

Reg # 55638-8

PM-18-TE-RESA 197



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

APR 15 1994

Christine A. Dively
ECOGEN INC.
2005 CABOT BLVD WEST
LANGHORNE, PA. 19047

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

**Subject: Label Amendment Submission of 01/13/94 in Response to PR Notice 93-7
EPA Reg. No. 55638-8
CUTLASS WETTABLE POWDER BIOINSECTICIDE**

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- **BEFORE** selling or distributing any product bearing the final printed labeling
- AND**
- **WITHIN** one year from date of this acceptance.



Recycled/Recyclable
Printed with Soy/Canola Ink on paper that
contains at least 50% recycled fiber

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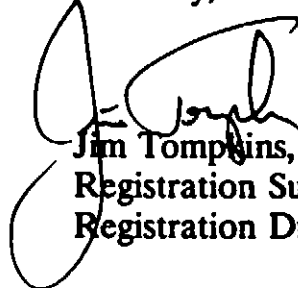
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

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ECOGEN INC.
55638-8 01/13/94
CUTLASS WETTABLE POWDER BIOINSECTICIDE
Original Submission

You have incorrect wording in the first paragraph in the Agricultural Use Requirements box on your proposed label. That paragraph must contain the exact wording of the paragraph shown as "2" in Section F on Part 2 of the Product Worksheet in Supplement Three-A to PR Notice 93-7.

You have incorrect wording in the second-to-last sentence in the first paragraph in the Agricultural Use Requirements box on your proposed label. The sentence must be as follows: "It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval."

WETTABLE POWDER BIOINSECTICIDE

Active Ingredient:

Bacillus thuringiensis subspecies *kurstaki* strain EG2371

Lepidopteran active toxin.....	10.00%
Inert Ingredients	90.00%
TOTAL	100.00%

1.6 oz. active ingredient per pound

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

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

If Swallowed: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.
If Inhaled: Remove to fresh air. Get medical attention.
If In Eyes: Flush with plenty of water. Call a physician if irritation persists.
If On Skin: Wash with soap and water.

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

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

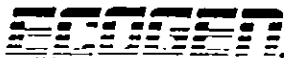
It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or others persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific 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 statements on this label about personal protective equipment (PPE). 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 12 hours.

PPE required for early entry to treated areas 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.



EcoGen Inc.
2005 Cabot Blvd West, Langhorne, PA 19047-1810
215/757-1590 800/220 2135

ACCEPTED
with COMMENTS
In EPA Letter Dated

APR 15 1994

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

55638-8

EPA REG No. 55638-8
EPA Est. No. 769-GA-1
Net Contents: 4 and 20 U.S. Pound Bags

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® bioinsecticide 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 while 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 Pressure (number of larvae/plant)

Pest category	Low ¹ (<0.3)	Moderate ² (0.3-1.0)	High ³ (1.0-5.0)	Extreme ⁴ (>5.0)
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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

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

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 small containers 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 limitation 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.

BEST AVAILABLE COPY

APPLICATION RATE TABLE

I. VEGETABLES & COLE CROPS
(Fresh and Processed)

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

Rate/Acre: 1.0 - 2.5 pounds

II. HERBS & SPICES

Crop such as:	Insect Pest
Basil	Armyworms
Chives	Diamondback moth
Cilantro	European corn borer
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*
Stlage	Loopers*
	European skipper
	Webworm

Rate/Acre 1.0 - 2.5 pounds

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

IV. FRUIT, NUT & VINE CROPS

Crop such as:	Insect Pest	Rate/Acre
Pome and Stone Fruit Trees: Apples Apricots Cherries Nectarines Peaches Pears Plums Prunes Quince	Cankerworm (Spring & Fall) Eastern tent caterpillar Fall webworm Fruitree 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: Almonds Chestnuts Filberts Pecans Walnuts	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 Fruitree leafroller Orangedog	1.0 - 2.5 pounds
Small Fruit and Berries: Blackberries Blueberries Cranberries Currants Raspberries Strawberries	Achema sphinx moth Armyworms Blueberry leafroller Fruitree 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: Avocados	Amorbia Loopers Orange tortrix Omnivorous leafroller Omnivorous looper Spanworm	1.0 - 2.5 pounds
Bananas	Banana skipper	1.0 - 2.0 pounds
Kwi	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-Batrachodra commosae Thecla-Thecla basides	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	Armyworms Loopers Oblique banded leafroller Omnivorous leaftier Spotted cutworm	1.0 - 2.5 pounds
Jajoba	Looper (<i>Anacamp- todes spp.</i>)	1.0 - 2.5 pounds
Peanuts	Fall armyworm Green cloverworm Loopers Podworms Velvetbean caterpillar	
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 Fall armyworm 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 such as Larvin® or synthetic pyrethroids can be combined with CUTLASS in accordance with the more restrictive of label limitation 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. COMMERCIAL FLOWERS & ORNAMENTAL PLANTS

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

Rate/Acre: 1.0 - 2.5 pounds

VII. FOREST, SHADE TREE & NURSERY STOCK

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

Rate/Acre: 1.0 - 2.5 pounds

WARRANTY AND CONDITIONS OF SALE

Ecogen warrants that this product conforms to the description on this label and is reasonably fit for the purposes stated on this label when used in accordance with the directions on this label under normal conditions of use.

ECOGEN MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

If this product is defective, Buyer's exclusive remedy shall be the replacement of the product, or if replacement is impracticable, refund of the purchase price. In no case will Ecogen be liable for incidental, consequential, or special damages resulting from the handling, storage or use of this product.

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