

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460



OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

September 26, 2014

Tammie Tyler Ph. D.
Regulatory Product Manager
Regulatory Division
Syngenta Crop Protection, LLC
P.O. Box 18300
Greensboro, NC 27419

Subject: Label Notification per PRN 98-10 –Notification to update Mode of
Action and Resistance management language
Product Name: Denim Insecticide
EPA Registration Number: 100-903
Application Date: August 8, 2014
Decision Number: 494406

Dear Tammie Tyler:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) 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 label submitted with the application has been stamped “Notification” and will be placed in our records.

If you have any questions, you may contact Jessica Rogala at 703-347-0263 or via email at rogala.jessica@epa.gov

Sincerely,

A handwritten signature in black ink that reads "Meredith F. Laws".

Meredith F. Laws, Chief
Insecticide-Rodenticide Branch
Registration Division
Office of Pesticide Programs

Enclosure

(BOOKLET)

RESTRICTED USE PESTICIDE
Toxic to Fish, Mammals, and Aquatic Organisms

For Retail Sale to and use only by Certified Applicators or Persons
under their direct supervision, and only for those uses covered
by the Certified Applicator's certification.

Denim® Insecticide

For control of certain lepidopterous larvae (worms/caterpillars) on Cavalo Broccolo,
Cotton and Tobacco

GROUP 6 INSECTICIDE

Active Ingredient:	
Emamectin benzoate (CAS No. 155569-91-8)	2.15%
Other Ingredients:	97.85%
Total:	100.00%

Denim Insecticide is an emulsifiable concentrate containing 0.16 pounds of active ingredient per gallon.

Contains petroleum distillates.

KEEP OUT OF REACH OF CHILDREN.

DANGER/PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See additional precautionary statements and directions for use in booklet.

EPA Est. xxxxx

EPA Reg. No. 100-903

Product of xxxxx

Formulated in xxxxx

SCP 903 MAS 0509

Net Contents

FIRST AID	
If in eyes	<ul style="list-style-type: none">• 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.• Call a poison control center or doctor for treatment advice.
If swallowed	<ul style="list-style-type: none">• Call poison control center or doctor immediately for treatment advice.• Do not give any liquid to the person.• Do not induce vomiting unless told to do so by the poison control center or doctor.• Do not give anything by mouth to an unconscious person.
If on skin or clothing	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
If inhaled	<ul style="list-style-type: none">• 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.• Call a poison control center or doctor for further treatment advice.
<p style="text-align: center;">NOTE TO PHYSICIAN</p> <p>Contains petroleum distillate – vomiting may cause aspiration pneumonia. Probably mucosal damage may contraindicate the use of gastric lavage.</p> <p>Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular tremors. If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms, and measurements.</p> <p>In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since emamectin benzoate is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic emamectin benzoate exposure.</p> <p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p>	
<p style="text-align: center;">HOT LINE NUMBER</p> <p style="text-align: center;">For 24-Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call 1-800-888-8372</p>	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

DANGER/PELIGRO

Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Wear protective eyewear, goggles, or face shields. Harmful if swallowed or absorbed through the skin. Avoid contact with skin. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum or using tobacco. Remove contaminated clothing and wash before reuse. Prolonged or frequently repeated exposure may cause allergic skin reactions in some individuals.

Personal Protective Equipment

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category C on an EPA chemical-resistance category selection chart.

All uses:

Applicators, mixers, loaders, and other handlers must wear:

- Coveralls worn over long-sleeved shirt and long-pants
- Chemical-resistant gloves, such as barrier laminate, butyl rubber ≥ 14 mil, nitrile rubber ≥ 14 mil, neoprene rubber ≥ 14 mil, polyvinyl chloride (PVC) ≥ 14 mil or Viton® ≥ 14 mil
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant apron when cleaning equipment, mixing or loading

In addition for aerial application to cotton:

Mixers and loaders must wear:

- Dust mist NIOSH-approved respirator with any N, R, P, or HE filter

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statements

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothes immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Environmental Hazards

This pesticide is toxic to fish, birds, mammals, and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash water or rinsate.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow drift to blooming crops or weeds if bees are visiting the treatment area.

Physical or Chemical Hazards

Do not use or store near heat or open flame.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC. or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and of Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

DIRECTIONS FOR USE

RESTRICTED USE PESTICIDE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Denim Insecticide must be used only in accordance with recommendations on this label or in separately published Syngenta supplemental labeling recommendations for this product.

