MVP

BIOINSECTICIDE

AQUEOUS FLOWABLE BASED ON THE CELLCAP® ENCAPSULATION SYSTEM

For control of certain caterpillar pests on vegetable, field, fruit, nut, vine, turf, flower, forest, ornamental landscape tree and nursery crops.

ACTIVE INGREDIENT	
Delta endotoxin of *Bacillus thuringiensis* variety *kurstaki* encapsulated in killed *Pseudomonas fluorescens*	10%
INERT INGREDIENTS	90%
TOTAL	100%

One gallon of this product contains 0.9 lbs of delta endotoxin of *Bacillus thuringiensis* variety *kurstaki* encapsulated in killed *Pseudomonas fluorescens*

KEEP OUT OF REACH OF CHILDREN

CAUTION

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

See back panel for additional precautionary statements

EPA Registration No. 53219-3

EPA Establishment No. 37429-GA-2

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Net Contents:

PRECAUTIONARY STATEMENTS

CAUTION- Hazards to Humans and Domestic Animals
May cause skin sensitization reactions in certain individuals. Avoid contact with eyes, skin or clothing. Use protective gloves, goggles and dust mask when applying this product.

Statement of Practical Treatment: If in eyes, flush with plenty of water. Get medical attention if irritation persists. Wash thoroughly with soap and water after handling.

Environmental Hazards: Keep out of lakes, ponds or streams. Do not contaminate aquatic systems by cleaning of equipment or disposal of wastes.

For emergency medical information, call toll-free 1-800-228-5635

GENERAL INFORMATION

Mode of Action: This product is a stomach poison against insects which must be eaten by targeted insects to be effective. After eating foliage that has been sprayed with this product, insects immediately stop feeding. Death usually occurs 1 to 5 days later.

Pre-harvest Interval: This product can be applied up to the day of harvest (zero days to harvest).

Insects Controlled This product controls the listed caterpillar (e.g. "larval") pests, including those resistant to synthetic chemical pesticides.

Beneficial Insects: This product does not harm beneficial insects (honeybees, lacewings, parasitic wasps, ladybird beetles, predatory beetles and flies, etc.)

DIRECTIONS FOR USE

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

Application Timing

o Always target newly hatched or small larvae with spray applications so that insects are controlled before they cause extensive feeding damage. Always make applications *before* older larvae are protected or begin feeding inside the plant or fruit.

o To determine optimal timing of first application, scout fields regularly for the appearance of eggs and newly hatched larvae. Make the first application as soon as larvae begin to hatch. Repeat applications as needed to maintain larval control.

o Larvae may tunnel or bore into buds, heads, stalks, or fruits as they mature. Once larvae are protected inside the plant, they will be difficult to control with this, or other foliar applied products.

Mixing and Application

o Thorough coverage of the foliage is NECESSARY for optimal performance of this product. All application techniques and equipment should result in uniform and complete coverage of all leaf surfaces on the plant. Control of target insects is achieved only when susceptible stages of the insect eat the treated plant. Skips, streaks or untreated foliage below the canopy surface will result in reduced pest control.

o Fill spray tank 3/4 full with water and add recommended amount of this product to tank. Mix thoroughly while adding remainder of water. Agitate as necessary to maintain suspension.

o Tank mixing this product with other insecticides should be governed by the most restrictive label instructions or precautions and should not be used with products that prohibit such use.

o If rain or irrigation occurs on day of application, reapply this product.

o For **water based conventional ground application**, apply recommended amount of product in at least 5 gallons of water per acre. In most crops a minimum of 20 gallons of water per acre is necessary for good performance. For water based aerial application, apply recommended amount of product in at least 2 (5 west of the Rockies) gallons of water per acre. Increasing water volume when crop growth is rapid and/or foliage is dense will improve crop coverage and the performance of this product.

o Use sufficient volume of water to thoroughly wet upper and lower leaf surfaces. Do not apply to runoff as it will wash off MVP.

o Use an approved spreader or spreader-sticker to improve coverage on hard to wet crops.

