



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

42750-385

Date of Issuance:

03/22/21

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

Crusader 2ME Insecticide

Name and Address of Registrant (include ZIP Code):

Albaugh LLC  
PO Box 21127  
Valdosta, GA 31604-2127

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
2. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. A one year study is required to satisfy these data requirements. You have 18 months from the date of registration to provide these data.

Signature of Approving Official:

Jacquelyn Herrick, Product Manager 03  
Invertebrate-Vertebrate Branch 1, Registration Division (7505P)

Date:

3/22/21

3. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, “EPA Reg. No. 42750-385.”
4. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements 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 Agency 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.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 03/24/2020

If you have any questions, please contact Jamey Shuler at (703) 347-8036 or by email at [Shuler.Jamey@epa.gov](mailto:Shuler.Jamey@epa.gov).

Enclosure

**RESTRICTED USE PESTICIDE**

Toxic to fish 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.

**ACCEPTED**  
03/22/2021  
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 42750-385

Lambda Cyhalothrin    **GROUP 3**    INSECTICIDE

**Crusader 2ME**  
Insecticide

**ACTIVE INGREDIENT:**

Lambda-cyhalothrin: ..... 22.88%  
**Other Ingredients:** ..... 77.12%  
**Total:** ..... 100.0%

This product contains 2.08 pounds of active ingredient per gallon and is a capsule suspension.  
Contains petroleum distillates.

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION/PRECAUCIÓN**

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

<b>FIRST AID</b>	
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing the eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor.</li> <li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center.</li> <li>• <b>DO NOT</b> give any liquid to the person.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>HOTLINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For 24 hour Medical or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), call CHEMTREC toll free at 1-800-424-9300.	
<b>NOTE TO PHYSICIAN</b>	
Contains petroleum distillates. Vomiting may cause aspiration pneumonia.	

EPA Reg. No. 42750-GIL  
EPA Est. No. XXX-XX-XXXX  
Net Contents: \_\_\_\_\_ gallons

**MANUFACTURED FOR**  
Albaugh, LLC  
1525 NE 36<sup>th</sup> Street  
Ankeny, IA 50021



## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION/PRECAUCIÓN

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber, ≥ 14 mils polyvinyl chloride ≥ 14 mils or viton ≥ 14 mils.
- Protective eyewear

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.

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 CFS 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 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

This pesticide is extremely toxic to fish and aquatic organisms and toxic to wildlife.

For terrestrial uses: **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** apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. **DO NOT** contaminate water when disposing of equipment washwater.

This product is highly toxic to bees and other pollinating insects exposed to direct treatment or residues on blooming crops or weeds. **DO NOT** apply this product or allow it to drift to blooming crops or weeds if bees or other pollinating insects are foraging the treatment area.

### PHYSICAL AND CHEMICAL HAZARDS

**DO NOT** mix or allow contact with oxidizing agents or reducing agents. Hazardous chemical reaction may occur.

## DIRECTIONS FOR USE

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

### SHAKE WELL BEFORE USING.

**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.

This labeling must be in the possession of the user at the time of application.

### 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 24 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
- Shoes plus socks
- Chemical resistant gloves made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber,  $\geq$  14 mils polyvinyl chloride  $\geq$  14 mils or viton  $\geq$  14 mils.
- Protective eyewear

**DO NOT** apply this product in a way that it will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application. For any requirement specific to your State or Tribe, consult State/Tribal agency responsible for pesticide regulation.

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to 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.

### FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR INSECT CONTROL, CROP INJURY, OR ILLEGAL RESIDUES. INFORMATION ON USE OF THIS PRODUCT

Initial and residual control are contingent upon thorough crop coverage. Apply with ground or aerial equipment using sufficient water to obtain full coverage of foliage. Apply in a minimum of 2 gallons per acre by air or 10 gallons per acre by ground unless otherwise specified in this label. When foliage is dense or pest

pressure is high (heavier insect or egg pressure, larger larval stages), use of higher listed application volumes and/or higher listed use rates may improve initial and residual control.

For cutworm control, this product may be applied before, during, or after planting. For soil-incorporated applications, use higher listed rates for improved control.

## **RESISTANCE MANAGEMENT**

This product is a Group 3 Insecticide (contains the active ingredient lambda-cyhalothrin). Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities for details.

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.

## **APPLICATION INSTRUCTIONS**

### **SPRAY DRIFT PRECAUTIONS BUFFER ZONES**

#### **Vegetative Buffer Strip**

Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing this product onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers:

*Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 21 pp.*

[www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf](http://www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf)

In the State of New York, a 25 ft. vegetated, non-cropped buffer strip untraversed by drainage tiles must be maintained between a treated field and a coastal salt marsh or stream that drains into a coastal salt marsh, for both aerial or ground application. For aerial applications, the 25 ft. vegetated non-cropped buffer strip for runoff protection would be part of the larger 150 ft. buffer strip (or 450 ft. buffer strip for ULV application) required for spray drift.

#### **Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast)**

**DO NOT** apply within 25 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes; natural ponds; estuaries; and commercial fish ponds).

#### **Buffer Zone for ULV Aerial Application**

**DO NOT** apply within 450 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes; natural ponds; estuaries; and commercial fish ponds).

#### **Buffer Zone for Non-ULV Aerial Application**

**DO NOT** apply within 150 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes; natural ponds; estuaries; and commercial fish ponds).

### **SPRAY DRIFT REQUIREMENTS**

#### **Wind Direction and Speed**

Only apply this product if the wind direction favors on-target deposition. **DO NOT** apply when the wind velocity exceeds 15 mph.

#### **Temperature Inversion**

**DO NOT** make aerial or ground applications into temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

#### **Droplet Size**

Use only medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

#### **Additional Requirements for Ground Applications**

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

#### **Additional Requirements for Aerial Applications**

The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices.

The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter.

Flight speed and nozzle orientation must be considered in determining droplet size.

Spray must be released at the lowest height consistent with pest control and flight safety. **DO NOT** release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a cross-wind, the swath will be displaced downward. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

## TANK MIX APPLICATION

When tank mixing with any other agricultural products, this product may be added last to avoid nozzle plugging. Fill the tank with 1/2 - 2/3 volume of the mixing diluent. All other products should be fully dispersed in the mixing diluent before adding the recommended rate of this product to the tank. Add the remainder of the mixing diluent volume. It is recommended that mixing and spray equipment have continuous agitation for best results. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

While this product has good flexibility for tank mixing with other agricultural products, a jar test for physical compatibility is recommended for untried mixtures, using proper ratios and mixing sequences of all ingredients to be included in the mixture.

This product is an aqueous based formulation. **DO NOT** use non-emulsifiable oils in combination with this product. If adjuvants are used, use only:

- Nonionic Surfactant (NIS) containing at least 75% surface agent, or
- Nonphytotoxic Crop Oil Concentrate (COC), including once-refined Vegetable Oil Concentrate (VOC), or,
- Methylated Sunflower Oils (MSO) containing a minimum of 17% emulsifier.

Adjuvants other than NIS or COC may be used providing the product meets the following criteria:

- Contains only EPA exempt ingredients.
- Is nonphytotoxic to the target crop.
- Is compatible in mixture. (May be established through a jar test.)
- Is supported locally for use with this product on the target crop through proven field trials and through university and extension recommendations.

In addition, the following may be used as diluents:

- Crop Oil Concentrate
- Methylated Sunflower Oils
- Urea-Ammonium Nitrate

**DO NOT** use the following in combination with this product as diluents or adjuvants:

- Non-emulsifiable oils
- Diesel Fuel
- Straight Mineral Oil

## CHEMIGATION

### Sprinkler Irrigation Application

Apply this product at rates and timing described elsewhere in this label. As local recommendations differ, consult your local State Extension Service or other local experts for recommendations on adjuvant or diluent types, tank mixes, and mixing instructions. These recommendations should be proven, through university and extension field trials, to be effective with this product applied by chemigation.

Check the irrigation system to insure uniform application of water to all areas. Thorough coverage of foliage is required for good control. Good agitation in the pesticide supply tank should be maintained prior to and during the entire application period.



Apply by injecting the labeled rate of this product into the irrigation system using a metering device that will introduce a constant flow and by distributing the product to the target area in 0.1-0.2 acre-inch of water. In general, use the least amount of water required for proper distribution and coverage. It is recommended that the product be injected into the main irrigation line ahead of a right angle turn in the line to ensure adequate dispersion or mixing in the irrigation water. Once the application is completed, flush the entire irrigation and injection system with clean water before stopping the system.

