - 5 days.

Bioprotec CAF Aqueous Biological Insecticide is a water based formulation which may be applied undiluted or diluted with clean water. Dilute with minimal quantities of clean water only when required to improve coverage. If diluting with water, add the recommended amount of Bioprotec CAF Aqueous Biological Insecticide to the required amount of water in the spray tank. Agitate as necessary to maintain suspension. Avoid application when significant rainfall is imminent. For early morning applications, foliage should not be wet with dew to the point of runoff.

For resistance management, please note that Bioprotec CAF Aqueous Biological Insecticide contains a Group 11 insecticide. Any insect population may contain individuals naturally resistant to Bioprotec CAF Aqueous Biological Insecticide and other Group 11 insecticide. The resistant individuals may dominate the insect population if this group of insecticide are used repeatedly in the same fields. Other resistance mechanism that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance:

- Where possible, rotate the use of Bioprotec CAF Aqueous Biological Insecticide or other Group 11 insecticide with different groups that control the same pests in a field.
- Use tank mixtures with insecticides from a different group when such use is permitted.
- Insecticide use should be based on an IPM program that includes scouting, record keeping, and consider cultural, biological and other chemical control control practices.
- Monitor treated pest populations for resistance development.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site pest problems in your area.
- For further information or to report suspected resistance contact AEF Global at 1-866-622-3222 or at [www.aefglobal.com](http://www.aefglobal.com).

## **FORESTRY, WOODLANDS AND ORNAMENTAL USE**

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. Applications should coincide 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 are 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:**

For ground application, dilute required amount of Bioprotec CAF Aqueous Biological Insecticide with clean water only to the volume required to provide thorough coverage. Wet foliage thoroughly but not to the point of excessive run-off.

For mist blower applications, add the recommended rate of Bioprotec CAF Aqueous Biological Insecticide to water, at a mix ratio ranging from 1:20 to 1:50. Recommended maximum volume of spray mixture is 100 Litres per hectare.

For high volume hydraulic sprayers, add the recommended volume of Bioprotec CAF Aqueous Biological Insecticide to water at a mix ratio ranging from 1:50 to 1:500. Recommended maximum volume of spray mixture is 1000 Litres per hectare.

**RESTRICTED USES:****FORESTS, WOODLANDS, RESIDENTIAL AND OTHER TREED AREAS****NOTICE TO USER**

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

**NATURE OF RESTRICTION**

This control product is to be used only in the manner authorized; consult local pesticide regulatory authorities about use permits that may be required.

**Forestry Use:** Ground/Aerial Application for sites greater than 500 ha.

**Woodlands Use:** Aerial Application for sites 500 ha. or less.

**Urban and Residential Use:** Aerial Application.

Consult local Transport Canada office regarding air regulations for residential/urban and forestry and woodland applications. Bioprotec CAF Aqueous Biological Insecticide may be used for aerial application in urban and residential areas for treatment of residential and industrial areas and municipal recreational areas (including parks, parkland, vacant lots, shelterbelts, and rights of way under municipal jurisdiction) and other wooded areas including provincial parks, ornamental plantations, seed orchards, tree plantations, tree nurseries, woodlots, cottage areas.

Undiluted applications, at the volumes noted in the dose rates table, are highly recommended for most labelled pests. When deemed necessary to improve coverage, Bioprotec CAF Aqueous Biological Insecticide may be diluted with clean water only 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 CAF Aqueous Biological Insecticide 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. Federal or provincial officials may recommend inclusion of a water soluble dye for purposes of recording spray deposit.

### Dose Rates: Aerial <sup>1</sup> and Ground Application

Forests, Woodlands, Tree Plantations, Tree Nurseries, Woodlots, Cottage Areas, Urban Areas, Residential Areas, Industrial Areas, Municipal and Provincial Parks, Rights of Way, Ornamental Plantations, Seed Orchards, Shade Trees and Other Treed Areas

