

ACCEPTED

70051-90

9/27/2007

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SEP 27 2007

# Crymax®

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 70051-90

## WETTABLE POWDER BIOINSECTICIDE

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

**Active Ingredient:**

*Bacillus thuringiensis* subspecies *kurstaki* strain EG7841 solids, spores and Lepidopteran active toxins\* .....40.00%

**Other Ingredients:** .....60.00%

**Total:** .....100.00%

\*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. 70051-90  
EPA Est. No. 62171-MS-001  
Lot No.:

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

**FIRST AID**  
**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.  
**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.  
**If swallowed:** Call a poison control center 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 center or doctor. Do not give anything by mouth to an unconscious person.  
Call a Poison control center or doctor for further treatment advice.  
Hot Line Number: 1-800-255-3924

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



**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Harmful if inhaled. Avoid breathing dust or spray mist. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**Personal Protective Equipment (PPE):**

Applicators and other handlers must wear:

- Long sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves

Follow the 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.

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.

**User Safety Recommendations**  
Users should:  
• Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.  
• Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.  
• 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**

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 disposing of equipment wash waters.

This product must not be applied aerially within 1/4 mile of any habitats of endangered or threatened lepidoptera. No manual application can be made 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 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:** CRYMAX® 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 CRYMAX®, larvae will cease to feed, but may remain alive on foliage for several days before disappearing. Immediately after ingestion of CRYMAX® larvae begin to move slowly, become discolored, shrivel and blacken prior to death.

**MIXING INSTRUCTIONS**

CRYMAX® may be applied with conventional ground, aerial or hand held application equipment with quantities of water sufficient to provide thorough coverage of infested plants. To obtain a suitable mixture with water, add enough water to allow maximum agitation. With agitator running, slowly add in the CRYMAX®. Continue agitation. Add remainder of water and other spray materials and agitate until mixed. Maintain suspension while loading and spraying. Do not mix more CRYMAX® than can be used in a 24-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.

**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 grower are responsible for considering all these factors when making decisions.

CRYMAX® is a biological insecticide for use against the lepidopteran larvae listed in the APPLICATION RATE TABLE. Larvae must consume deposits of CRYMAX® 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.

- Applications should be repeated at an interval sufficient to maintain control, depending upon plant growth, insect pressure and weather conditions after spraying.
- 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.
- Local conditions may affect the use of CRYMAX®. 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 2 pounds per 100 gallons of spray solution. Spray to wet, but not to runoff.

**TANK MIX**

Combinations of CRYMAX® 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 limitation and precautions.

For improved durability of spray deposits, a spreader/sticker approved for use on growing crops may be used for hard-to-wet crops such as cole crops.

**CHEMIGATION**

Apply this product only through center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move sprinkler systems. **Do not apply this product through any other type of irrigation system.** Crop injury or lack of effectiveness can result from non-uniform distribution of treated water.

If you have questions about calibration, contact your State Extension Service Specialist, 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 systems are in place.

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.

**CHEMIGATION SYSTEM CONNECTED TO PUBLIC WATER SYSTEMS**

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 serves 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, the 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.

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 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. Systems must use a metering 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.

Do not apply when wind speed favors drift beyond the area intended for treatment.

**SPRINKLER CHEMIGATION**

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.

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, 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.

Do not apply when wind speed favors drift beyond the area intended for treatment.

The active ingredient in CRYMAX® will settle in the tank and injection lines; adequate agitation must be provided before and during the injection period. Use only in systems that apply uniformly and have appropriate check valves. When application is complete, thoroughly flush the injection system and sprinkler lines.

**MIXING RECOMMENDATIONS FOR CHEMIGATION:**

Follow general MIXING INSTRUCTIONS and keep the ratio at three parts water to one part CRYMAX®. Also, provide mild uniform agitation throughout the solution but do not agitate excessively.