In addition to the above instructions, if application is being made during a normal irrigation set of a stationary sprinkler, the labeled rate of this product for the area covered should be injected into the system only during the end of the irrigation set for sufficient time to provide adequate coverage and product distribution.

### **Use Precautions – Sprinkler Irrigation Applications**

1. Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. **DO NOT** apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have any questions about calibration, you should contact State Extension Service Specialists, equipment manufacturers, or other experts.
4. **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.
5. 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.
6. 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 back-flow.
7. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
8. 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.
9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
10. 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.
11. 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 are capable of being fitted with a system interlock.
12. Any alternatives to the above required safety devices must conform to the list of EPA-approved alternative devices.

13. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment or non-uniform distribution of treated water.

### CROP SPECIFIC USE INSTRUCTIONS

*[Note to reviewer: The following statement may be added to Crop Specific Use Directions as per CDPR requirement]*

**[Not approved for use in California]**

#### ALFALFA, ALFALFA GROWN FOR SEED

Pests	Product Rate Per Acre	USE DIRECTIONS
Alfalfa Caterpillar Army Cutworm Cutworm spp. Green Cloverworm Leafhopper spp. Looper spp. Three-cornered Alfalfa Hopper Velvetbean Caterpillar Webworm spp.	0.92-1.54 fl. oz. (0.015-0.025 lb.a.i)	Use scouting to determine need for applications. Base the timing and frequency of applications on the timing when insect populations reach local economic thresholds.
Alfalfa Seed Chalcid (Adult) Alfalfa Weevil Armyworm Bean Leaf Beetle (Adult) Blister Beetle spp. Blue Alfalfa Aphid Clover Leaf Weevil spp. Clover Root Borer (Adult) Clover Root Curculio spp. (Adult) Clover Stem Borer (Adult) Corn Earworm Cowpea Aphid Cowpea Curculio (Adult) Cowpea Weevil (Adult) Cucumber Beetle spp. (Adult) Egyptian Alfalfa Weevil Fall Armyworm <sup>1</sup> Grape Colaspis (Adult) Grasshopper spp. Green June Beetle (Adult) Green Peach Aphid <sup>3</sup> Japanese Beetle (Adult) Meadow Spittlebug Mexican Bean Beetle Pea Aphid Pea Weevil (Adult) Plant Bug spp. Including Lygus spp. <sup>3</sup> Spotted Alfalfa Aphid Stink Bug spp. Thrips spp. <sup>4</sup> Sweet Clover Weevil (Adult) Western Yellowstriped Armyworm	1.23-1.84 fl. oz. (0.02-0.03 lb. a.i.)	Apply by ground or air using enough water to obtain full coverage of foliage. Apply in at least 2 gals./A by air or 10 gals./A by ground. In situations of dense foliage and/or high pest populations, use 5-10 gals./A by air or 20 gals./A by ground and higher listed use rates. Also use higher listed rates for improved residual control.  Avoid application when bees are actively foraging by applying during the early morning or during the evening hours. Be aware of bee hazard resulting from a cool evening and/or morning dew. It may be advisable to remove bee shelters during and for 2-3 days following application. Avoid direct application to bee shelters.  <sup>1</sup> Use higher listed rates for large larvae.  <sup>2</sup> Suppression only.  <sup>3</sup> See resistance statement under Product Information.  <sup>4</sup> Does not include Western Flower Thrips.

Whitefringed Beetle spp. (Adult) Yellowstriped Armyworm		<b>DO NOT</b> apply more than 0.03 lb. a.i. (0.12 pt. or 1.84 fl. oz. of product)/A per cutting.
Beet Armyworm <sup>1,3</sup> Blotch Leafminer <sup>3</sup> Spider Mites <sup>2</sup>	1.84 fl. oz. (0.03 lb. a.i.)	<b>DO NOT</b> apply more than 0.12 lb. a.i. (0.46 pt. or 7.37 fl. oz. of product)/A per season.  <b>DO NOT</b> apply within 1 day of harvest for forage or within 7 days of harvest for hay.

**CANOLA**

<b>Pests</b>	<b>Product Rate Per Acre</b>	<b>USE DIRECTIONS</b>
Armyworm spp. Cabbage Seedpod Weevil Cutworm spp. Diamondback Moth Flea Beetle Grasshoppers Looper spp. Lygus Bug	0.92-1.84 fl. oz. (0.015-0.03 lb.a.i)	Use scouting to determine need for applications, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.  Apply by air or ground with enough water to obtain full coverage of foliage.
Cabbage Aphid	1.84 fl. oz. (0.03 lb. a.i.)	For air applications, apply a minimum of 2 gals. of water/A.  <b>DO NOT</b> apply more than 0.09 lb. a.i. (0.35 pt. or 5.53 fl. oz. of product)/A per year.  <b>DO NOT</b> apply within 7 days of harvest.

**CEREAL GRAINS – CORN (AT PLANT): FIELD CORN, POPCORN, SEED CORN, SWEET CORN**

Pests	Product Rate Per Acre	USE DIRECTIONS
Corn Rootworm Larvae (Western, Northern, Southern, Mexican) Cutworm spp. Lesser Cornstalk Borer Red Imported Fire Ant <sup>1</sup> Seedcorn Beetle Seedcorn Maggot Wireworm spp. <sup>1</sup> White Grub spp.	0.31 fl. oz. (0.005 lb.a.i)	<p><b>DO NOT</b> harvest or graze livestock or cut treated crops for feed within 21 days of at plant application. <b>DO NOT</b> apply more than 0.09 lb. a.i. (0.35 pt. or 5.53 fl. oz. of product)/A per crop at plant.</p> <p><b>For field corn, popcorn, and seed corn DO NOT</b> apply more than 0.12 lb. a.i. (0.46 pt. or 7.37 fl. oz. of product)/A per crop from at plant and foliar applications. For sweet corn <b>DO NOT</b> apply more than 0.48 lb. a.i. (1.84 pts. or 29.49 fl. oz. of product)/A per crop from at plant and foliar applications.</p> <p><b>For Banded Applications</b> – Make application at planting as a 5-7 inch T-band sprayed across the open seed furrow between the furrow openers and the press wheels or as a band application behind the press wheel.</p> <p><b>For In-Furrow Applications</b> – Make application into the seed furrow through spray nozzles or microtubes, behind the planter furrow openers and in front of the press wheel.</p> <p>Apply a minimum of 3 gals. finished spray/A.</p> <p><sup>1</sup>Suppression only.</p>
	0.31 fl. oz. (0.005 lb.a.i) / 1000 ft of row <sup>2</sup>	

<sup>2</sup>lbs. a.i. and fl. oz./A of this product applied at 0.31fl. oz./1,000 ft. of row for various row spacings.

Row Spacing	40"	38"	36"	34"	32"	30"
Linear ft./A	13,068	13,756	14,520	15,374	16,335	17,424
lbs. a.i./A	0.067	0.07	0.075	0.079	0.084	0.09
fl. oz./A	4.12	4.30	4.61	4.85	5.16	5.53

