UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

August 25, 2016

Alexander Pierce
Regulatory Affairs Associate
Certis USA LLC
9145 Guilford Road, Suite 175
Columbia, MD 21046

Subject: Labeling Notification per Pesticide Registration Notice (PRN) 98-10 – Update with New Language for Pests and Control
Product Name: Crymax
EPA Registration Number: 70051-86
Application Date: 06/29/2016
OPP Decision Number: 519532

Dear Mr. Pierce:

The U.S. Environmental Protection Agency (EPA) is in receipt of your application for notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Biopesticides and Pollution Prevention Division (BPPD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The labeling submitted with this application has been stamped "Notification" and will be placed in our records. You must submit one (1) copy of the final printed labeling with the modifications.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and is subject to review by the EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

If you have any questions, please contact Nicola Steinmetz of my team by phone at (703) 347-8567 or via email at steinmetz.nicola@epa.gov.

Sincerely,

Jeannine Kausch, Acting Product Manager 92
Microbial Pesticides Branch
Biopesticides and Pollution
Prevention Division (7511P)
Office of Pesticide Programs

Enclosure

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*..... 40.0%
Other 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 US Pound Bag
EPA Reg. No. 70051-86
EPA Est. No. 70051-CA-001

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

NOTIFICATION

70051-86

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

08/25/2016

KEEP OUT OF REACH OF CHILDREN

CAUTON

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 the eye.

Call a poison control center or doctor for further treatment advice.
Hotline number: 1-800-255-3924

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION: 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
- Waterproof gloves

- 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 may cause allergic sensitization.

Follow manufacturer recommendations for cleaning and maintaining PPE. If no such instructions for washables exist, wash with detergent in warm water. Keep and wash separate from other laundry.

User Safety Recommendations

Users should:

- Wash hands thoroughly before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove 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 ¼ mile of any habitats of threatened or endangered Lepidoptera. No manual application can be made within 300 ft. 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, contact your State or Tribal 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 restrictive 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 entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry into treated areas that is permitted by the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, water, is: coveralls, waterproof gloves, protective eyewear, 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 handheld 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 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.

For Light Brown Apple Moth: Apply when newly hatched larvae appear and before leaves are rolled or webbing is significant.

For Banana Moth: Drench bark to newly emergent shoots following pruning or apply to susceptible plant tissues when Banana Moth larvae are active.

For European Grapevine Moth: apply at blackhead egg stage or when larvae are newly hatched before leaves are rolled, or larvae have entered fruit.

For European Pepper Moth: Begin applications at egg lay and continue at 3-5 day intervals throughout larval feeding period.

For All Pests: Sprays should target small larvae, from newly-hatched to 2nd instar. High label rates may be required to control larger larvae. Continue applying as part of a normal spray program until pest is adequately controlled. Apply when caterpillars are actively feeding. To be effective, Crymax® spray must be deposited at the larval feeding site. Crymax can be applied by ground or air in water sufficient to insure thorough and even coverage. Thorough and uniform crop coverage is required for adequate insect control. Applications at higher water volumes have demonstrated improved control of targeted pests. Early morning or evening applications, when air is calm, are generally best for aerial applications.

In order to make proper decisions on application rates to be used, follow the recommendations in the APPLICATION RATE TABLE.

APPLICATION INSTRUCITONS

Aerial Application

Avoiding spray drift at the application site is the responsibility of the applicator. The interactions 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 <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 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 a 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 AND COLE CROPS

Crop:	**Insect Pest**
Artichokes	Alfalfa Looper
Arugala	Armyworms*
Asparagus	Artichoke plume moth
Beans	Beet armyworm*
Beets	Cabbage budworm
Bok Choy	Cabbage Looper
Broccoli	Celery leaftier
Brussels sprouts	Corn earworm
Cabbage	Cross-striped cabbageworm
Cardoni	Diamondback moth**