Pest	BIU's per Ha.	Litres per Ha.
Gypsy Moth <sup>2</sup>	30 - 50	2.4 - 4.0
Eastern Spruce Budworm <sup>3</sup>	20 - 30	1.6 - 2.4
Western Spruce Budworm <sup>3</sup>	30 - 40	2.4 - 3.2
Jack Pine Budworm <sup>4</sup>	20 - 30	1.6 - 2.4
Forest Tent Caterpillar <sup>4</sup>	12 - 20	1.0 - 1.6
Eastern Hemlock Looper <sup>4</sup>	30 - 40	2.4 - 3.2
Bagworm <sup>4</sup>	20 - 30	1.6 - 2.4
Elm Spanworm <sup>4</sup>	20 - 30	1.6 - 2.4
Fall Spanworm <sup>4</sup>	20 - 30	1.6 - 2.4
Spring & Fall Cankerworm <sup>4</sup>	12 - 20	1.0 - 1.6
Satin Moth <sup>4</sup>	50	4.0
White Marked Tussock Moth <sup>4</sup>	50	4.0

<sup>1</sup>See Restricted Uses for aerial application to forests, woodlands, residential and other treed areas and ground application to forest sites > 500 ha.

<sup>2</sup> Gypsy Moth: apply first application when larvae are in 2<sup>nd</sup> and 3<sup>rd</sup> instar and leaf expansion reaches 40-50%. If egg hatch is extended or reinfestation occurs, 2 or more applications, 7 - 10 days apart, may be required. Use higher rates for heavy infestations.

<sup>3</sup> 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.

<sup>4</sup>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.

**DIRECTIONS FOR USE: FIELD CROPS , ORCHARD USES, GREENHOUSE USES**

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 CAF may be applied up to the day of harvest.

**GROUND APPLICATION:** Use recommended amount of Bioprotec CAF in a minimum of 300 litres of water per hectare, depending on the type of equipment and crop. Use diluted spray mixtures within a 12 hour period.

**AERIAL APPLICATION:** Bioprotec CAF Aqueous Biological Insecticide should be applied by aerial equipment undiluted. Dilute with minimal quantities of water only when required to improve deposit. Best results can be expected when Bioprotec CAF Aqueous Biological Insecticide 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. If dilution is necessary 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 CAF Aqueous Biological Insecticide. Add the recommended rate of Bioprotec CAF Aqueous Biological Insecticide to the tank or plane hopper and agitate until uniformly suspended. If using undiluted product, continual mixing is not necessary and should be avoided.

PEST	CROP/SITE	Litres/Hectare	BIU/Hectare
Cabbage Looper	Asian Radish, Bok Choy, Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Celery, Chinese Cabbage, Chinese Broccoli, Collards, Kale, Lettuce, Mustard Greens, Parsley, Potatoes, Spinach, Turnip Greens, Tomatoes,	1.4 - 2.8	18 - 36 BIU/Ha.
	Herbs and Spices Group <sup>11</sup> (including celery seed, parsley (dried), mustard seed, nasturtium, basil, caraway, catnip, chervil (dried), coriander, dill and fennel; Mints)	1.4 - 2.8	18 - 36 BIU/Ha.
Imported Cabbage Worm	Asian Radish, Bok Choy, Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Celery, Chinese Cabbage, Chinese Broccoli, Collards, Kale, Lettuce, Mustard Greens, Parsley, Potatoes, Spinach, Turnip Greens, Tomatoes	1.4 - 2.8	18 - 36 BIU/Ha.
Diamond Back Moth	Asian Radish, Bok Choy, Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Celery, Chinese Cabbage, Chinese Broccoli, Collards, Kale, Lettuce, Mustard Greens, Parsley, Potatoes, Spinach, Turnip Greens, Tomatoes	1.4 - 2.8	18 - 36 BIU/Ha.
Leafrollers <sup>1</sup> (Fruittree, European, Oblique-banded, Three-lined)	Orchards: Apple, Apricot, Cherry, Peach, Pear Plum/Prune	2.8 - 4.0	36 - 50 BIU/Ha.
Essex Skipper	Timothy Mixtures and Other Forage Grasses	0.55 - 0.7	7 - 9 BIU/Ha.
Hornworms	Tobacco, Tomatoes	0.65 - 1.1	8 - 14 BIU/Ha.
Rangeland Caterpillar	Rangeland	0.65 - 1.1	8 - 14 BIU/Ha.
Winter Moth <sup>2</sup>	Apples	0.7	8.9 BIU/Ha.
Fruitworms <sup>1</sup>	Orchards: Apple, Apricot, Cherry, Peach, Pear, Plum/Prune	2.8 - 4.0	36 - 50 BIU/Ha.