**CEREAL GRAINS – CORN (FOLIAR): FIELD CORN, POPCORN, SEED CORN, SWEET CORN**

Pests	Product Rate Per Acre	USE DIRECTIONS
Corn Earworm <sup>1</sup> Cutworm spp. Green Cloverworm Meadow Spittlebug Western Bean Cutworm <sup>1</sup>	0.92-1.54 fl. oz. (0.015-0.025 lb.a.i)	Use scouting or locally prescribed corn growth stages to determine need for application, usually at intervals of 7 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds or other locally recommended methods.
Armyworm <sup>2</sup> Bean Leaf Beetle Bird Cherry-Oat Aphid <sup>3</sup> Cereal Leaf Beetle Corn Leaf Aphid <sup>3</sup> Corn Rootworm Beetle (Adult beetles including Mexican, Northern, Southern, Western) English Grain Aphid <sup>3</sup> European Corn Borer <sup>1</sup> Fall Armyworm <sup>2</sup> Flea Beetle spp. Grasshopper spp. Hop vine Borer <sup>1</sup> Japanese Beetle (Adult) Lesser Cornstalk Borer Sap Beetle (Adult) Seedcorn Beetle Southwestern Corn Borer <sup>1</sup> Stalk Borer <sup>1</sup> Stink Bug spp. Tobacco Budworm <sup>1,4</sup> Webworm spp. Yellowstriped Armyworm <sup>2</sup>	1.23-1.84 fl. oz. (0.02-0.03 lb. a.i.)	Apply by ground or air using sufficient water and application methods to obtain full coverage of target location. When applying by air, apply in at least 2 gals. of water/A.  For chinch bug control, begin application when bugs migrate from small grains or grass weeds to small corn and direct the spray to the base of corn plants. Make additional applications at 3-5 day intervals if needed. This product may only suppress heavy infestations and/or subsequent migrations.  For control of adult corn rootworm beetles ( <i>Diabrotica</i> spp.) as part of an aerial applied corn rootworm control program use at least 1.84 fl. oz./A (0.03 lb. a.i./A).
Beet Armyworm <sup>4</sup> Chinch Bug Green Bug <sup>3,4</sup> Mexican Rice Borer <sup>1</sup> Rice Stalk Borer <sup>1</sup> Southern Corn Leaf Beetle <sup>3</sup> Sugarcane Borer	1.84 fl. oz. (0.03 lb. a.i.)	<sup>1</sup> For control before the larva bores into the plant stalk or ear.  <sup>2</sup> Use higher listed rates for large larvae.  <sup>3</sup> Suppression only.  <sup>4</sup> See resistance statement under Product Information.  <b>DO NOT</b> apply within 21 days of harvest.  <b>DO NOT</b> allow livestock to graze in treated areas or harvest treated corn forage as feed for meat or dairy animals within 1 day after treatment. <b>DO NOT</b> feed treated corn fodder or silage to meat or dairy animals within 21 days after last treatment.

		<p><b>DO NOT</b> apply more than 0.12 lb. a.i. (0.46 pt. or 7.37 fl. oz. of product)/A per crop from at plant and foliar applications.</p> <p><b>DO NOT</b> apply more than 0.06 lb. a.i. (0.23 pt. or 3.69 fl. oz. of product) after silk initiation.</p> <p><b>DO NOT</b> apply more than 0.03 lb. a.i. (0.12 pt. or 1.84 fl. oz. of product)/A after corn has reached the milk stage (yellow kernels with milky fluid).</p>
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**CEREAL GRAINS – SWEET CORN (FOLIAR)**

<b>Pests</b>	<b>Product Rate Per Acre</b>	<b>USE DIRECTIONS</b>
Aphid spp. <sup>2,3</sup> Armyworm <sup>1</sup> Aster Leafhopper Beet Armyworm <sup>1,3</sup> Cereal Leaf Beetle Chinch Bug Common Cornstalk Borer Corn Rootworm Beetle (Adult beetles including Mexican, Northern, Southern, Western) Corn Earworm Cutworm spp. European Corn Borer Fall Armyworm <sup>1</sup> Flea Beetle spp. Grasshopper spp. Japanese Beetle (Adult) Sap Beetle (Adult) Southern Armyworm <sup>1</sup> Southwestern Corn Borer Spider Mite spp. <sup>2</sup> Stink Bug spp. Tarnished Plant Bug Yellowstriped Armyworm <sup>1</sup> Western Bean Cutworm Webworm spp.	1.23-1.84 fl. oz. (0.02-0.03 lb. a.i.)	<sup>1</sup> Use higher listed rates for large larvae. <sup>2</sup> Suppression only. <sup>3</sup> See resistance statement under Product Information.  <b>DO NOT</b> apply within 1 day of harvest.  <b>DO NOT</b> allow livestock to graze in treated areas or harvest treated corn forage as feed for meat or dairy animals within 1 day after last treatment.  <b>DO NOT</b> feed treated corn fodder or silage to meat or dairy animals within 21 days after last treatment.  <b>DO NOT</b> apply more than 0.48 lb. a.i. (1.84 pts. Or 29.49 fl. oz. of product)/A per crop from at plant and foliar applications. Use scouting or locally prescribed corn growth stages to determine need for application, usually at intervals of 4 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. For best results target control before insects enter the stalk or ear.
Corn Silkfly (Adult) <sup>4</sup> Green Bug <sup>2,3</sup>	1.84 fl. oz. (0.03 lb. a.i.)	Apply ground or air using enough water and application methods to obtain full coverage of foliage and ears (if present). When applying by air, apply in at least 2 gals. of water per acre.

		For control of adult corn rootworm beetles ( <i>Diabrotica</i> spp.) as part of an aerial applied corn rootworm control program use a minimum of 0.025 lb. a.i. (1.54 fl. oz.)/A.
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### CEREAL GRAINS – RICE AND WILD RICE

Pests	Product Rate Per Acre	USE DIRECTIONS
Bird Cherry-Oat Aphid Chinch Bug Fall Armyworm Grasshopper spp. Green Bug Leafhopper spp. Rice Stink Bug Rice Water Weevil (Adult) Riceworm Sharpshooter spp. True Armyworm Yellowstriped Armyworm Yellow Sugarcane Aphid	1.54-2.46 fl. oz. (0.025-0.04 lb. a.i.)	<sup>1</sup> For control before the larvae bore into the plant stalk.  <b>DO NOT</b> release flood water within 7 days of application.  <b>DO NOT</b> apply more than 0.12 lb. a.i. (0.46 pt. or 7.37 fl. oz. of product)/A per season. <b>DO NOT</b> apply more than 0.08 lb. a.i. (0.31 pt.)/A within 28 days of harvest or more than 0.04 lb. a.i. (0.15 pt.)/A within 21 days of harvest. <b>DO NOT</b> apply within 21 days of harvest.
European Corn Borer <sup>1</sup> Mexican Rice Borer <sup>1</sup> Rice Seed Midge <sup>1</sup> Sugarcane Borer <sup>1</sup>	1.84-2.46 fl. oz. (0.03-0.04 lb. a.i.)	<b>DO NOT</b> use treated rice fields for the aquaculture of edible fish and crustacea.  <b>DO NOT</b> apply as an ultra-low volume (ULV) spray.

### CEREAL GRAINS – SORGHUM (GRAIN)

Pests	Product Rate Per Acre	USE DIRECTIONS
Cutworm spp. Sorghum Midge	0.92-1.23 fl. oz. (0.015-0.02 lb. a.i.)	<sup>1</sup> Use higher listed rates for large larvae.  <sup>2</sup> For control before the larva bores into the plant stalk.
Armyworm Beet Armyworm <sup>3</sup> Corn Earworm European Corn Borer <sup>2</sup> Fall Armyworm <sup>1</sup> Flea Beetle spp. Grasshopper spp. Lesser Cornstalk Borer <sup>2</sup> Southwestern Corn Borer <sup>2</sup> Stink Bug spp. Webworm spp. Yellowstriped Armyworm <sup>1</sup>	1.23-1.84 fl. oz. (0.02-0.03 lb. a.i.)	<sup>3</sup> See resistance statement under Product Information.  <b>DO NOT</b> apply more than 0.08 lb. a.i. (0.31 pt. or 4.91 fl. oz. of product)/A per season.  <b>DO NOT</b> apply more than 0.06 lb. a.i. (0.23 pt. or 3.69 fl. oz. of product)/A per season after crop emergence.  <b>DO NOT</b> apply more than 0.02 lb. a.i. (0.08 pt. or 1.23 fl. oz. of product)/A per season once crop is in soft dough stage.

		<p><b>DO NOT</b> apply within 30 days of harvest.</p> <p>Use scouting to determine need for treatment, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.</p> <p>Apply by ground or air using enough water and application methods to obtain full coverage of target location. When applying by air, apply in at least 2 gals. of water/A.</p> <p>For sorghum midge control, make first application when one quarter of the sorghum heads have emerged and are in tip bloom. If needed, repeat applications at 5-day intervals.</p>
Chinch Bug Mexican Rice Borer <sup>2</sup> Sugarcane Borer <sup>2</sup>	1.84 fl. oz. (0.03 lb. a.i.)	<p>For chinch bug control, start applications when bugs migrate from small grains or grass weeds to small sorghum, directing spray to the base of sorghum plants. If needed, repeat applications at 3-5 day intervals.</p> <p>This product may only suppress heavy infestations and/or subsequent migrations.</p>

**CEREAL GRAINS – WHEAT, WHEAT HAY, TRITICALE, BARLEY, BUCKWHEAT, OATS AND RYE**

<b>Pests</b>	<b>Product Rate Per Acre</b>	<b>USE DIRECTIONS</b>
Army Cutworm Cutworm spp.	0.92-1.54 fl. oz. (0.015-0.025 lb. a.i.)	<sup>1</sup> Best control is obtained before insects begin to roll leaves. Once crop has started to boot, this product may provide suppression only. Higher rates and increased coverage will be necessary.
Armyworm Bird Cherry-Oat Aphid <sup>1</sup> Cereal Leaf Beetle English Grain Aphid <sup>1</sup> Fall Armyworm Flea Beetle spp. Grasshopper spp. Hessian Fly <sup>4</sup> Orange Blossom Wheat Midge Russian Wheat Aphid <sup>1</sup> Stink Bug spp. Yellowstriped Armyworm	1.23-1.84 fl. oz. (0.02-0.03 lb. a.i.)	<p><sup>2</sup>Suppression only.</p> <p><sup>3</sup>See resistance statement under Product Information.</p> <p><sup>4</sup>Make application when adults emerge.</p> <p><b>DO NOT</b> apply within 30 days of harvest.</p>
Grass Sawfly	1.54-1.84 fl. oz. (0.025-0.03 lb. a.i.)	