Carrots	European corn borer
Cauliflower	European Grapevine moth
Celeriac	Green cloverworm
Celery	Imported cabbageworm
Chickpeas	Light-brown apple moth***
Chicory	Melonworm
Chinese cabbage	Omnivorous leafroller
Collards	Pickleworm
Cucumber	Rindworm complex
Cucurbits	Saltmarsh caterpillar
Dry bulb onions	Soybean looper
Eggplants	Tobacco budworm
Escarole	Tomato fruitworm
Endive	tomato hornworm
Garlic	Tomato pinworm
Green onions	Velvetbean caterpillar
Greens: Beets, China, Dandelion, Mustard, Turnip	Yellowstriped armyworm*
Horseradish	Bollworms
Kale	
Kohlrabi	
Lentils	
Leeks	
Lettuce (Head, Leaf, Romaine)	
Malanga	
Melons (Cantaloupe, Crenshaw, Honeydew, Muskmelon, Watermelon, etc.)	
Napa	
Okra	
Olives	
Onions	
Parsley	
Parsnips	
Peas	
Peppers	
Potatoes	
Pumpkins	
Radishes	
Rutabaga	
Salsify	
Shallots	
Soybean foliage	
Spinach	
Squash	
Sugar beets	
Sweet potatoes	
Swiss chard	

Tomatoes	
Turnips	

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.

***All crops

II. HERBS AND SPICES

Crop:	**Insect Pest**
Basil	Alfalfa looper
Chives	Armyworms
Cilantro	Diamondback moth
Dill	European corn borer
Oregano	Green cloverworm
Peppermint	Imported cabbageworm
Thyme	Loopers
	Saltmarsh caterpillars
	Bollworms
	Corn Earworm

Rate/Acre: 0.5-2.0

III. PASTURE AND HAY CROPS

Crop:	**Insect Pest**
Alfalfa (hay & seed)	Alfalfa caterpillar
Pasture (grasses & hay)	Armyworms
Silage	Beet Armyworm*
	European skipper
	Loopers*
	Webworm
	Yellowstriped armyworm*
	Bollworms
	Corn Earworms

Rate/Acre: 0.5-2.0

*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 4^{th} and 5^{th} instar larvae.

IV. FRUIT, NUT AND VINE CROPS

Crop:	**Insect Pest**	
Pome and Stone Fruit Trees:		
Apples	Cankerworm (Spring and Fall)	Oriental Fruit moth
Apricots	Cherry fruitworm	Pandemis Leafroller
Cherries	Eastern tent caterpillar	peach twig borer
Nectarines	European Grapevine Moth*	Redbanded leafroller
Peaches	Fall webworm	Redhumped caterpillar
Pears	Fruittree leafroller	Tortrix moth (Orange and

		Garden)
Plums	Green fruitworm	Tufted apple moth
Prunes	Gypsy moth	Variegated leafroller
Quince	Navel orangeworm	Walnut caterpillar
	Obliquebanded leafroller	
Nut Trees:		
Almonds	Citrus cutworm	Omnivorous leafroller
Chestnuts	European Grapevine Moth*	Pecan nut casebearer
Filberts	Filbert leafroller	Peach twig borer
Pecans	Filbert webworm	Redhumped caterpillar
Pistachios	Fruittree leafroller	Roughskinned cutworm
Walnuts	Hickory shuckworm	Western tent caterpillar
	Navel orangeworm	
	Obliquebanded leafroller	
Citrus		
	Amorbia	Omnivorous leafroller
	Citrus cutworm	Orangedog
	Fruittree leafroller	
Small Fruit and Berries:		
Blackberries	Achema sphinx moth	Gypsy moth
Blueberries	Armyworms	Loopers
Boysenberries	Blackheaded fireworm	Obliquebanded leafroller
Cranberries	Blueberry leafroller	Omnivorous looper
Currants	Cranberry girdler	Tobacco budworm
Loganberries	European Grapevine Moth*	Bollworms
Raspberries	Fruittree leafroller	Corn Earworm
Strawberries	Grape berry moth	
Grapes:		
	European grapevine moth*	Green fruitworm
	Grape berry moth	Omnivorous leafroller
	Cherry fruitworm	Orange tortrix
	Grape leaffolder	Saltmarsh caterpillar
	Grape leaf skeletonizer	Yellowstriped armyworm
Tropical and Other Fruit:		
Avocados	Amorbia	Omnivorous leafroller
	Loopers	Omnivorous looper
	Orange tortrix	Spanworm
Bananas	Banana skipper	Banana moth
Persimmons, Pomegranate	Citrus cutworm	Omnivorous leafroller
	European grapevine moth*	Redhumped caterpillar
	Fall webworm	Tent caterpillar
	Filbert webworm	