White Marked Tussock Moth	Blueberries <sup>3</sup> , Ornamental Urban Trees <sup>4</sup>	4.0	50 BIU/Ha.
Green and Brown Spanworm	Cranberries	0.7 - 1.4	9 - 18 BIU/Ha.
Sunflower Moth <sup>5</sup>	Sunflowers	0.8 - 1.6	10 - 20 BIU/Ha
Early and Late Season Oblique Banded Leafrollers	Red Raspberries <sup>7</sup>	1.4 - 2.8	18 - 36 BIU/Ha.
Tomato Fruitworm <sup>6</sup>	Tomato	1.4	18 BIU/Ha
European Corn Borer	Sweet and Field Corn <sup>8</sup>	2.8 – 4.0	36 - 50 BIU/Ha
	Succulent common beans <sup>9</sup> (e.g. green, yellow/wax, snap, string)	2.8 – 4.0	36 - 50 BIU/Ha
	Sweet Peppers <sup>10</sup>	2.8	36 BIU/Ha

<sup>1</sup> Apply in 600-800 L water/ha 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 CAF Aqueous Biological Insecticide to water at a mix ratio of 1:50 to 1:500. Recommended maximum volume is 1500 litres/hectare. Weekly applications may be necessary if egg hatch is asynchronous. Best results are obtained if applications are made in the evening or on a cloudy day.

For spindle plantings and dwarf trees, volume and application equipment must be adjusted accordingly. Consult an appropriate orchard pest management guide for further details regarding Tree Row Volume (TRV) applications.

<sup>2</sup> For use in combination with Ripcord 400 EC (12.5 ml/ha) or Cymbush 250 EC (28 ml/ha.). See their respective labels for specific instructions.

<sup>3</sup> Make 2 applications. Apply first at peak second instar larval development. Apply second application 2 - 5 days later. Use aerial, ground or mist blower applications.

<sup>4</sup> Make 2 applications. Make first application when larvae are in peak second instar. Make second application 2 - 5 days later.

<sup>5</sup> Apply aerially when 20 - 50% heads in bloom. Thorough coverage of larval feeding sites within flowers is necessary for adequate control. Apply when provincial authorities recommend treatment based on pheromone trap counts. A second application may be necessary if trap counts are high.

<sup>6</sup> Apply every 5 - 7 days.

<sup>7</sup> Apply in a maximum volume of 600 Litres/ha.

<sup>8</sup> For ground application only, by boom sprayer. Adjust the dosage per hectare, within the approved rate range, as a function of the density of foliage to treat, i.e., when crop canopy is dense in late summer, the higher dosage may be required. Up to 3 applications per generation of European corn borers, for a maximum of 6 applications per year. Allow 5-10 days between applications. Monitor for the pest and apply at hatching, before larvae bore into plant tissues. Consult provincial recommendations and regional advisors for monitoring procedures, treatment thresholds and refinements on the timing of application. Bioprotec CAF Aqueous Biological Insecticide is more effective when no rain occurs within 24-48 hours after application, to allow time for larvae to ingest a lethal quantity of spray deposits.

<sup>9</sup> **Application:** Apply 2.8-4.0 L Bioprotec CAF Aqueous Biological Insecticide/ha. 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. Up to 2 applications may be made per generation of European corn borers, for a maximum of 4 applications per year. Allow 5-10 days between applications. PHI 1 day.

**Timing:** Monitor for the pest and apply at hatching, before larvae bore into the plant tissues. Consult provincial recommendations and regional advisors for monitoring procedures, treatment threshold and refinements on the timing of application.

**Method:** Ground application by boom sprayer. Consult provincial recommendations and regional advisors for further guidance.

**Additional:** Bioprotec CAF Aqueous Biological Insecticide is more effective when no rain occurs within 24-48 hours after application, to let time for larvae to ingest a lethal quantity of spray deposits.

To reduce the incidence of European corn borer in bean fields, it is recommended not to grow beans adjacent to corn field (the preferred crop for the pest) and to remove volunteer corn from bean fields in order not to attract moths.

<sup>10</sup> 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; ground application only; PHI 1 day.