Recommended Application Rates

Rates and frequency of applications will vary depending on intensity and type of larval infestation, and type of application equipment used. For aerial applications or when conditions interfere with good coverage, the higher recommended rates should be used.

Light infestations	1-2 quarts per acre
Moderate to heavy infestations	2-3 quarts per acre
Extremely heavy infestations	3-4 quarts per acre

Hand Held Spray Application Equipment

o Spray to wet but not to runoff. Time the application as recommended in Application Timing section.

o For mixing small volumes, use 3 to 6 tablespoons (1.5 fl oz. to 3 fl oz.) of this product per gallon of water.

o For mixing large volumes, use 1-4 quarts of this product per 100 gallons of water.

LEAFY, ROOT AND TUBER VEGETABLES, CUCURBITS, COLE CROPS

CROPS		INSECT PESTS
Artichokes	Kohlrabi	Alfalfa looper
Asparagus	Leeks	Armyworms
Beets	Lettuce	Artichoke Plume moth
Bok Choy	Melon	Beet armyworm
Broccoli	Melon hybrid	Cabbage budworm
Broccoli raab	Muskmelon	Cabbage looper
Brussels Sprouts	Mustard greens	Cabbage webworm
Cabbage	Napa cabbage	Celery leaftier
Cantaloupes	Okra	Corn earworm
Cardoni	Onions	Cross striped cabbageworm
Carrots	Parsley	Diamondback moth
Cauliflower	Parsnips	European corn borer
Casabas	Peppers	Fall armyworm
Celeriac	Persian Melon	False celery leaftier
Celery	Potatoes	Green cloverworm
Chicory	Pumpkin	Hornworms
Chinese cabbage	Radishes	Imported cabbageworm
Collards	Rutabagas	Loopers
Crenshaw	Salsify	Melonworm
Cucumber	Shallots	Omnivorous leafroller
Eggplants	Spinach	Pickleworm
Endive	Squash	Potato tuberworm
Escarole	Sugar beets	Rindworms
Garlic	Sweet potatoes	Saltmarsh caterpillar
Greens	Swiss chard	Soybean looper
Green onions	Tomatoes	Tobacco budworm
Honey ball melon	Turnips	Tomato fruitworm
Honeydew melon	Upland cress	Tomato pinworm
Horseradish	Watercress	Velvetbean caterpillar
Kale	Watermelon	Webworms
		Yellowstriped armyworm

SMALL FRUITS AND BERRIES

CROPS	INSECT PESTS	
Blackberries	Achema sphinx moth	Grape berry moth
Blueberries	Armyworms	Gypsy moth
Caneberries	Blueberry leafroller	Loopers
Cranberries	Blueberry spanworm	Obliquebanded leafroller
Currants	Brown spanworm	Omnivorous leafroller
Raspberries	Cabbage looper	Orange tortrix
Strawberries	Carib moth	Roughskinned cutworm
	Cherry fruitworm	Saltmarsh caterpillar
	Fruitree leafroller	Tobacco budworm
	Green fruitworm	

NUTS, POME FRUIT AND STONE FRUIT

CROPS		INSECT PESTS	
Almonds	Peaches	Cankerworm	Obliquebanded leafroller
Apples	Pears	Carob moth	Omnivorous leafroller
Apricots	Pistachios	Citrus cutworm	Orange tortrix
Cherries	Plums	Codling moth	Oriental fruit moth
Chestnuts	Prunes	Cutworms	Peach twig borer
Filberts	Quince	Fall webworm	Redbanded leafroller
Nectarines	Walnuts	Filbert leafroller	Redhumped caterpillar
Pecans		Filbert webworm	Roughskinned cutworm
		Filbertworm	Speckled green fruitworm
		Fruit tree leafroller	Tent caterpillars
		Garden tortrix	Tufted apple budmoth
		Green fruitworm	Varigated leafroller
		Gypsy moth	Walnut caterpillar
		Humped green fruitworm	Western tussock moth
		Navel orangeworm	