<p>Chinch Bug          Corn Leaf Aphid<sup>2</sup>          Greenbug<sup>1,3</sup>          Mite spp.<sup>2</sup></p>	<p>1.84 fl. oz.          (0.03 lb. a.i.)</p>	<p><b>DO NOT</b> apply more than 0.06 lb. a.i. (0.23 pt. or 3.69 fl. oz. of product)/A per season.</p> <p><b>DO NOT</b> allow livestock to graze in treated areas or harvest treated wheat forage as feed for meat or dairy animals with- in 7 days after treatment. <b>DO NOT</b> feed treated straw to meat or dairy animals within 30 days after last treatment.</p> <p>Use scouting to determine need for treatment, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.</p> <p>Apply by ground or air using enough water and application methods to obtain full coverage of foliage.</p> <p>When applying by air, apply in at least 2 gals. of water/A.</p> <p>For chinch bug control, repeat applications at 3-5 day intervals if needed. This product may only suppress heavy infestations and/or migrations.</p> <p>Because Greenbug is known to have many biotypes, it is possible that this product may only provide suppression. If this occurs, a second application using an alternative chemistry may be needed.</p>
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**COLE CROPS – BROCCOLI, BRUSSELS SPROUTS, CABBAGE, CAVALO BROCCOLO, CAULIFLOWER, CHINESE BROCCOLI (GAI LON), CHINESE CABBAGE (NAPA), CHINES MUSTARD CABBAGE (GAI CHOY), KOHLRABI**

Pests	Product Rate Per Acre	USE DIRECTIONS
<p>Alfalfa Looper            Cabbage Looper            Cabbage Webworm            Cutworm spp.            Imported Cabbageworm            Southern Cabbageworm</p>	<p>0.92-1.54 fl. oz.            (0.015-0.025 lb. a.i.)</p>	<p><sup>1</sup>For control of first and second instars only.</p> <p><sup>2</sup>Suppression only.</p> <p><sup>3</sup>See resistance statement under Product Information.</p>
<p>Aphid spp.<sup>2,3</sup>            Armyworm            Beet Armyworm<sup>1,3</sup></p>	<p>1.23-1.84 fl. oz.            (0.02-0.03 lb. a.i.)</p>	

<p>Corn Earworm  Diamondback Moth<sup>3</sup>  Fall Armyworm<sup>1</sup>  Flea Beetle spp.  Grasshopper spp.  Japanese Beetle (Adult)  Leafhopper spp.  Meadow Spittlebug  Plant Bug spp. – including Lygus spp.<sup>3</sup>  Spider Mite spp.<sup>2</sup>  Stink Bug spp.  Thrips spp.<sup>2</sup>  Vegetable Weevil (Adult)  Whitefly spp.<sup>2,3</sup>  Yellowstriped Armyworm</p>		<p><b>DO NOT</b> apply within 1 day of harvest.</p> <p><b>DO NOT</b> apply more than 0.24 lb. a.i. (0.92 pts. or 14.74 fl. oz. of product.)/A per season.</p> <p>Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.</p> <p>Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of water/A.</p>
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## COTTON

Pests	Product Rate Per Acre	USE DIRECTIONS
<p>Cutworm spp.  Soybean  Thrips  Tobacco  Thrips</p>	<p>0.92-1.23 fl. oz.  (0.015-0.02 lb. a.i.)</p>	<p><sup>1</sup>For control of first and second instars only.</p> <p><sup>2</sup>Suppression only.</p>
<p>Cabbage Looper  Cotton Fleahopper  Cotton  Leafperforator  Cotton Leafworm  Lygus Bug spp.<sup>3</sup></p>	<p>1.23-1.84 fl. oz.  (0.02-0.03 lb. a.i.)</p>	<p><sup>3</sup>See resistance statement under Product Information.</p> <p><b>DO NOT</b> apply within 21 days of harvest.</p>
<p>Bandedwing Whitefly<sup>2,3</sup>  Beet Armyworm<sup>1,3</sup>  Boll Weevil  Brown Stink  Bug Cotton Aphid<sup>2,3</sup>  Cotton Bollworm  European Corn Borer  Fall Armyworm  Green Stink Bug  Southern Green Stink Bug  Sweetpotato Whitefly<sup>2,3</sup>  Tobacco Budworm<sup>3</sup>  Twospotted Spider Mite<sup>2</sup></p>	<p>1.54-2.46 fl. oz.  (0.025-0.04 lb. a.i.)</p>	<p><b>DO NOT</b> graze livestock in treated areas.</p> <p><b>DO NOT</b> apply more than 0.2 lb. a.i. (0.77 pts. or 12.29 fl. oz. of product)/A per season.</p> <p><b>DO NOT</b> make more than a total of 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season.</p> <p>Use scouting to determine need for application, usually at intervals of 5-7 days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.</p> <p>Apply ground or air using enough water to obtain full coverage of foliage.</p>

		<p>Applications may also be made with equipment adapted and calibrated for ULV sprays. This product may be mixed with once-refined vegetable oil and applied in a minimum of at least one qt. of finished spray/A.</p> <p>When bollworm/budworm infestation levels are light, 0.02 lb. a.i. (1.23 fl. oz. of product)/A may be applied in conjunction with intense field monitoring.</p> <p>For boll weevil, spray on a 3-5 day schedule.</p> <p>When applied according to the directions above for control of cotton bollworm and tobacco budworm, this product also provides ovicidal control of unhatched <i>Heliothis</i> species eggs.</p>
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**CURCUBITS – CHAYOTE (FRUIT), CHINESE WAXGOURD, CITRON MELON, CUCUMBER, GHERKIN, GOURD (edible) MOMORDICA spp., MUSKMELON, PUMPKIN, SQUASH (summer and winter), WATERMELON**

<b>Pests</b>	<b>Product Rate Per Acre</b>	<b>USE DIRECTIONS</b>
Armyworm spp. <sup>1</sup> Blister Beetle spp. Cabbage Looper Corn Earworm Cricket spp. Cucumber Beetle spp. (Adult) Cutworm spp. Flea Beetle spp. Grasshopper spp. June Beetle spp. Leaffooted Bug Leafhopper spp. Lygus Bug spp. <sup>1</sup> Melonworm Pickleworm Plant Bug spp. Rindworm species complex Saltmarsh Caterpillar Squash Beetle Squash Bug spp. Squash Vine Borer spp. Stink Bug spp. Thrips spp. <sup>1,2</sup> Tobacco Budworm <sup>1</sup> Webworm spp.	1.23-1.84 fl. oz. (0.02-0.03 lb. a.i.)	Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds. <p>Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of solution per acre. When applying by ground, apply in a minimum of 10 gals. of solution per acre.</p> <p>Use higher application volumes and/or listed application rates when foliage is dense, larvae are large, pest populations are high, size of plants increases, or weather conditions are adverse. Use higher listed rates for longer residual. Insects that tunnel or bore into leaves, stems, vines, or fruit must be controlled before penetration. Only insects (larvae and adults) exposed to the product can be controlled with foliar applications of this product.</p>
Aphid spp. <sup>1</sup> Leafminer spp. <sup>1,3</sup> Spider Mite spp. <sup>3</sup>	1.84 fl. oz. (0.03 lb. a.i.)	