**SPRAY VOLUME**

For chemigation, use irrigation levels of 0.15 to 0.5 inches of water per acre. Up to 1 inch of irrigation water may be used, but efficacy may be reduced. The product should be applied continuously for the duration of the water application.

**APPLICATION RATE TABLE**

**I. Vegetable & Cole CROPS**

Crop such as:	Insect Pest	
Artichokes	Lentils	Alfalfa looper
Arugala	Lettuce (Head,	Armyworm
Asparagus	Leaf, Romaine)	Artichoke plume moth
Beans	Malanga	Beet armyworm
Beets	Melons	Cabbage budworm
Bok Choy	(Cantaloupe,	Cabbage looper
Broccoli	Crenshaw,	Cabbage Webworm
Brussels sprouts	Honeydew,	Celery leafminer
Cabbage	Muskmelon,	Corn earworm
Cardoni	Watermelon,	Cross-striped
Carrots	etc.)	cabbageworm
Cauliflower	Napa	Diamondback moth
Celeriac	Okra	European corn borer
Celery	Onions	Green cloverworm
Chick peas	Parsley	Imported cabbageworm
Chicory	Parsnips	Melonworm
Chinese cabbage	Peas	Omnivorous leafroller
Collards	Peppers	Pickleworm
Cucumber	Potatoes	Rindworm complex
Cucurbits	Pumpkins	Saltmarsh caterpillar
Dry bulb onions	Radishes	Southern armyworm
Eggplant	Rutabaga	Soybean looper
Escarole	Salsify	Tobacco budworm
Endive	Shallots	Tomato fruitworm
Garlic	Soybean foliage	Tomato hornworm
Green onions	Spinach	Tomato pinworm
Greens (Beets,	Squash	Velvetbean caterpillar
China,	Sugar beets	Yellowstriped armyworm
Dandelion,	Sweet potatoes	
Mustard,	Swiss chard	
Turnip)	Tomatoes	
Hörseradish	Turnips	
Kale	Watercress	
Kohlrabi		

Rate/Acre: 0.5 - 2.0 pounds

**II. HERBS & SPICES**

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

Rate/Acre: 0.5 - 2.0 pounds

**III. PASTURE & HAY CROPS**

Crop such as:	Insect Pest
Alfalfa (hay & seed)	Alfalfa caterpillar
Pasture (grasses & hay)	Armyworm
Silage	Beet armyworm
	European skipper
	Loopers
	Webworm
	Yellowstriped armyworm

Rate/Acre: 0.5 - 2.0 pounds

**IV. FRUIT, NUT & VINE CROPS**

Crop such as:	Insect Pest	
<b>Pome and Stone Fruit Trees:</b> Apples Apricots Cherries Nectarines Peaches Pears Plums Prunes Quince	Cankerworm (Spring & Fall) Cherry fruitworm Eastern tent caterpillar Fall webworm Fruitree leafroller Green fruitworm Gypsy moth Navel orangeworm Obliquebanded leafroller Omnivorous leafroller Oriental fruit moth	Pandemis leafroller Peach twig borer Redbanded leafroller Redhumped caterpillar Tortrix moth (Orange and Garden) Tufted apple budmoth Variegated leafroller Walnut caterpillar Western tent caterpillar
<b>Nut Trees:</b> Almonds Chestnuts Filberts Pecans Pistachios Walnuts	Citrus cutworm Filbert leafroller Filbert webworm Fruitree leafroller Hickory shuckworm Navel orangeworm Obliquebanded leafroller	Omnivorous leafroller Pecan nut casebearer Peach twig borer Redhumped caterpillar Roughskinned cutworm Western tent caterpillar
<b>Citrus:</b>	Amorbia Citrus cutworm Fruitree leafroller	Omnivorous leafroller Orangedog
<b>Small Fruit and Berries:</b> Blackberries Blueberries Boysenberries Cranberries Currants Longanberries Raspberries Strawberries	Achema sphinx moth Armyworms Blackheaded fireworm Blueberry leafroller Cranberry girdler Fruitree leafroller Grape berry moth Gypsy moth Loopers Obliquebanded leafroller	Omnivorous looper Tobacco budworm
<b>Grapes:</b>	Grape berry moth Cherry fruitworm Grape leafroller Grapeleaf skeletonizer Green fruitworm	Omnivorous leafroller Orange tortrix Saltmarsh caterpillar Yellowstriped armyworm
<b>Tropical and Other Fruit:</b> Avocados	Amorbia Loopers Orange tortrix	Omnivorous leafroller Omnivorous looper Spanworm
Bananas	Banana skipper	
Kiwi	Omnivorous leafroller	
Persimmons Pomegranate	Citrus cutworm Fall webworm Filbert webworm	Omnivorous leafroller Redhumped caterpillar Tent caterpillar
Pineapple	Gummosos-Batrachedra commosae Thecla-Thecla basilides	
Tropical fruits	Hornworms Leafrollers	Loopers Omnivorous leafroller