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 interval. The requirements in this box 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 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 over long-sleeved shirt and long-pants
- Chemical-resistant gloves, such as barrier laminate, butyl rubber ≥ 14 mil, nitrile rubber ≥ 14 mil, neoprene rubber ≥ 14 mil, polyvinyl chloride (PVC) ≥ 14 mil or Viton ≥ 14 mil
- Chemical-resistant footwear plus socks
- Protective eyewear

FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR INSECT CONTROL, AND/OR ILLEGAL RESIDUES.

GENERAL INFORMATION

Denim Insecticide is a selective insecticide for use on cavalo broccolo, cotton and tobacco.

Denim Insecticide controls the larval stages (worms/caterpillars) of certain lepidopteran species. Although Denim Insecticide has some contact activity, to be most effective, larvae should ingest it. Shortly after exposure to Denim Insecticide, affected larvae are paralyzed, stop feeding, and subsequently die after 2-4 days.

Apply Denim Insecticide to plant foliage when larvae first appear, but before populations reach damaging levels. Target Denim Insecticide applications at small (1/4 inch in length) larvae.

Thorough spray coverage is essential for optimum performance. Apply Denim Insecticide in sufficient water to ensure good coverage of all plant surfaces. The use of greater water volumes will generally result in better coverage, especially under adverse conditions (e.g., hot, dry) or where a dense plant canopy exists. See the **Crop Use Directions** section of this label for specific spray volume recommendations for different crops.

The use of a penetrating type spray adjuvant, at the manufacturer's suggested rate, is recommended for all applications of Denim Insecticide. The use of an adjuvant typically improves coverage and penetration and results in optimum insect control, especially in crops with hard-to-wet leaf surfaces. However, do not use sticker/binder type adjuvants because they may reduce translaminar movement of the active ingredient into the plant.

Denim Insecticide has been tested for phytotoxicity and has a wide margin of safety on the crops listed on this label.

Resistance Management

GROUP	6	INSECTICIDE
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~~Because of the inherent risks of resistance development to any product, it is strongly advised that Denim Insecticide be used in a sound resistance management program that includes rotation with other products with different modes of action.~~

Some insect pests are known to develop resistance to products after repeated use. Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies established for the crop and use area. Syngenta encourages responsible product stewardship to ensure effective long-term control of the insects on this label.

Denim Insecticide contains a Group 6 insecticide (emamectin benzoate). Insect biotypes with acquired or inherent resistance to Group 6 insecticides may eventually dominate the pest population if Group 6 insecticides are used repeatedly as the predominant method of control for targeted species. This may result in partial or total loss of control of those species by Denim Insecticide or other Group 6 insecticides.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

Maintaining Susceptibility to this Class of Chemistry

- Avoid using Group 6 insecticides exclusively for season-long control of insect species with more than one generation per crop season.
- For insect species with successive or overlapping generations, apply Denim Insecticide or other Group 6 insecticides using a "treatment window" approach. A treatment window is a period of time as defined by the stage of crop development and/or the biology of the pests of concern. Within the treatment window, depending on the length of residual activity, there may either be single or consecutive applications (seed treatment, soil, foliar, unless otherwise stated) of the Group 6 insecticides. Do not exceed the maximum Denim Insecticide allowed per growing season.
- Following a treatment window of Group 6 insecticides, rotate to a treatment window of effective products with a different mode of action before making additional applications of Group 6 insecticides.
- A treatment window rotation, along with other IPM practices for the crop and use area, is considered an effective strategy for preventing or delaying a pest's ability to develop resistance to these classes of chemistry.
- If resistance is suspected, do not reapply Denim Insecticide or other Group 6 insecticides.

Other Insect Resistance Management (IRM) Practices

- Incorporate IPM techniques into your insect control program.
- Monitor treated insect populations for loss of field efficacy.
- Use tank-mixtures or premixes with insecticides from a different target site of action group as long as the involved products are all registered for the same crop outlet and effective rates are applied.

Other Sources for Information on Insect Resistance Management

- Contact your local extension specialist, certified crop advisor and/or product manufacturer for additional insect resistance management recommendations.
- Visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.irac-online.org/>.

Use Restrictions

- **Do not** use Denim Insecticide in greenhouses, nurseries, plant propagation houses, or on any plants grown for use as transplants.
- **Do not** apply this product through any type of irrigation system.
- **Do not** allow livestock to graze in treated areas.

Rotational Restrictions

There are no rotational (plant back) restrictions with Denim Insecticide. Treated areas may be replanted with any crop immediately following application.

APPLICATION PROCEDURES

Chemigation

Do not apply this product through any type of irrigation system.