<sup>11</sup> **Application:** Apply 1.4-2.8 L Bioprotec CAF Aqueous Biological Insecticide/ha in a minimum of 300L of water. Adjust the dosage per hectare, 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 dosage may be required. Allow 5-10 days between applications. Number of application: No more than 5. Use diluted spray mixture within 12 hour period.

**Timing:** Monitor for the pest and apply at hatching, when larvae are small. Consult provincial recommendations and regional advisors for monitoring procedures, treatment threshold and refinements on the timing of application.

**Method:** Ground application by boom sprayer or mist blower. Consult provincial recommendations and regional advisors for further guidance.

Additional: Bioprotec CAF Aqueous Biological Insecticide is more effective when no rain occurs within 24-48 hours after application, to let time for larvae to ingest a lethal quantity of spray deposits.

## GREENHOUSE USES

Apply to young larvae at first signs of infestation. Repeat applications as necessary to maintain control of young larvae. The timing and number of applications will depend on foliage development and larval activity, including egg hatch, stage of larval development and population pressure.

CROP	PEST	Litres per 1000L water
Vegetables (Tomatoes, Lettuce, Cucumbers, Peppers)	Cabbage Looper, Tomato Hornworm	1.8 0.9 - 1.8
Chrysanthemums	Cabbage Looper	1.8
Roses	Omnivorous Leafroller	1.8

### NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS:

The DIRECTIONS FOR USE for Bioprotec CAF Aqueous Biological Insecticide for this uses described below were decided by persons other than AEF Global and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. AEF Global itself makes no representation or warranty with respect to efficacy or phytotoxicity claims for this product when used on the mentioned crop described below. Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold AEF Global harmless from any claims based on efficacy or phytotoxicity in connection with the use described below.

PEST	CROP/SITE	Litres/Hectare	BIU/Hectare
Gypsy moth <sup>1</sup>	Sea buckthorn	2.4 - 4.0	30 - 50 BIU/Ha

<sup>1</sup> Use the higher rate for heavy infestations. If egg hatch is extended or re-infestation occurs, repeat applications. Apply every 7 to 10 days.

## PRECAUTIONS:

**KEEP OUT OF REACH OF CHILDREN.** May cause sensitization. Avoid contact with skin, eyes or clothing. Wear a long sleeved shirt, long pants, water-proof gloves and eye goggles when handling, mixing/loading or applying the product and during all clean-up/repair activities. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's web site at: [www.croplife.ca](http://www.croplife.ca).

**FIRST AID:**

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**If in eyes:** Hold eyes 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 centre or doctor for treatment advice.

**TOXICOLOGICAL INFORMATION:** Treat symptomatically.

**STORAGE:**

Store, in original container, at temperatures between 0° and 15° C. Cooler storage temperatures are preferred. Store container upright and keep tightly closed when not in use. After extended storage, shake or stir contents to assure a uniform suspension.

**DISPOSAL:**

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple or pressure rinse the empty container. Add the rinsing to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**NOTICE TO USER:**

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

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# BIOPROTEC CAF

GROUP	<b>11</b>	INSECTICIDE
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AQUEOUS BIOLOGICAL INSECTICIDE

SUPPLEMENTAL LABEL

FOR USE ON Highbush Blueberries

COMMERCIAL

POTENTIAL SENSITIZER

**READ THE LABEL BEFORE USING**

**GUARANTEE:**

**Active ingredient :** *Bacillus thuringiensis* subspecies *kurstaki*, strain HD-1, at a potency of 11, 400 International Units (IU) per mg., equivalent to 12.7 BIU (Billion International Units) per litre

**REGISTRATION NO:      26854                      PEST CONTROL PRODUCTS ACT**

**Net contents : 10 litres**

**Lot no :**

**Date of Manufacture :**

**This products should be used within 6 months of the date of manufacture.**

**AEF Global Inc.  
201 Mgr-Bourget  
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G6V 9V6**

**Toll-free Help-line:  
1-866-622-3222  
[www.aefglobal.com](http://www.aefglobal.com)**

**GENERAL DIRECTIONS FOR USE :**

Bioprotec CAF Aqueous Biological Insecticide is selectively toxic to some species of lepidopteran larvae. It is a stomach intoxicant only; to be effective, deposits of Bioprotec CAF Aqueous Biological Insecticide must be ingested by susceptible larvae. Thorough coverage of target foliage where larvae are feeding is essential. In general, larvae should be treated when they are newly hatched and actively feeding. After ingestion of a sufficient dose, larvae cease feeding within a few hours and death occurs in 2 - 5 days.