**Rate/Acre: 0.5 - 2.0 pounds**

**V. FIELD CROPS**

Crop such as:	Insect Pest	
Canola/ Rape Seed Evening Primrose Meadow foam	Armyworm Diamondback moth Imported cabbageworm Loopers	
Corn (Field, Sweet, Popcorn, Seed)	Armyworm European corn borer Southwestern corn borer	

**V. FIELD CROPS, continued**

Crop such as:	Insect Pest	
Cotton*	Beet armyworm Bollworm Cabbage looper Cotton leaf perforator	Saltmarsh caterpillar Soybean looper Tobacco budworm Yellowstriped armyworm
Hops	Armyworm Loopers Obliquebanded leafroller	Omnivorous leaflier Spotted cutworm
Jojoba	Looper ( <i>Anacamptodes sp.</i> )	
Peanuts	Green cloverworm Loopers	Podworm Velvetbean caterpillar
Rice	Armyworm Green cloverworm Loopers	Saltmarsh caterpillar Velvetbean caterpillar
Safflower	Armyworm Loopers	Saltmarsh caterpillar
Small Grains (Barley, Oats, Rye, Wheat, etc.)	Armyworm Loopers	
Sorghum	European corn borer Headworm	Saltmarsh caterpillar Velvetbean caterpillar
Soybeans	Green cloverworm Podworm	Soybean looper Velvetbean caterpillar
Sunflowers	Banded sunflower moth Beet armyworm Headmoth	Loopers Sunflower moth
Tobacco	Tobacco budworm Tobacco hornworm Loopers	

**Rate/Acre: 0.5 - 2.0 pounds**

\* Use CRYMAX® at 0.25 lb/acre to control light to moderate populations of newly hatched tobacco budworm and bollworm in integrated pest management programs. Repeat treatments at four to five day intervals or as long as necessary until results are acceptable. Ovicides or synthetic pyrethroids can be combined with CRYMAX® 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. COMMERCIAL FLOWERS & ORNAMENTAL PLANTS**

Crop such as:	Insect Pest	
Bedding plants Flowers (Greenhouse and Field) Greenhouse Ornamentals Greenhouse Vegetables Container Stock	Armyworm Azalea moth Beet armyworm Diamondback moth Ello moth (hornworm) Florida fern caterpillar lo moth Loopers	Oleander moth Omnivorous leafroller Omnivorous looper Tobacco budworm

**Rate/Acre: 0.5 - 2.0 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
	Fruittree leafroller	Tortix
	Greenstriped mapleworm	Western tussock moth
	Gypsy moth	
	Jack pine budworm	
	Mimosa webworm	

Rate/Acre: 0.5 - 2.0 pounds

**VIII. TURF**

Crop such as:	Insect Pest	
Turf	Armyworm	
	Sod webworm	
	Tropical sod webworm	

Rate/Acre: 0.5 - 2.0 pounds

**STORAGE AND DISPOSAL**

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

**Pesticide 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.

**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.**

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