

70051-79

3/5/2003

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Cutlass®

ACCEPTED

MAR 05 2003

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 70051-79

WETTABLE POWDER BIOINSECTICIDE

CUTLASS® wettable powder bioinsecticide is a biological insecticide for the control of lepidopteran pests.

Active Ingredient:

Bacillus thuringiensis subspecies *kurstaki* strain EG2371

solids, spores and Lepidopteran active toxins40.0%

Inert ingredients:60.0%

Total.....100.0%

The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

Net Contents:

5 U.S. Pound Bag

EPA Reg. No. 70051-79

EPA Est. No. 42761-MS-1

Manufactured by
Certis USA
9145 Guilford Road
Suite 175
Columbia, MD 21046

CERTIS

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID:

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

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

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

Hot Line Number: 1-800-255-3924

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if inhaled. Avoid breathing dust or spray mist.

Harmful if swallowed. Causes eye irritation. Avoid contact with skin, eyes, or clothing. In case of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long sleeved shirt and long pants
- Shoes plus socks

Mixers/loaders and applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

User should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of equipment washwaters.

STORAGE AND DISPOSAL

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

Storage: Store in a cool, dry place inaccessible to children.

Pesticide Disposal: Do not contaminate water when disposing of equipment washwaters. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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 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 intervals. The requirements in this section 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.

Preharvest Interval: CUTLASS may be applied to the crops listed in the APPLICATION RATE TABLE at any time, up to and on the day of harvest.

Mode of Action: After consuming a lethal dose of CUTLASS, larvae will cease to feed, but may remain alive on foliage for several days before disappearing. Immediately after ingestion of CUTLASS, larvae begin to move slowly, become discolored, shrivel and blacken prior to death.

MIXING INSTRUCTIONS

CUTLASS may be applied with conventional ground, aerial or hand held application equipment with quantities of water sufficient to provide thorough coverage of infested plants. Do not apply this product through any type of irrigation system. To obtain a suitable mixture with water, add enough water to allow maximum agitation. With agitator running, slowly add in the CUTLASS. Continue agitation. Add remainder of water and other spray materials and agitate until mixed. Maintain suspension with loading and spraying. Do not mix more CUTLASS than can be used in a 12-hour period. Rinse and flush spray equipment thoroughly following each use. Do not contaminate water when disposing of equipment washwaters.

In order to make proper decisions on application rates to be used, follow the recommendations in the APPLICATION RATE TABLE and these guidelines:

APPLICATION GUIDELINES

Pest category	Pest Pressure (number of larvae/plant)			
	Low ¹ (<0.3)	Moderate ² (0.3-1.0)	High ³ (1.0-5.0)	Extreme ⁴ (>5.0)
Pounds of Product to be Applied per Acre				
Category 1	1.5	2.0	2.5	2.5
Category 2	1.0	1.5	2.0	2.5
Category 3	1.0	1.0	1.5	2.0

¹ Recommended spray interval of 7 - 10 days.
² Recommended spray interval of 6 - 8 days.
³ Recommended spray interval of 4 - 6 days.
⁴ Recommended spray interval of 3 - 5 days.

Category 1 Pests include: artichoke plume moth, navel orangeworm, oriental fruit moth, tomato fruitworm (also called bollworm and corn earworm), tufted apple budmoth.

Category 2 Pests include: Amorbia, armyworms, cabbage looper, citrus cutworm, diamondback moth, leafrollers, melonworm, peach twig borer, pickleworm, soybean looper, tomato pinworm, tobacco budworm and tortrix moth.

Category 3 Pests include: all caterpillar pests shown in the APPLICATION RATE TABLE, except those shown in Categories 1 and 2.

For crops such as Fruits, Nuts and Vines, applications are often timed to stage of development and recommendations from local Extension personnel should always be followed.

APPLICATION INSTRUCTIONS

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and weather-related factors determine the potential for spray drift. The

applicator and the user are responsible for considering all these factors when making decisions.

CUTLASS is a selective insecticide for use against the lepidopteran larvae listed in the APPLICATION RATE TABLE. Larvae must consume deposits of CUTLASS to be affected. Always follow these directions:

- Make applications when larvae are still small (early instars) and actively feeding on foliage or other plant parts.
- Make applications before noticeable foliar damage occurs.
- Thorough spray coverage is essential for good insect control. For ground applications, directed drop nozzles should be used for certain vegetable crops.
- When insect infestations are heavy, use the higher label rates, shorten the spray interval, and/or use larger total spray volume to improve spray coverage (see APPLICATION GUIDELINES for selection of rates and intervals).
- Applications should be repeated at an interval sufficient to maintain control, depending upon plant growth, insect pressure and weather conditions after spraying. (Refer to APPLICATION GUIDELINES).
- For ground applications, use a minimum spray volume of 5 gallons per acre. For aerial applications, use a minimum spray volume of 2 gallons per acre.
- Local conditions may affect the use of CUTLASS. Consult your State Agricultural Extension Specialist for specific recommendations related to local crop protection problems.
- Spray water/spray tank solutions should not exceed pH 8.0. If necessary, buffer water to near neutral pH.

