

Certis

# Crymax®

## BIOINSECTICIDE

**CRYMAX® WDG water dispersible granule 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%  
 Inert Ingredients:..... 60.00%

Total ..... 100.00%

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

EPA Reg. # 70051-86

EPA Est. # 62171-MS-001

### KEEP OUT OF REACH OF CHILDREN

### CAUTION

#### FIRST AID

**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 center or doctor for treatment advice.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

#### 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, and 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.

#### 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.

### 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.

### 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, protective eyewear, shoes plus socks.

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#### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to the uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Do not enter treated areas without protective clothing until sprays have dried.

**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 WDG 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. 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 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 and these guidelines:

#### APPLICATION INSTRUCTIONS

##### Aerial Application

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 bioinsecticide for use against the lepidopteran larvae listed in the APPLICATION RATE TABLE. Larvae must consume deposits of CRYMAX WDG to be affected. Always follow these directions:

- Make applications when larvae are still small (early instars < 1/2'' in length) 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. For orchard applications, a spray volume of 100 gallons per acre and treatment of each orchard row is recommended.
- Do not use screens smaller than 50 mesh.
- For ground applications, use a minimum spray volume of 20 gallons per acre. For aerial applications, use a spray volume of at least 5 gallons per acre. (See cotton and soybeans for special instructions.)
- 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.
- 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 2 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

CRYMAX may be tank mixed with contact pesticides. 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.

#### APPLICATION RATE TABLE

##### I. Vegetable & Cole CROPS

Crop such as:	Insect Pest	
Artichokes	Lentils	Alfalfa looper
Arugala	Lettuce (Head, Leaf,	Armyworm*
Asparagus	Romaine)	Artichoke plume moth
Beans	Malanga	Beet armyworm*
Beets	Melons	Cabbage budworm
Bok Choy	(Cantaloupe, Crenshaw,	Cabbage looper
Broccoli	Honeydew, Muskmelon,	Celery leaf-tier
Brussels sprouts	Watermelon, etc.)	Corn earworm

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Crop such as:	Insect Pest
Cabbage Cardoni Carrots Cauliflower Celeriac Celery Chick peas Chicory	Napa Okra Onions Parsley Parsnips Peas
Chinese cabbage Collards Cucumber Cucurbits Dry bulb onions Eggplant Escarole Endive Garlic Green onions Greens (Beets, China, Dandelion, Mustard, Turnip) Horseradish Kale Kohlrabi	Leeks Peppers Potatoes Pumpkins Radishes Rutabaga Salsify Shallots Soybean foliage Spinach Squash Sugar beets Sweet potatoes Swiss chard Tomatoes Turnips
	Cross-striped cabbageworm Diamondback moth** European corn borer Green cloverworm Imported cabbageworm Melonworm Omnivorous leafroller
	Pickleworm Rindworm complex Saltmarsh caterpillar Soybean looper Tobacco budworm Tomato fruitworm Tomato hornworm Tomato pinworm Velvetbean caterpillar Yellowstriped armyworm*

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

\*Recommended rate is 1.0-1.5 pounds/acre unless tank-mixed with contact insecticide.

\*\*CRYMAX will control Bt resistant and susceptible diamondback moth.

**II. HERBS & SPICES**

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

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

**III. PASTURE & HAY CROPS**

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

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

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

**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
<b>Nut Trees:</b> Almonds Chestnuts Filberts Pecans Pistachios Walnuts	Citrus cutworm Filbert leafroller Filbert webworm Fruitree leafroller Hickory shuckworm Navel orangeworm Obliquebanded leafroller
Citrus:	Pandemis leafroller Peach twig borer Redbanded leafroller Redhumped caterpillar Tortrix moth (Orange and Garden) Tufted apple budmoth Variegated leafroller Walnut caterpillar Western tent caterpillar
	Omnivorous leafroller Pecan nut casebearer Peach twig borer Redhumped caterpillar Roughskinned cutworm Western tent caterpillar
	Amorbia Citrus cutworm Fruitree leafroller
	Omnivorous leafroller Orangedog

Crop such as:	Insect Pest
<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
Grapes:	Grape berry moth Cherry fruitworm Grape leafroller Grapeleaf skeletonizer Green fruitworm
<b>Tropical and Other Fruit:</b> Avocados	Amorbia Loopers Orange tortrix
Bananas	Banana skipper
Kiwi	Omnivorous leafroller
Persimmons Pomegranate	Citrus cutworm Fall webworm Filbert webworm
Pineapple	Gummosos-Batrachedra commosae Thecla-Thecla basilides
Tropical fruits	Hornworms Leafrollers
	Omnivorous looper Tobacco budworm Omnivorous leafroller Orange tortrix Spanworm
	Omnivorous leafroller Omnivorous looper Spanworm
	Omnivorous leafroller
	Citrus cutworm Fall webworm Filbert webworm
	Omnivorous leafroller Redhumped caterpillar Tent caterpillar
	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
Cotton*	Beet armyworm** Bollworm** Cabbage looper Cotton leaf perforator
Hops	Armyworm Loopers Obliquebanded leafroller
Joboba	Looper ( <i>Anacamptodes sp.</i> )
Peanuts	Green cloverworm Loopers
Rice	Armyworm Green cloverworm Loopers
Safflower	Armyworm** Loopers
Small Grains (Barley, Oats, Rye, Wheat, etc.)	Armyworm** Loopers
Sorghum	European corn borer Saltmarsh caterpillar
Soybeans	Green cloverworm Soybean looper
Sunflowers	Banded sunflower moth Beet armyworm** Headmoth
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.

\*\*Combination of CRYMAX with a contact insecticide is recommended for infestations that include 4th and 5th instar larvae.

**VI. COMMERCIAL FLOWERS & ORNAMENTAL PLANTS**

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

**Rate/Acre: 1.0-2.0 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****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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