Whitefly spp. <sup>1,3</sup>		<p><sup>1</sup>See resistance statement under Product Information.</p> <p><sup>2</sup>Western Flower Thrips are not included.</p> <p><sup>3</sup>Suppression only.</p> <p><b>DO NOT</b> apply within 1 day of harvest.</p> <p><b>DO NOT</b> apply more than 0.18 lb. a.i. (0.69 pts. or 11.06 fl. oz.)/A per season.</p>
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**FRUITING VEGETABLE – TOMATO, TOMATILLO, PEPPERS (BELL AND NON BELL), EGGPLANT, GROUND CHERRY, PEPINO**

Pests	Product Rate Per Acre	USE DIRECTIONS
Cabbage Looper Cutworm spp. Hornworm spp.	0.92-1.23 fl. oz. (0.015-0.02 lb. a.i.)	<p><sup>1</sup>For control of first and second instars only.</p> <p><sup>2</sup>Suppression only.</p>
Aphid spp. <sup>2,3</sup> Beet Armyworm <sup>1,3</sup> Blister Beetle spp. Colorado Potato Beetle <sup>3</sup> Cucumber Beetle spp. (Adult) European Corn Borer <sup>4</sup> Fall Armyworm <sup>1</sup> Flea Beetle spp. Grasshopper spp. Japanese Beetle (Adult) Leafhopper spp. Leafminer spp. <sup>2</sup> Meadow Spittlebug Pepper Weevil (Adult) <sup>2</sup> Plant Bug spp. Southern Armyworm <sup>1</sup> Spider Mite spp. <sup>2</sup> Stalk Borer <sup>4</sup> Stink Bug spp. Thrips <sup>5</sup> Tobacco Budworm <sup>3</sup> Tomato Fruitworm Tomato Pinworm Tomato Psyllid <sup>2,3</sup> Vegetable Weevil (Adult) Whitefly spp. <sup>2,3</sup> Yellowstriped Armyworm <sup>1</sup>	1.23-1.84 fl. oz. (0.02-0.03 lb. a.i.)	<p><sup>3</sup>See resistance statement under Product Information.</p> <p><sup>4</sup>For control before the larva bores into the plant stalk or fruit.</p> <p><sup>5</sup>Does not include Western Flower thrips. <b>DO NOT</b> apply within 5 days of harvest.</p> <p><b>DO NOT</b> apply more than 0.36 lb. a.i. (1.38 pts. or 22.12 fl. oz. of product)/A per season.</p> <p>Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on the timing when insect populations reach local economic thresholds.</p> <p>Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of water/A.</p>

**GRASS FOR FORAGE, FODDER AND HAY – PASTURE AND RANGELAND GRASS, GRASS GROWN FOR HAY OR SILAGE AND GRASS GROWN FOR SEED**

Pests	Product Rate Per Acre	USE DIRECTIONS
Army Cutworm Cutworm spp. Essex Skipper Range Caterpillar Striped Grass Looper	0.92-1.54 fl. oz. (0.015-0.025 lb. a.i.)	See additional instructions below.  <sup>1</sup> Best control is obtained before insects begin to roll leaves.
Beet Armyworm Billbug spp. <sup>3</sup> Bird Cherry-Oat Aphid <sup>1</sup> Black Grass Bug Black Turfgrass Beetle (Adult) Blue Stem Midge Cereal Leaf Beetle Chinch Bug Crane Fly spp. Cricket spp. English Grain Aphid <sup>1</sup> Fall Armyworm Flea Beetle spp. Grass Mealybug Grass Sawfly (Adult) Grasshopper spp. Green June Beetle (Adult) Greenbug <sup>1,2,4</sup> Japanese Beetle (Adult) Katydid spp. Leafhopper spp. Mite spp. <sup>3</sup> Russian Wheat Aphid <sup>1</sup> Southern Armyworm Spittlebug spp. Stink Bug spp. Sugarcane Aphid Thrips spp. Tick spp. True Armyworm Webworm spp. Yellowstriped Armyworm	1.23-1.84 fl. oz. (0.02-0.03 lb. a.i.)	<sup>2</sup> See resistance statement under Product Information.  <sup>3</sup> Suppression only.  <sup>4</sup> Greenbug is known to have many biotypes. This product may provide suppression only. A second application using alternative chemistry may be needed.  Pasture and rangeland grass may be used for grazing or cut for forage 0 days after application. <b>DO NOT</b> cut grass to be dried and harvested for hay until 7 days after the last application. Grass grown for seed: Straw and mature seed (seed screenings) may be used as feed 7 days after the last application. Regrowth of grass grown for seed may be used for grazing, cut for forage or cut to be dried and harvested for hay.  <b>DO NOT</b> apply more than 0.03 lb. a.i. (0.12 pt. or 1.84 fl. oz.)/A per cutting for pastures, rangeland, and grasses grown for seed. A minimum re-treatment interval (RTI) of 30 days is required for pastures and rangeland receiving 0.03 lb. a.i./A which have not been cut between applications.  <b>DO NOT</b> apply more than 0.09 lb. a.i. (0.35 pt. or 5.53 fl. oz. of product) per acre per season.  Use scouting to determine application requirements. Base the timing and frequency of applications on when insect populations reach local economic thresholds.  Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2

		<p>gals. of water per acre. When applying by ground, apply in a minimum of 7 gals. of water per acre.</p> <p>Use higher application volumes and/or listed application rates when foliage is dense, larvae are large, pest populations are high, or weather conditions are adverse. Use higher listed rates for longer residual.</p> <p>For chinch bug control, this product may only suppress heavy infestations and/or migrations. In these situations, a second application using alternative chemistry may be needed.</p>
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### LEGUME VEGETABLES (BEANS AND PEAS)

**EDIBLE PODDED (ONLY):** *Canavalia gladiata* – sword bean; *Canavalia ensiformis* – jackbean; *Glycine max* – soybean (immature seed).

**EDIBLE PODDED, SUCCULENT SHELLED OR DRIED SHELLED:** *Phaseolus* spp. – includes field, kidney, lima, navy, pinto, runner, snap, tepary, and wax beans; *Vigna* spp. – includes adzuki, asparagus, moth, mung, rice, urd and yardlong beans, black-eyed pea, catjang, Chinese longbean, cowpea, Crowder pea, and Southern pea; *Pisum* spp. – includes dwarf, edible-pod, English, field, garden, green, snow, and sugar peas; *Cajanus cajan* – Pigeon pea.

**SUCCULENT SHELLED OR DRIED SHELLED:** *Vicia faba* – broadbean (fava bean).

**DRIED SHELLED (ONLY):** *Lupinus* spp. – includes grain, sweet, white and sweet white lupines; *Cicer arietinum* – chickpea (garbanzo bean), *Cyamopsis tetraganoloba* – guar, *Lablab purpureus* – lablab bean (hyacinth bean), *Lens esculata* – lentils.

Pests	Product Rate Per Acre	USE DIRECTIONS
Cutworm spp. Green Cloverworm Imported Cabbageworm Mexican Bean Beetle Saltmarsh Caterpillar Velvetleaf Caterpillar	0.92-1.54 fl. oz. (0.015-0.025 lb. a.i.)	For edible podded and succulent shelled legume vegetables, <b>DO NOT</b> apply within 7 days of harvest.  For dried shelled legume vegetables, <b>DO NOT</b> apply within 21 days of harvest.
Alfalfa Caterpillar Aphid spp. <sup>4</sup> Armyworm <sup>2</sup> Bean Leaf Beetle Bean Leafskeletonizer Blister Beetle spp. Corn Earworm Corn Rootworm Beetle spp. (Adult) Cucumber Beetle spp. (Adult) Curculio and Weevil spp. <sup>1</sup> (Foliage and pod feeding adults and larvae) European Corn Borer Fall Armyworm <sup>2</sup>	1.23-1.84 fl. oz. (0.02-0.03 lb. a.i.)	<b>DO NOT</b> apply more than 0.12 lb. a.i. (0.46 pt. or 7.37 fl. oz. of product)/A per season.  For succulent and dried shelled peas and beans, <b>DO NOT</b> graze livestock in treated areas or harvest vines for forage or hay.

Flea Beetle spp. (Adult) Flea Hopper spp. Grasshopper spp. Japanese Beetle (Adult) Leafhopper spp. Leaftier spp. Looper spp. Meadow Spittlebug Painted Lady Butterfly (Larva) Plant Bug spp. including Lygus spp. <sup>4</sup> Stalk Borer <sup>1</sup> Stink Bug spp. Threecornered Alfalfa Hopper Thrips spp. <sup>4,5</sup> Tobacco Budworm <sup>4</sup> Webworm spp. Western Bean Cutworm Western Yellowstriped Armyworm <sup>2</sup> Yellowstriped Armyworm <sup>2</sup>		Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.  Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of water/A.  <sup>1</sup> For control before the larva bores into the plant stalk or pods.  <sup>2</sup> Use higher listed rates for large larvae.  <sup>3</sup> For suppression only.
Beet Armyworm <sup>3,4</sup> Leafminer spp. <sup>3,4</sup> Lesser Cornstalk Borer <sup>3</sup> Soybean Looper <sup>3,4</sup> Spider Mite spp. <sup>3</sup> Whitefly spp. <sup>3,4</sup>	1.84 fl. oz. (0.03 lb. a.i.)	<sup>4</sup> See resistance statement under Product Information.  <sup>5</sup> Does not include Western Flower Thrips.