HAND-HELD EQUIPMENT

When using hand-held equipment, mix 3 teaspoons per gallon of water or 1 1/2 pounds per 100 gallons of spray solution. Spray to wet, but not to runoff.

TANK-MIX

Combinations of CUTLASS with commonly used insecticides, fungicides, or other spray tank adjuvants are generally not deleterious to performance. It is advisable to test physical compatibility by mixing all components in a small container in proportionate quantities prior to mixing in spray tank. This product cannot be mixed with any product containing a label prohibition against such mixing. No label dosage rate should be exceeded. Application must be made in accordance with the more restrictive of label limitations and precautions.

- For improved durability of spray deposits, an approved spreader/sticker is strongly recommended for hard-to-wet crops such as cole crops.
- Feeding stimulants may improve performance. Consider using feeding stimulants in situations of heavy worm pressure, inadequate coverage, or dense crop canopy.

APPLICATION RATE TABLE

I. VEGETABLES & COLE CROPS
(Fresh and Processed)

Crop such as:	Insect Pest
Artichokes	Leeks
Arugala	Lentils
Asparagus	Lettuce (Head
Beans	Leaf, Romaine)
Beets	Malanga
Bok Choy	Melons (Cantaloupe,
Broccoli	Crenshaw, Honeydew,
Brussels sprouts	Muskmelon,
Cabbage	Watermelon, etc.)
Cardoni	Napa
Carrots	Okra
Cauliflower	Onions
Celeriac	Parsley
Celery	Parsnips
Chick peas	Peas
Chicory	Peppers
Chinese cabbage	Potatoes
Collards	Pumpkins
Cucumber	Radishes
Cucurbits	Rutabaga
Dry bulb onions	Salsify
Eggplants	Shallots
Escarole	Soybean foliage
Endive	Spinach
Garlic	Squash
Green onions	Sugar Beets
Greens (Beets,	Sweet potatoes
China, Dandelion,	Swiss Chard
Mustard, Turnip)	Tomatoes
Horseradish	Turnips
Kale	Watercress
Kohlrabi	

Rate/Acre: 1.0 - 2.5 pounds

II. HERBS & SPICES

Crop such as:	Insect Pest
Basil	Armyworms
Chives	Diamondback moth
Cilantro	European corn corer
Dill	Green cloverworm
Oregano	Imported cabbageworm
Peppermint	Loopers
Thyme	Saltmarsh caterpillar

Rate/Acre: 1.0 - 2.5 pounds

III. PASTURE & HAY CROPS

Crop such as:	Insect Pest
Alfalfa (hay & seed)	Alfalfa caterpillar
Pasture (grasses & hay)	Armyworms*
Silage	Loopers*
	European skipper
	Webworm

Rate/Acre: 1.0 - 2.5 pounds

* Product should be applied when early instar larvae first appear. If infestation persists, make a second application 7-10 days later. Combination of CUTLASS with contact insecticide is recommended for control of 4th and 5th instar larvae.