Spray Equipment

Spray nozzles should be uniformly spaced and of the same size, and should provide accurate and uniform application. Use spray nozzles and boom pressures that provide medium-sized droplets (as defined by ASAE Standard 572) under application conditions. To ensure accuracy, calibrate sprayer before each use. For spray equipment and calibration information, consult sprayer manufacturers and/or state recommendations. All ground and aerial application equipment must be properly maintained and calibrated using appropriate carriers.

Spray Volume

Applications using sufficient water volume to provide thorough and uniform coverage of the foliage generally provide the most effective lepidopterous larvae control. In situations where a dense canopy exists and/or larval infestations are high, use higher water volumes. See the **Crop Use Directions** section of this label for recommendations on spray volumes for different crops.

SPRAY DRIFT

Spray Drift Precautions [Aerial Application (cotton only) and Ground Application]

- **Do not** apply by ground equipment within 25 ft., or by aerial equipment (cotton only) within 150 ft. of lakes; reservoirs; rivers; permanent streams, marshes, pot holes, or natural ponds; estuaries; and commercial fish farm ponds.
- **Do not** cultivate within 25 ft. of the aquatic area as to allow growth of a vegetative filter strip.
- **Do not** allow this product to drift onto nontarget areas. Drift may result in illegal residues on adjacent crops or injury to non-target species. Risk of exposure to sensitive areas can be reduced by making applications when wind direction is away from the sensitive area.
- **Do not** apply when weather conditions may cause drift. Avoid applications when temperature is high and/or the humidity is low. These conditions increase the evaporation of spray droplets and the likelihood of drift to aquatic areas.
- Make applications when wind velocity favors on target product deposition (approximately 3 - 10 mph).
- **Do not** apply when wind velocity is greater than 10 mph or wind gusts exceed 10 mph.
- **Do not** apply when wind speed is below 2 mph due to variable wind direction and high inversion potential.

Note: When states have more stringent regulations, they should be observed.

Spray Drift Precautions (Aerial Application– cotton only)

Responsibility

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 is responsible for considering all of these factors when making decisions.

Drift Management

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops:

- The distance of the outer most nozzles on the boom must not exceed $\frac{3}{4}$ the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

- **Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see **Wind, Temperature and Humidity and Temperature Inversions**).

- **Controlling Droplet Size**

Volume

Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure

Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of Nozzles

Use the minimum number of nozzles that provide uniform coverage.

Nozzle Orientation

Orienting nozzles so that the spray is released parallel to the air stream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

Nozzle Type

Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

- **Boom Length**

For some use patterns, reducing the effective boom length to less than $\frac{3}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.

- **Application Height**

Applications must not be made at a height greater than 10 ft. above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

- **Swath Adjustment**

When applications are made with a cross wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance increases with increasing drift potential (higher wind, smaller drops, etc.).

- **Wind**

Drift potential is lowest between 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. **Do not** apply when wind speed is below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

- **Temperature and Humidity**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

- **Temperature Inversions**

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, the movement of smoke from a ground source or an aircraft smoke

generator can also identify inversions. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates, indicates good vertical air mixing.

MIXING PROCEDURES

1. Prepare no more spray mixture than is needed for the immediate application.
2. Thoroughly clean spray equipment before using this product.
3. Agitate the spray solution before and during the application.
4. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply rinsate to a previously treated area.
5. Keep product container tightly closed when not in use.

Denim Insecticide Alone

1. Add 1/3 of the required amount of water to the spray or mixing tank.
2. With the agitator running, add the Denim Insecticide to the spray tank.
3. Continue agitation while adding the remainder of the water.
4. Begin application of the solution after the Denim Insecticide has completely dispersed into the mix water.
5. Maintain agitation until all of the mixture has been applied.

Note: Do not use liquid fertilizer as a carrier for Denim Insecticide.

Denim Insecticide + Tank Mixtures

1. Add 1/3 the required amount of water to the mix tank.
2. Start the agitator running before adding any tank mix partners.
3. When using Denim Insecticide in tank mixtures, all products in water-soluble packaging should be added to the tank before any other tank mix partner, including Denim Insecticide. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank mix partner to the tank. Then add other tank mix partners in this order: wettable powders, wettable granules (dry flowables), liquid flowables, liquids and emulsifiable concentrates. Always allow each tank mix partner to fully disperse before adding the next product.
4. Provide sufficient agitation while adding the remainder of the water.
5. Maintain the agitation until all of the spray mixture has been applied.