Pineapple	Gummosos-Batracheda commosae	Thecla-thecla basildes
Tropical fruits/subtropical fruits, avocado, guava, lychee, sugar apple	European grapevine moth*	Loopers
	Hornworms	Omnivorous leafroller
	Leafrollers	

Rate/Acre: 0.5-2.0

*Apply at blackhead egg stage or when larvae are newly hatched before leaves are rolled or larvae have entered fruit. Continue applications as necessary for larval control.

V. FIELD CROPS

Crop:	**Insect Pest**
Canola/Rape Seed	Armyworms
Evening Primrose	Diamondback moth
Meadow foam	Imported Cabbageworm
	Loopers
Corn (Field, Sweet, Popcorn, Seed)	Armyworms
	European corn borer
	Southwestern corn borer
	Corn earworm
Cotton*	Beet armyworm**
	Bollworm*
	Cabbage looper
	Cotton leaf perforator
	Saltmarsh caterpillar
	Soybean looper
	Tobacco budworm
	Yellowstriped armyworm**
Hops	Armyworms
	Loopers
	Oblique banded leafroller
	Omnivorous leaftier
	Spotted cutworm
Jojoba	Looper (*Anacamptodesspp.*)
Peanuts	Green cloverworm
	Loopers
	Corn earworm /Podworms
	Velvetbean caterpillar
Rice	Armyworms

	Green cloverworm
	Loopers
	Saltmarsh caterpillar
	Velvetbean caterpillar
	Corn earworm
Safflower	Armyworms**
	Loopers
	Saltmarsh caterpillar
Small grains (Barley, Oats, Rye, Wheat, etc.)	Armyworms**
	Loopers
Sorghum	European Corn borer
	Saltmarsh caterpillar
	Velvetbean caterpillar
Soybeans	Green cloverworm
	Soybean looper
	Velvetbean caterpillar
	Corn earworm/Podworm
Sunflowers	Banded sunflower moth
	Beet armyworm**
	Headmoth
	Loopers
	Sunflower moth
	Corn earworm
Tobacco	Tobacco budworm
	Tobacco hornworm
	Loopers
	Corn earworm
Coffee	Banana moth

Rate/Acre: 0.5-2.0

*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 AND ORNAMENTAL PLANTS

Crop:	Insect Pest
Bedding Plants	Armyworms
Flowers (Greenhouse and Field)	Azalea moth
Greenhouse Ornamentals	Beet armyworm
Greenhouse vegetables	Diamondback moth
Container stock	Ello moth (hornworm)
	European grapevine moth*
	Florida fern caterpillar
	Io moth
	Loopers
	Oleander moth
	Omnivorous leafroller
	Omnivorous looper
	Tobacco budworm
	Corn earworm

Rate/Acre: 1.0 to 2.0

*apply at blackhead egg stage or when larvae are newly hatched before leaves are rolled or larvae have entered fruit. Continue applications as necessary for larval control.

VII. FOREST, SHADE TREE AND NURSERY STOCK

Crop:	Insect Pest
Forest	Bagworm
Shade trees	Blackheaded budworm
Nursery trees	Browntail moth
	California oakworm
	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
	Saddle prominent caterpillar
	Spring and Fall cankerworm
	Spruce budworm
	Tent caterpillar
	Tortrix
	Western tussock moth

Rate/Acre: 0.5-2.0 pounds

VIII. TURF

Crop such as:	Insect pest
Turf	Armyworms
	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: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or 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. To the extent consistent with applicable law, 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.

CRYMAX is a trademark of Certis USA

U.S. Patent No. 5441884, 5650308, 5776449, 5843744