Bioprotec CAF Aqueous Biological Insecticide is a water based formulation which may be applied undiluted or diluted with clean water. Dilute with minimal quantities of clean water only when required to improve coverage. If diluting with water, add the recommended amount of Bioprotec CAF Aqueous Biological Insecticide to the required amount of water in the spray tank. Agitate as necessary to maintain suspension. Avoid application when significant rainfall is imminent. For early morning applications, foliage should not be wet with dew to the point of runoff.

For resistance management, please note that Bioprotec CAF Aqueous Biological Insecticide contains a Group 11 insecticide. Any insect population may contain individuals naturally resistant to Bioprotec CAF Aqueous Biological Insecticide and other Group 11 insecticide. The resistant individuals may dominate the insect population if this group of insecticide are used repeatedly in the same fields. Other resistance mechanism that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance:

- Where possible, rotate the use of Bioprotec CAF Aqueous Biological Insecticide or other Group 11 insecticide with different groups that control the same pests in a field.
- Use tank mixtures with insecticides from a different group when such use is permitted.
- Insecticide use should be based on an IPM program that includes scouting, record keeping, and consider cultural, biological and other chemical control practices.
- Monitor treated pest populations for resistance development.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site pest problems in your area.
- For further information or to report suspected resistance contact AEF Global at 1-866-622-3222 or at [www.aefglobal.com](http://www.aefglobal.com).

**GROUND APPLICATION:**

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. Bioprotec CAF Aqueous Biological Insecticide may be applied up to the day of harvest.

For ground application, dilute required amount of Bioprotec CAF Aqueous Biological Insecticide with clean water only to the volume required to provide thorough coverage (minimum of 300 L of water per hectare). Wet foliage thoroughly but not to the point of excessive run-off. Use diluted spray mixtures within a 12 hour period.

**DIRECTIONS FOR USE:**

<b>Pest</b>	<b>Crop</b>	<b>Litres / hectare</b>	<b>BIU / hectare</b>
Cherry Fruitworm	Highbush blueberries	1.4 – 2.8	18 - 36

**Application:** Apply 1.4-2.8 L Bioprotec CAF Aqueous Biological Insecticide/ha. Adjust the dosage per hectare, within this range as a function of the density larvae or 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, when larvae are small. Apply from petal fall through to green fruit stage. Weekly applications may be necessary if egg hatch is asynchronous. Consult provincial recommendations and regional advisors for monitoring procedures, treatment threshold and refinements on the timing of application.

**Method:** Ground application by boom sprayer or mist blower. Consult provincial recommendations and regional advisors for further guidance. Use a minimum of 300 litres of water per hectare.

**Additional:** Bioprotec CAF Aqueous Biological Insecticide is more effective when no rain occurs within 24-48 hours after application, to let time for larvae to ingest a lethal quantity of spray deposits. Maximum of 4 applications. Pre-Harvest Interval = 0 days. Best results are obtained if applications are made in the evening or on a cloudy day.

## **PRECAUTIONS:**

**KEEP OUT OF REACH OF CHILDREN.** May cause sensitization. Avoid contact with skin, eyes or clothing. Wear a long sleeved shirt, long pants, water-proof gloves and eye goggles when handling, mixing/loading or applying the product and during all clean-up/repair activities. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you required information on acceptable residue levels in the U.S., contact 1-866-375-4648 or [www.cropro.org/](http://www.cropro.org/)

## **FIRST AID:**

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**If in eyes:** Hold eyes 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 centre or doctor for treatment advice.

## **TOXICOLOGICAL INFORMATION:**

Treat symptomatically

## **STORAGE:**

Store, in original container, at temperatures between 0° and 15° C. Cooler storage temperatures are preferred. Store container upright and keep tightly closed when not in use. After extended storage, shake or stir contents to assure a uniform suspension.

**DISPOSAL:**

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple or pressure rinse the empty container. Add the rinsing to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements. For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

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