NOTE: If using Denim Insecticide in a tank mixture, observe all directions for use, crop/sites, use rates, dilution ratios, precautions, and limitations that appear on the tank mix product label. No label dosage rate should be exceeded, and the most restrictive label precautions and limitations should be followed. This product should not be mixed with any product that prohibits such mixing. Tank mixtures or other applications of

products referenced on this label are permitted only in those states in which the referenced products are labeled.

Compatibility

Denim Insecticide is compatible with most insecticide, fungicide, and foliar nutrients products. However, the physical compatibility of Denim Insecticide with tank mix partners should be tested before use. To determine the physical compatibility of Denim Insecticide with other products, use a jar test as described below:

1. Using a quart jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powders and water-dispersible granular products first, then liquid flowables, and emulsifiable concentrates last.
2. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible.
3. Once compatibility has been proven acceptable, use the same procedure for adding required ingredients to the spray tank.

Note: The safety of all potential tank mixes on all crops listed on this label may not have been tested. Before applying any tank mixture not specifically recommended on this label, the safety to the target crop should be confirmed.

CROP USE DIRECTIONS

CAVALO BROCCOLO

Pest	Rate/A Per Application	Remarks
Beet Armyworm Cabbage Looper Cabbage Webworm Corn Earworm Cross-Striped Cabbageworm Diamondback Moth Fall Armyworm Imported Cabbageworm Soybean Looper	6-12 fl. oz./A	0.0075-0.015 lb. a.i./A

Mix with water and apply by ground equipment as a foliar spray. Apply thoroughly to ensure good upper and lower leaf coverage. Thorough coverage is essential for good insect control on crops. Use 6 fl. oz./A for low to moderate infestations and 12 fl. oz./A for severe infestations. Apply when larvae are first observed and repeat applications as necessary to maintain control.

- **Do not** apply by aircraft.

- **Do not** apply through any type of irrigation system.
- **Do not** exceed 72 fl. oz. of Denim Insecticide per acre per full cropping season.
- **Do not** apply at less than a 7–day interval.
- **Do not** apply within 7 days of harvest.
- **Do not** allow livestock to graze in treated areas.

COTTON

Note: For aerial application on cotton, workers must not mix or load more than 194 gallons of Denim Insecticide per day and must not mix or load Denim Insecticide for more than a total of 30 days out of a year.

Pest	Rate/A Per Application	Remarks
Beet armyworm	6.0 - 8.0 fl. oz./A	Application should be targeted at small (1/4 inch) larvae. At least 2 applications may be needed to control a generation during an extended egg laying period.
Cabbage looper Cotton bollworm Fall armyworm Soybean looper Spider mites ¹ Tobacco budworm	8.0 - 12.0 fl. oz./A	Application should be targeted at small (1/4 inch) larvae. At least 2 applications may be needed to control a generation during an extended egg laying period.
Beet armyworm Cabbage looper Cotton bollworm Fall armyworm Soybean looper Tobacco budworm	6.0 fl. oz./A	<p>Tank-Mix Rate: Use the tank mix rate of Denim Insecticide in combination with other larvicides for control of the listed pests. Recommended tank mix partners include: Curacron[®] (minimum rate of 0.5 lb ai/A), Larvin[®] (minimum rate of 0.25 lb a.i./A), and pyrethroids (Recommended labeled rates). Tank mixes with other products not specifically recommended on this label may also be used.</p> <p>Application should be targeted at small (1/4 inch) larvae. At least 2 applications may be needed to control a generation during an extended egg laying period.</p>

¹ Denim Insecticide provides suppression of spider mite (*Tetranychid* spp.) populations. Suppression means either erratic control ranging from good to poor, or consistent control at a level below that which is generally considered acceptable for commercial control.

Thorough spray coverage of plant foliage is recommended for optimum performance. Apply in a minimum of 5 gals. /A when applied by ground and 2 gals. /A when applied by air. The use of a penetrating type spray adjuvant, at the manufacturer's suggested rate, is recommended to provide optimum coverage and insect control. Do not use a sticker/binder type adjuvant.

- **Do not** apply through any type of irrigation system.
- **Do not** apply at rates lower than those recommended on this label.
- **Do not** make more than two sequential applications without rotating to another product with a different mode of action.
- **Do not** apply following a field failure of another product if larvae are large (>¼ inch in length).
- **Do not** apply more than a total of 48 fl. oz./A per crop per season.
- **Do not** apply more than 12.0 fl. oz./A per application.
- Allow a minimum of 5 days between applications.
- **Do not** apply within 21 days of harvest.
- **Do not** allow livestock to graze in treated areas.