LEGUMES

CROPS	INSECT PESTS
Beans	Armyworms
Phaseolus spp.	Beet armyworm
Lupinus spp.	Cabbage looper
Vigna spp.	Cutworms
Chick peas	Diamondback moth
Fava beans	Green cloverworm
Guar	Helicoverpa spp.
Jackbean	Loopers
Lentils	Podworms
Peas	Saltmarsh caterpillar
Pigeon peas	Soybean looper
	Velvetbean caterpillar

CITRUS

CROP	INSECT PESTS
Citrus citron	Amorbia
Grapefruit	Citrus cutworm
Kumquats	Fruittree leafroller
Lemons	Orangedog
Limes	
Oranges	
Tangelos	
Tangerines	

CEREAL GRAINS, FORAGE GRASSES, FORAGE LEGUMES

CROPS		INSECT PESTS
Alfalfa (hay and seed)	Peanut hay	Alfalfa caterpillar
Barley	Pea vine hay	Armyworms
Buckwheat	Rye	Beet armyworm
Clover	Small grains (hay, grazing and silage)	Cabbage looper
Corn (fodder and silage)		European corn borer
Cowpea	Sorghum (hay and silage)	European skipper
Cowpea hay	Soybeans (forage and hay)	Fall armyworm
Lespedeza	Sudan grass	Green cloverworm
Lupine	Trefoil	Loopers
Millet	Triticale	Saltmarsh caterpillar
Oats	Velvet beans	Velvetbean caterpillar
Pasture and range grasses (hay and silage)	Vetch	Webworms
	Wheat	Yellowstriped armyworm

HERBS AND SPICES

CROPS	INSECT PESTS
Arugala	Armyworms
Basil	Beet armyworm
Bay leaf	Diamondback moth
Camomile	European corn borer
Chives	Fall armyworm
Cilantro	Green cloverworm
Coriander	Helicoverpa spp.
Dill	Imported cabbageworm
Fennel	Loopers
Marjoram	Saltmarsh caterpillar
Mint	
Oregano	
Peppermint	
Sage	
Tarragon	
Thyme	
Wintergreen	

FIELD CROPS

CROPS	INSECT PESTS
Canola (Rapeseed)	Armyworms
Corn	Banded sunflower moth
Field, Sweet, Seed,	Beet armyworm
Popcorn	Cabbage looper
Cotton	Corn earworm
Hops	Cotton bollworm
Jojoba	Cotton leafworm
Peanuts	Cutworms
Rice	Diamondback moth
Safflower	European corn borer
Sorghum	Fall armyworm
Soybeans	Green cloverworm
Sunflower	Hornworms
Tobacco	Imported cabbageworm
	Loopers
	Obliquebanded leafroller
	Omnivorous leaftier
	Podworms
	Saltmarsh caterpillar
	Southwestern corn borer
	Soybean looper
	Spotted cutworm
	Sunflower headmoth
	Sunflower moth
	Tobacco budworm
	Velvetbean caterpillar

SPECIAL INSTRUCTIONS - COTTON and SOYBEANS

RATE OF APPLICATION

o **General**
Rates of application should be adjusted as pest pressure and crop foliage increase.

o **Stand Alone**
Use this product alone at rates of 2 to 8 pints per acre. Use 4 to 8 pints of this product per acre for control of loopers and armyworms.

o **Tank Mix**
Use this product at 1 to 4 pints per acre in tank mixtures with recommended ovicides and larvicides for control of tobacco budworm and cotton bollworm. For control of loopers and armyworms, use 2 to 4 pints per acre with recommended ovicides and larvicides.

APPLICATION SUGGESTIONS

Uniform and complete coverage of the foliage where larvae are feeding is essential to good control. Application water volume should be sufficient to ensure good coverage. For water based sprays, use a minimum application volume of 5 gallons per acre for ground applications and 2 (5 west of the Rockies) gallons of total spray volume per acre for aerial applications. The addition of an emulsified oil is recommended to improve coverage of foliage.

This product may be mixed with emulsified oils for ULV application (1 pint MVP plus 1 pint emulsified oil).