IV. FRUIT, NUT AND VINE CROPS

Crop such as:	Insect Pest	Rate/Acre
Pome and Stone Fruit Trees:	Cankerworm (Spring & Fall) Eastern tent caterpillar Fall webworm Fruittree leafroller Gypsy moth Navel orangeworm Omnivorous leafroller Oriental fruit moth Peach twig borer Redbanded leafroller Redhumped caterpillar Tortrix moth (Orange and Garden) Tufted apple budmoth Variegated leafroller Walnut caterpillar	1.0 - 2.5 pounds
Nut Trees:	Citrus cutworm Filbert leafroller Filbert webworm Navel orangeworm Oblique banded leafroller Peach twig borer Roughskinned cutworm	1.0 - 2.5 pounds
Citrus	Amorbia Citrus cutworm Fruittree leafroller Orangedog	1.0 - 2.5 pounds
Small Fruit and Berries:	Acherna sphinx moth Armyworms Blueberry leafroller Fruittree leafroller Grape berry moth Gypsy moth Loopers Oblique banded leafroller Tobacco budworm	1.0 - 2.5 pounds
Grapes	Grape berry moth Cherry fruitworm Grape leafroller Grapeleaf skeletonizer Green fruitworm Omnivorous leafroller Orange tortrix Saltmarsh caterpillar	1.0 - 2.5 pounds
Tropical and Other Fruit:	Amorbia Loopers Orange tortrix Omnivorous leafroller Omnivorous looper Spanworm	1.0 - 2.5 pounds
Bananas	Banana skipper	1.0 - 2.0 pounds.
Kiwi	Omnivorous leafroller	1.5 - 2.5 pounds
Persimmons Pomegranate	Citrus cutworm Fall webworm Filbert webworm Omnivorous leafroller Redhumped caterpillar Tent caterpillar	1.0 - 2.5 pounds
Pineapple	Gummosos-Batrachedra commosae Thecla-Thecla basilides	1.0 - 2.0 pounds
Tropical fruits	Hornworms Leafrollers Loopers Omnivorous leafroller	1.0 - 2.5 pounds

V. FIELD CROPS

Crop such as:	Insect Pest	Rate/Acre
Canola/Rape Seed Evening Primrose	Armyworms Diamondback moth Imported cabbageworm Loopers	1.0 - 2.5 pounds
Corn (Field, Sweet, Popcorn)	Armyworms European corn borer Southwestern corn borer	1.0 - 2.0 pounds
Cotton*	Beet armyworm Bollworm Cabbage looper Cotton leaf perforator Saltmarsh caterpillar Tobacco budworm	1.0 - 2.5 pounds
Hops Loopers	Armyworms Oblique banded leafroller Omnivorous leaflier Spotted cutworm	1.0 - 2.5 pounds
Jojoba	Looper (<i>Anacamptodes spp.</i>)	1.0 - 2.5 pounds
Peanuts	Fall armyworm Green cloverworm Loopers Podworms Velvetbean caterpillar	1.0 - 2.5 pounds
Rice	Armyworms Green cloverworm Loopers Saltmarsh caterpillar Velvetbean caterpillar	1.0 - 2.5 pounds
Safflower	Armyworms Loopers Saltmarsh caterpillar	1.0 - 2.5 pounds
Small Grains (Barley, Oats, Rye, Wheat, etc.)	Armyworms Loopers	1.0 - 2.5 pounds
Sorghum	European corn borer Saltmarsh caterpillar Velvetbean caterpillar	1.0 - 2.5 pounds
Soybeans	Green cloverworm Soybean looper Velvetbean caterpillar	1.0 - 2.5 pounds
Sunflowers	Banded sunflower moth Beet armyworm Headmoth Loopers Sunflower moth	1.0 - 2.5 pounds
Tobacco	Tobacco budworm Tobacco hornworm Loopers	1.0 - 2.5 pounds

* Use CUTLASS to control light to moderate populations of newly hatched worms in integrated pest management programs. Repeat treatments at four to five day intervals or as long as necessary until results are acceptable. For control of cotton bollworm and tobacco budworm, ovicides or synthetic pyrethroids can be combined with CUTLASS in accordance with the more restrictive of label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

VI. COMMERCIALLY GROWN FLOWERS & ORNAMENTAL PLANTS 484

Crop such as:	Insect Pest	
Bedding plants	Armyworms	Loopers
Flowers	Azalea moth	Oleander moth
Greenhouse	Diamondback moth	Omnivorous leafroller
Ornamentals	Ello moth (hornworm)	Omnivorous looper
Vegetables	lo moth	Tobacco budworm

Rates/Acre 1.0 - 2.5 pounds

VII. FOREST, SHADE TREE & NURSERY STOCK

Crop such as:	Insect Pest	
Forest	Bagworm	Pine butterfly
Shade trees	Blackheaded budworm	Redhumped caterpillar
Nursery trees	Browntail moth	Saddleback caterpillar
	California oakworm	Saddle prominent caterpillar
	Douglas fir tussock moth	Spring and Fall cankerworm
	Elm spanworm	Spruce budworm
	Fall webworm	Tent caterpillar
	Fruitree leafroller	Tortix
	Greenstriped mapleworm	Western tussock moth
	Gypsy moth	
	Jack pine budworm	
	Mimosa webworm	

Rate/Acre 1.0 - 2.5 pounds

WARRANTY

Certis USA, L.L.C. warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, the insect problem, condition of the crop, incompatibility with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage or handling of this material not in strict accordance with directions given herein. NO OTHER EXPRESS OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.