TOBACCO

Pest	Rate/A Per Application	Remarks
Beet armyworm	6.0 - 8.0 fl. oz./A	Application should be targeted at small (1/4 inch) larvae. At least 2 applications may be needed to control a generation during an extended egg laying period.
Cabbage looper Fall armyworm Soybean looper Tobacco budworm Tobacco hornworm Tomato hornworm	8.0 - 12.0 fl. oz./A	Application should be targeted at small (1/4 inch) larvae. At least 2 applications may be needed to control a generation during an extended egg laying period.

Thorough spray coverage of plant foliage is recommended for optimum performance. Apply in a minimum of 20 gals. /A. The use of a penetrating type spray adjuvant, at the manufacturer's suggested rate, is recommended to provide optimum coverage and insect control. Do not use a sticker/binder type adjuvant.

- **Do not** apply by aircraft.
- **Do not** apply through any type of irrigation system.
- **Do not** apply at rates lower than those recommended on this label.
- **Do not** make more than 2 sequential applications without rotating to another product with a different mode of action.
- **Do not** apply following a field failure of another product if larvae are large (> ¼ inch in length).
- **Do not** apply more than a total of 36 fl. oz./A per crop per season.
- **Do not** apply more than 12.0 fl. oz./A per application.
- Allow a minimum of 5 days between applications.
- **Do not** apply within 14 days of harvest.
- **Do not** allow livestock to graze in treated areas.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

Storage

Store in a tightly closed original container in a cool, dry place.

Pesticide Disposal

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling

Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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For non-emergency (e.g., current product information), call
Syngenta Crop Protection at 1-800-334-9481.

Manufactured for:
Syngenta Crop Protection, LLC
P.O. Box 18300
Greensboro, North Carolina 27419-8300

SCP 903A-MAS 0509

(Non-detachable Container Label)

RESTRICTED USE PESTICIDE
 Toxic to Fish, Mammals, and Aquatic Organisms

For Retail Sale to and use only by Certified Applicators or Persons
 under their direct supervision, and only for those uses covered
 by the Certified Applicator's certification.

Denim® Insecticide



For control of certain lepidopterous larvae (worms/caterpillars) on Cavallo Broccolo, Cotton and Tobacco

Active Ingredient:

Emamectin benzoate (CAS No. 155569-91-8)	2.15%
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Other Ingredients:	97.85%
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Total:	100.00%
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Denim Insecticide is an emulsifiable concentrate containing 0.16 pounds of active ingredient per gallon.

Contains petroleum distillates.

KEEP OUT OF REACH OF CHILDREN.

DANGER/PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See additional precautionary statements and directions for use in booklet.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

EPA Est.
EPA Reg. No. 100-903

SCP 903 MAS 0509

Net Contents

FIRST AID	
If in eyes	<ul style="list-style-type: none">• 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.• Call a poison control center or doctor for treatment advice.
If swallowed	<ul style="list-style-type: none">• Call poison control center or doctor immediately for treatment advice.• Do not give any liquid to the person.• Do not induce vomiting unless told to do so by the poison control center or doctor.• Do not give anything by mouth to an unconscious person.
If on skin or clothing	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
If inhaled	<ul style="list-style-type: none">• 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.• Call a poison control center or doctor for further treatment advice.
<p style="text-align: center;">NOTE TO PHYSICIAN</p> <p>Contains petroleum distillate – vomiting may cause aspiration pneumonia. Probably mucosal damage may contraindicate the use of gastric lavage.</p> <p>Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular tremors. If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms, and measurements.</p> <p>In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since emamectin benzoate is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic emamectin benzoate exposure.</p> <p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p>	
<p style="text-align: center;">HOT LINE NUMBER</p> <p style="text-align: center;">For 24-Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call 1-800-888-8372</p>	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

DANGER / PELIGRO

Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Wear protective eyewear, goggles, or face shields. Harmful if swallowed or absorbed through the skin. Avoid contact with skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove contaminated clothing and wash before reuse. Prolonged or frequently repeated exposure may cause allergic skin reactions in some individuals.

Environmental Hazards

This pesticide is toxic to fish, birds, mammals, and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash water or rinsate.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow drift to blooming crops or weeds if bees are visiting the treatment area.

Physical or Chemical Hazards

Do not use or store near heat or open flame.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

Storage

Store in a tightly closed original container in a cool, dry place.

Pesticide Disposal

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling

Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Do not apply this product through any type of irrigation system.

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