TROPICAL AND OTHER FRUIT

Avocados	Amorbia Cabbage looper Loopers Omnivorous leafroller Omnivorous looper Orange tortrix Spanworm
Bananas	Banana skipper
Dates	Carob moth Indian meal moth Raisin moth
Grapes	Armyworms Beet armyworm Cabbage looper Cherry fruitworm Grape berry moth Grape leaffolder Grape leaf skeletonizer Green fruitworm Loopers Obliquebanded leafroller Omnivorous leafroller Orange tortrix Raisin moth Saltmarsh caterpillar Tobacco budworm W. Grape leaf skeletonizer
Kiwi Fruit	Omnivorous leafroller
Persimmons Pomegranates	Citrus cutworm Fall webworm Filbert webworm Omnivorous leafroller Omnivorous looper Redhumped caterpillar Tent caterpillars
Pineapple	Gummosos comosae Thecla basilides

TURF, FLOWERS, BEDDING AND INDOOR PLANTS

CROPS	INSECT PESTS
Bedding plants	Armyworms
Flowers	Azalea moth
Ornamentals	Cabbage looper
Turf	Cutworms
	Diamondback moth
	Ello moth
	Fall armyworm
	Fiery skipper
	Io moth
	Loopers
	Oleander moth
	Omnivorous leafroller
	Omnivorous looper
	Sod webworms
	Tobacco budworm

FOREST, ORNAMENTAL LANDSCAPE TREES and SHRUBS

CROPS	INSECT PESTS
Forest	Armyworms
Shade trees	Bagworm
Nursery trees	Blackheaded budworm
	Browntail moth
	Buckmoth caterpillar
	California oakworm
	Cankerworm
	Douglas fir tussock moth
	Elm spanworm
	Fall webworm
	Fruittree leafroller
	Greenstriped mapleworm
	Gypsy moth
	Jack pine budworm
	Mimosa webworm
	Pine butterfly
	Redhumped caterpillar
	Saddleback caterpillar
	Spruce budworm
	Tent caterpillar
	Tortrix
	Western tussock moth

Chemigation

Apply this product only through sprinkler (including center pivot, lateral move end tow side (wheel) roll, traveler, big gun, solid seat, or hand move) irrigation systems. Do not apply this product through any other type of irrigation systems. For best results use irrigation levels of 0.15 to 0.5 inches of water per acre.

Shake the product container well or otherwise agitate the product before pouring or pumping into a nurse tank.

Product may be injected undiluted and does not require agitation in the nurse tank. Agitate the product again if shutdown period are longer than 36 hours.

If dilution of the product is required to obtain proper application rate dilute in a 1 to 1 ratio of water to product and maintain continuous agitation during application. Agitate again after any shutdown period. Do not mix with nonemulsifiable oil.

When application is completed, thoroughly flush the injection system and sprinkler lines with water.

Do not apply when wind speed favors drift beyond the area intended for treatment.
In center pivot systems the application of this product must be made continuously for the duration of the water application. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from nonuniform distribution of the treated water.

If you have questions about calibration, you should contact your State Extension Service specialists equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label - prescribed safety devices for public water supplies are in place. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly services an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

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 backflow. 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, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. The irrigation line or water pump must include a functional pressure switch which 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 (e.g., diaphragm 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.

STORAGE AND DISPOSAL

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

Storage: Keep container unopened until use. Store unused product in original container. This product should be stored at temperatures between 35°F and 90°F.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, 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.

LIMIT OF WARRANTY AND LIABILITY

This product conforms to the description on this label and is reasonably fit for the purpose set forth on this label when used according to the label directions and under the specified label conditions. THE MANUFACTURER DISCLAIMS ANY AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE. Buyer and all users assume all risks and responsibility for loss or damage if this product is used, stored, handled or applied under any condition not reasonably foreseeable or beyond the manufacturer's control, or not as explicitly set forth in this label. THE LIMIT OF THE MANUFACTURER'S LIABILITY SHALL BE THE PURCHASE PRICE FOR THE QUANTITY INVOLVED. IN NO EVENT SHALL THE MANUFACTURER BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.