#### LEGUME VEGETABLES (SOYBEANS)

Pests	Product Rate Per Acre	USE DIRECTIONS
Bean Leaf Beetle Cabbage Looper Corn Earworm Corn Rootworm Beetle (Adult beetles including Mexican, Northern, Southern, Western) Cutworm spp. Green Cloverworm Mexican Bean Beetle Painted Lady (Thistle) Caterpillar Potato Leafhopper Saltmarsh Caterpillar Soybean Aphid <sup>4</sup> Threecornered Alfalfa Hopper Thrips spp. <sup>5</sup> Velvetbean Caterpillar	0.92-1.54 fl. oz. (0.015-0.025 lb. a.i.)	Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.  <b>DO NOT</b> graze or harvest treated soybean forage, straw or hay for livestock feed.  Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of water/A.

Armyworm <sup>1</sup> Blister Beetle spp. European Corn Borer Fall Armyworm <sup>1</sup> Grasshopper spp. Japanese Beetle (Adult) Plant Bug spp. Silverspotted Skipper Stink Bug spp. Tobacco Budworm <sup>3</sup> Webworm spp. Yellowstriped Armyworm <sup>1</sup>	1.54-1.84 fl. oz. (0.025-0.03 lb. a.i.)	For control of adult corn rootworm beetles ( <i>Diabrotica</i> spp.) as part of an aerial applied to corn rootworm control program use at least 1.23 fl. oz./A of product (0.02 lb. a.i./A).  <sup>1</sup> Use higher listed rates for large larvae.  <sup>2</sup> Suppression only.  <sup>3</sup> See resistance statement under Product Information.
Beet Armyworm <sup>2,3</sup> Lesser Cornstalk Borer <sup>2</sup> Soybean Looper <sup>2,3</sup> Spider Mite spp. <sup>2</sup>	1.84 fl. oz. (0.03 lb. a.i.)	<sup>4</sup> Use lower rates for early season applications and/or lighter populations.  <sup>5</sup> Does not include Western Flower Thrips. <b>DO NOT</b> apply within 30 days of harvest.  <b>DO NOT</b> apply more than 0.06 lb. a.i. (0.23 pt. or 3.69 fl. oz of product)/A per season.

#### LETTUCE (HEAD AND LEAF)

Pests	Product Rate Per Acre	USE DIRECTIONS
Alfalfa Looper Cabbage Looper Cutworm spp. Green Cloverworm Imported Cabbageworm Saltmarsh Caterpillar	0.92-1.54 fl. oz. (0.015-0.025 lb. a.i.)	Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.
Aphid spp. <sup>2,3</sup> Armyworm Beet Armyworm <sup>1,3</sup> Corn Earworm Diamondback Moth <sup>3</sup> European Corn Borer Fall Armyworm <sup>1</sup> Flea Beetle spp. Grasshopper spp. Japanese Beetle (Adult) Leafhopper spp. Meadow Spittlebug Plant Bug spp. including Lygus spp. <sup>3</sup> Southern Armyworm Spider Mite spp. <sup>2</sup> Stink Bug spp. Tobacco Budworm <sup>3</sup> Vegetable Weevil (Adult) Whitefly spp. <sup>2,3</sup>	1.23-1.84 fl. oz. (0.02-0.03 lb. a.i.)	Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of water/A.  <sup>1</sup> For control of first and second instars only.  <sup>2</sup> Suppression only.  <sup>3</sup> See resistance statement under Product Information. <b>DO NOT</b> apply within 1 day of harvest.



		<b>DO NOT</b> apply more than 0.3 lb. a.i. (1.15 pts. or 18.43 fl. oz. of product)/A per season.
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### ONION (BULD) AND GARLIC

Pests	Product Rate Per Acre	USE DIRECTIONS
Cutworm spp. Leafminer spp. (Adult) Onion Maggot (Adult) Seedcorn Maggot (Adult)	0.92-1.54 fl. oz. (0.015-0.025 lb. a.i.)	See additional instructions below. Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.
Aphid spp. <sup>2</sup> Armyworm spp. <sup>1</sup> Flower Thrips <sup>2,3</sup> Onion Thrips <sup>3</sup> Plant Bug spp. Stink Bug spp. Tobacco Thrips <sup>3</sup> Western Flower Thrips <sup>2,3</sup>	1.23-1.84 fl. oz. (0.02-0.03 lb. a.i.)	<p>Use the higher listed label rates as thrips population increases and avoid rescue situations.</p> <p>Apply by ground or air using enough water and application methods to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of water/A.</p> <p>To control thrips by aerial application, the addition of 1% COC v/v, 1/4% NIS v/v or a silicone adjuvant (follow manufacturer's use directions) may improve the deposition of the spray and increase plant coverage.</p> <p>Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.</p> <p>Use the higher listed label rates as thrips population increases and avoid rescue situations.</p> <p>Apply by ground or air using enough water and application methods to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of water/A.</p> <p>To control thrips by aerial application, the addition of 1% COC v/v, 1/4% NIS v/v or a silicone adjuvant (follow manufacturer's use directions) may</p>

		<p>improve the deposition of the spray and increase plant coverage.</p> <p><sup>1</sup>For control of first and second instars only.</p> <p><sup>2</sup>Suppression only.</p> <p><sup>3</sup>See resistance statement under Product Information.</p> <p><b>DO NOT</b> apply within 14 days of harvest.</p> <p><b>DO NOT</b> apply more than 0.24 lb. a.i. (0.92 pts. or 14.74 fl. oz. of product)/A per season.</p>
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## PEANUTS

Pests	Product Rate Per Acre	USE DIRECTIONS
Cutworm spp. Green Cloverworm Potato Leafhopper Rednecked Peanut Worm Threecornered Alfalfa Leafhopper Velvetbean Caterpillar	0.92-1.54 fl. oz. (0.015-0.025 lb. a.i.)	Use scouting to determine need for application, usually at intervals of 7 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.
Bean Leaf Beetle Corn Earworm Fall Armyworm <sup>1</sup> Grasshopper spp. Southern Corn Rootworm (Adult) Stink Bug spp. Tobacco Thrips Vegetable Weevil Whitefringed Beetle (Adult)	1.23-1.84 fl. oz. (0.02-0.03 lb. a.i.)	<p>Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of water/A.</p> <p><sup>1</sup>Use higher listed rates for large larvae.</p> <p><sup>2</sup>Suppression only.</p> <p><sup>3</sup>See resistance statement under Product Information</p>
Aphid spp. <sup>2</sup> Beet Armyworm <sup>2,3</sup> Lesser Cornstalk Borer <sup>2</sup> Soybean Looper <sup>2,3</sup> Spider Mite spp. <sup>2</sup>	1.84 fl. oz. (0.03 lb. a.i.)	<p><b>DO NOT</b> apply within 14 days of harvest.</p> <p><b>DO NOT</b> apply more than 0.12 lb. a.i. (0.46 pt. or 7.37 fl. oz. of product)/A per season.</p>

**POME FRUITS – APPLE, CRABAPPLE, LOQUAT, MAYHAW, ORIENTAL PEAR, PEAR, QUINCE**

Pests	Product Rate Per Acre	USE DIRECTIONS
Apple Aphid Apple Maggot (Adult) Cherry Fruit Fly spp. (Adult) Codling Moth Green Fruitworm Japanese Beetle Leafhopper spp. Leafroller spp. Lesser Appleworm Omnivorous Leafroller Orange Tortrix Oriental Fruit Moth Pear Psylla <sup>1</sup> Pear Sawfly Periodical Cicada Plant Bug spp. Plum Curculio Rosy Apple Aphid San Jose Scale (Fruit infestations only) Spirea Aphid <sup>1</sup> Stink Bug spp. Tent Caterpillar spp. Tentiform Leaf Miner spp. Tree Borer spp. Tufted Apple Budworm Webworm spp.	1.23-2.46 fl. oz. (0.02-0.04 lb. a.i.)	See additional instructions below. Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds and IPM recommendations.  Apply by ground or air using enough water to obtain full coverage of the foliage or target area. When applying by air, apply in at least 5 gals. of water per acre, but use higher volumes as appropriate for thorough coverage.  <sup>1</sup> Suppression only.  <b>DO NOT</b> apply within 21 days of harvest.  <b>DO NOT</b> apply more than 0.2 lb. a.i. (0.77 pts. or 12.29 fl. oz. of product)/A per year.  <b>DO NOT</b> apply more than 0.16 lb. a.i. (0.61 pts. or 9.83 fl. oz. of product)/A per year post bloom.

**STONE FRUITS – APRICOT, SWEET CHERRY, TART CHERRY, NECTARINE, PEACH, PLUM, CHICASAW PLUM, DAMSON PLUM, JAPANESE PLUM, PLUMCOT, PRUNE**

Pests	Product Rate Per Acre	USE DIRECTIONS
American Plum Borer Apple Maggot (Adult) Black Cherry Aphid Cherry Fruit Fly spp. (Adult) Codling Moth Green Fruitworm Japanese Beetle June Beetle Leafhopper spp. Leafroller spp. Oriental Fruit Moth Peachtree Borer spp. Peach Twig Borer Pear Sawfly Periodical Cicada Plant Bug spp. Plum Curculio	1.23-2.46 fl. oz. (0.02-0.04 lb. a.i.)	Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds and IPM recommendations.  Apply by ground or air using enough water to obtain full coverage of the foliage or target area. When applying by air, apply at least 5 gals. of water per acre but use higher volumes as appropriate for thorough coverage. <b>DO NOT</b> apply within 14 days of harvest.  <b>DO NOT</b> apply more than 0.2 lb. a.i. (0.77 pts. or 12.29 fl. oz. of product)/A

Rose Chafer Stink Bug spp. Tent Caterpillar spp. Thrips spp.		per year. <b>DO NOT</b> apply more than 0.16 lb. a.i. (0.61 pts. or 9.83 fl. oz. of product)/A per year post bloom.
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## SUGARCANE

Pests	Product Rate Per Acre	USE DIRECTIONS
Mexican Rice Borer <sup>1</sup> Pygmy Mole Cricket Rice Stalk Borer <sup>1</sup> Sugarcane Aphid <sup>3</sup> Sugarcane Beetle (Adult) <sup>2</sup> Sugarcane Borer <sup>1</sup> West Indian Crane fly Yellow Sugarcane Aphid <sup>3</sup>	1.54-2.46 fl. oz. (0.025-0.04 lb. a.i.)	Use scouting to determine need for application, usually at intervals of 7 or more days. Base the timing and frequency of applications on when insect populations reach local economic threshold.  Apply by ground or air using enough water to obtain full coverage of the foliage or target area. When applying by air, apply at least 2 gals. of water/A.  <sup>1</sup> For control before the larva bores into the plant stalk.  <sup>2</sup> Suppression only of beetles active above ground.  <sup>3</sup> See resistance statement under Product Information.  <b>DO NOT</b> apply within 21 days of harvest.  <b>DO NOT</b> apply more than 0.16 lb. a.i. (0.61 pts. or 9.83 fl. oz. of product)/A per season.

## SUNFLOWER

Pests	Product Rate Per Acre	USE DIRECTIONS
Cutworm spp. Sunflower Beetle	0.92-1.54 fl. oz. (0.015-0.025 lb. a.i.)	Use scouting to determine need for application, usually at intervals of 5 or

<p>Banded Sunflower Moth Fall Armyworm<sup>1</sup>  Grasshopper spp.  Head-Clipper Weevil (Adult)  Japanese Beetle (Adult)  Leafhopper spp.  Meadow Spittlebug  Painted Lady (Thistle)  Caterpillar Seed Weevil (Adult)  Spotted Cabbage Looper  Stem Weevil (Adult)  Stink Bug spp.  Sunflower Maggot (Adult)  Sunflower Moth  Woollybear Caterpillar</p>	<p>1.23-1.84 fl. oz.  (0.02-0.03 lb. a.i.)</p>	<p>more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.</p> <p>Apply by ground or air using enough water to obtain full coverage of sunflower heads and/or foliage. When applying by air, apply in at least 2 gals. of water/A.</p> <p><sup>1</sup>Use higher listed rates for large larvae.</p> <p><sup>2</sup>Suppression only.</p>
<p>Beet  Armyworm<sup>2,3</sup>  Spider Mite spp.<sup>2</sup></p>	<p>1.84 fl. oz.  (0.03 lb. a.i.)</p>	<p><sup>3</sup>See resistance statement under Product Information.</p> <p><b>DO NOT</b> apply within 45 days of harvest.</p> <p><b>DO NOT</b> apply more than 0.12 lb. a.i. (0.46 pt. or 7.37 fl. oz. of product)/A per season. <b>DO NOT</b> apply more than 0.09 lb. a.i. (0.35 pt. or 5.53 fl. oz. of product)/A per season after bloom initiation.</p> <p><b>DO NOT</b> apply as an Ultra-Low Volume (ULV) spray.</p>

**TOBACCO**

Pests	Product Rate Per Acre	USE DIRECTIONS
<p>Armyworm spp.<sup>1</sup>  Blister Beetle spp.  Cabbage Looper  Corn Earworm  Cucumber Beetle spp. (Adult)  Cutworm spp.  Grasshopper spp.  Japanese Beetle (Adult)  Katydid spp.  Plant Bug spp.<sup>3</sup>  Potato Tuberworm  Saltmarsh Caterpillar  Stinkbug spp.  Tobacco Aphid spp.<sup>2,3</sup>  Tobacco Budworm<sup>3</sup>  Tobacco Flea Beetle (Adult)  Tobacco Hornworm  Tobacco Thrips spp.<sup>2</sup></p>	<p>0.92-1.84 fl. oz.  (0.015-0.03 lb. a.i.)</p>	<p>Use scouting to determine need for application, usually at intervals of 7 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.</p> <p>Apply by ground or air using enough water to obtain full coverage of the foliage. When applying by air, apply in at least 2 gals. of water/A.</p> <p><sup>1</sup>For control of first and second instars only.</p> <p><sup>2</sup>Suppression only.</p>

Tomato Hornworm Tree Cricket spp. Vegetable Weevil (Adult) Webworm spp.		<sup>3</sup> See resistance statement under Product Information.  <b>DO NOT</b> apply within 40 days of harvest.  <b>DO NOT</b> apply more than 0.09 lb. a.i. (0.35 pt. or 5.53 fl. oz. of product)/A per year.
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**TREE NUTS – ALMOND, BEECH NUT, BRAZIL NUT, BUTTERNUT, CASHEW, CHESTNUT, CHINQUAPIN, FILBER (HAZLENUT), HICKORY NUT, MACADAMIA NUT (BUSH NUT), PISTACHIO, WALNUT-BLACK, WALNUT-ENGLISH (PERSIAN), PECAN**

Pests	Product Rate Per Acre	USE DIRECTIONS
Ants Chinch Bug Codling Moth Filbertworm Hickory Shuckworm Leaffooted Bug Leafroller spp. Navel Orangeworm Peach Twig Borer Pecan Aphid spp. Pecan Casebearer spp. Pecan Phylloxera spp. Pecan Spittlebug Pecan Weevil Plant Bug spp. Stink Bug spp. Walnut Aphid Walnut Husk Fly spp. (Adult)	1.23-2.46 fl. oz. (0.02-0.04 lb. a.i.)	Use scouting to determine need for application, usually at intervals of 5 or more days. Base the timing and frequency of applications on when insect populations reach local economic thresholds.  Apply by ground or air using enough water to obtain full coverage of the foliage or target area. When applying by air, apply in at least 5 gals. of water per acre, but use higher listed rates as appropriate for thorough coverage.  <b>DO NOT</b> apply within 14 days of harvest.  <b>DO NOT</b> apply more than 0.16 lb. a.i. (0.61 pts. or 9.83 fl. oz. of product)/A per year.  <b>DO NOT</b> apply more than 0.12 lb. a.i. (0.48 pt. or 7.37 fl. oz. of product)/A per year post bloom.

**TUBEROUS AND CORM VEGETABLES – ARRACACHA, ARROWROOT, ARTICHOKE (Chinese and Jerusalem only), CANNA (edible), CASSAVA (bitter and sweet), CHAYOUT (root), CHUFA, DASHEEN, GINGER, LEREN, POTATO, SWEET POTATO, TANIER, TURMERIC, YAM (bean and true)**

Pests	Product Rate Per Acre	USE DIRECTIONS
Cutworm spp. Leafhopper spp. Saltmarsh Caterpillar Sweet Potato Hornworm Woollybear Caterpillarspp.	0.92-1.54 fl. oz. (0.015-0.025 lb. a.i.)	Use scouting to determine need for application, usually at intervals of 7 or more days. Base the timing and frequency of applications on when insect

<p>Aphid spp.<sup>1</sup>  Armyworm spp.<sup>1</sup>  Blister Beetle spp.  Colorado Potato Beetle<sup>1</sup>  Corn Earworm  Cricket spp.  Cucumber Beetle spp. (Adult)  European Corn Borer  Flea Beetle spp. (Adult)  Grasshopper spp.  Looper spp.<sup>1</sup>  Lygus Bug spp.<sup>1</sup>  Plant Bug spp.  Potato Psyllid  Potato Tuberworm  Stink Bug spp.  Sweet Potato Leaf Beetle (Adult)  Sweet Potato Vine Borer  Thrips spp.<sup>1,2</sup>  Tortoise Beetle spp.  Webworm spp.  Weevil spp. (Adult)</p>	<p>1.23-1.84 fl. oz.  (0.02-0.03 lb. a.i.)</p>	<p>populations reach local economic thresholds.</p> <p>Apply by ground or air using enough water to obtain full coverage of foliage. When applying by air, apply in at least 2 gals. of water per acre. When applying by ground, apply in a minimum of 10 gals. of water per acre.</p> <p>Use higher application volumes and/or application rates when foliage is dense, larvae are large, pest populations are high, plant size increases, or weather conditions are adverse. Use higher listed rates for longer residual. Insects that tunnel or bore into leaves, vines, stems, tubers, or corms must be controlled before penetration. Only exposed insects (larvae and/or adults) can be controlled with foliar applications of this product.</p>
<p>Leafminer spp.<sup>1,3</sup>  Whitefly spp.<sup>1,3</sup>  Spider Mite spp.<sup>3</sup></p>	<p>1.84 fl. oz.  (0.03 lb. a.i.)</p>	<p><sup>1</sup>See resistance statement under Product Information.</p> <p><sup>2</sup>Does not include Western Flower Thrips.</p> <p><sup>3</sup>Suppression only.</p> <p><b>DO NOT</b> apply within 7 days of harvest.</p> <p><b>DO NOT</b> apply more than 0.12 lb. a.i. (0.46 pt. or 7.37 fl. oz. of product) per acre per season.</p>

**CONIFER AND DECIDUOUS TREES – PLANTATIONS AND NURSERIES**

Pests	Product Rate Per Acre	USE DIRECTIONS
<p>Bagworm  Balsam Twig  Aphid Balsam  Wooly Aphid  Birch Leafminer  Black Pine Weevil  Elm Leaf Beetle  European Elm Leaf Beetle  Gypsy Moth  Japanese Beetle  June Beetle spp.  Leaf Beetle spp.  Leafroller spp.  May Beetle spp.  Mealybug spp.<sup>1</sup>  Pales Weevil  Pine Chafer</p>	<p>1.23-2.46 fl. oz.  (0.02-0.04 lb. a.i.)</p>	<p>Use scouting to determine timing for control of exposed foliage, flower, cone, seed and bark feeding insects. Base the timing and frequency of applications on when insect populations reach local economic thresholds.</p> <p>Apply by ground or air using enough water to obtain full coverage of target site. When applying by air, apply in at least 2 gals. of water/A.</p> <p><sup>1</sup>Suppression only.</p>

Pine Colaspis Beetle Pine Conelet Bug Pine Leaf Chermid Pine Needle Scale Pine Sawfly spp. Pine Tip Moth spp. Pine Tortoise Scale Pine Weevil spp. Poplar Aphid spp. Sawfly spp. Spittlebug spp. Spruce Budworm Tent Caterpillar spp. Tussock Moth spp. Webworm spp.		<b>DO NOT</b> apply more than 0.24 lb. a.i. (0.92 pts. or 14.74 fl. oz. of product)/A per year.
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**CONIFER AND DECIDUOUS TREES – SEED ORCHARDS**

<b>Pests</b>	<b>USE DIRECTIONS</b>
Coneworm spp. Seed Bug spp. Thrips spp.	For high volume sprayers, dilute 2.46 fl. oz. of product per 100 gals. of water and apply 5-10 gals. of finished spray per tree.  For low volume sprayers, dilute 10 fl. oz. of product per 100 gals. of water and apply 100 gals. of finished spray per acre.  For aerial applications, apply 7.5 fl. oz. of product per acre in a minimum of 10 gals. of finished spray per acre.  <b>DO NOT</b> apply more than 0.5 lb. a.i. (2 pts. or 30.72 fl. oz. of product)/A per year.



## NON-AGRICULTURAL USES

### NON-CROPLAND ADJACENT TO AGRICULTURAL AREAS (EXCLUDING PUBLIC LAND)

Pests	USE DIRECTIONS
See crop instructions in sections above for specific pest and rate information.	<p>Spray non-cropland adjacent to agricultural areas to control insects which may migrate to and threaten crops. Follow the Directions for Use instructions, application rates, and spray recommendations found elsewhere on this label for the adjacent crop outlet and target pests.</p> <p>When foliage is dense/large, insect populations are high or larval stages are large, use the highest labeled rate for that crop-pest combination.</p> <p>Repeat as necessary to maintain control.</p> <p><b>DO NOT</b> apply more than 0.2 lb. a.i. (0.77 pts. or 12.29 fl. oz. of product)/A per year.</p> <p><b>DO NOT</b> graze livestock in treated areas.</p>

### Rate Conversion Chart

Treated	60	50	40	33	25
pts./A	0.04	0.08	0.10	0.12	0.15
fl. oz./A	0.61	1.23	1.54	1.84	2.46
lbs. a.i./A	0.01	0.02	0.025	0.03	0.04

### FOR USE ON PLANTS INTENDED FOR AESTHETIC PURPOSES OR CLIMATIC MODIFICATION AND BEING GROWN IN INTERIOR PLANSAPES, ORNAMENTAL GARDENS OR PARKS, OR ON LAWNS OR GROUNDS

- **DO NOT** apply directly to impervious horizontal surfaces such as sidewalks, driveways, and patios except as a spot or crack-and-crevice treatment. During application, do not allow pesticide to enter or runoff into storm drains, drainage ditches, gutters or surface waters.
- All outdoor applications must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses:
  1. Treatment to soil or vegetation around structures;
  2. Applications to lawns, turf, and other vegetation;
  3. Applications to building foundations, up to a maximum height of 3 feet above grade;
  4. Applications to underside of eaves, soffits, doors, or windows permanently protected from rainfall by a covering, overhang, awning, or other structure;
  5. Applications around potential pest entry points into buildings, when limited to a surface band not to exceed one inch in width;

6. Applications made through the use of a coarse, low-pressure spray to only those portions of surfaces that are directly above bare soil., lawn, turf, mulch or other vegetation, as listed on this label, and not over an impervious surface, drainage or other condition that could result in runoff into storm drains, drainage ditches, gutters, or surface waters, in order to control occasional invaders or aggregating pests.

- **DO NOT** water the treated area to the point of run-off.
- **DO NOT** make applications during rain.
- **DO NOT** apply directly to sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur, except as directed by this label.

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

**PESTICIDE STORAGE:** Store in a cool, dry place. For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

### CONTAINER HANDLING:

Containers < 5 Gallons: Nonrefillable container. **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Minibulk Containers:** Nonrefillable container. **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying.

Triple rinse as follow: Empty the remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Bulk Containers:** Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes.

Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. When the container is empty, replace the cap and seal all openings that have been opened during use; and return to the point of purchase, or to a designated location named at the time of purchase of this product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. **DO NOT** transport if this container is damaged or leaking. If the container is damaged or leaking, call CHEMTREC. If the container is damaged and leaking or material has been spilled, follow these procedures:

- Cover spill with absorbent material.
- Sweep into disposal container.

- Wash area with detergent and water and follow with clean water rinse.
- **DO NOT** allow to contaminate water supplies.
- Dispose of according to instructions.

If not returned to the point of purchase or to a designated location, clean empty container as instructed above and offer for recycling. Disposal of this container must be in compliance with state and local regulations.

### **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 this product, which are beyond the control of ALBAUGH, LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ALBAUGH, LLC and Seller harmless for any claims relating to such factors.

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## LABEL HISTORY

Not Part of Final printed Label

File Name	Revision Mark	Comment
042750-00XXX.20200324.Crusader2ME.DRAFT	032420	Initial application draft label
042750-00GIL.20210322.DRAFT	032221	Corrections requested by EPA