

**RESTRICTED USE PESTICIDE**  
**DUE TO TOXICITY 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.**

LAMBDA-CYHALOTHRIN GROUP 3A INSECTICIDE



Contains lambda-cyhalothrin, the active ingredient used in Warrior II with Zeon Technology®.

<b>ACTIVE INGREDIENT:</b>	(% by weight)
Lambda-cyhalothrin <sup>1,2</sup> .....	22.8%
<b>OTHER INGREDIENTS:</b> .....	77.2%
<b>TOTAL</b> .....	100.0%
Contains 2.08 lbs of active ingredient per gal and is a capsule suspension.	
<sup>1</sup> CAS No. 91465-08-6	
<sup>2</sup> Synthetic pyrethroid	
EPA Reg. No.: 91234-249	

**KEEP OUT OF REACH OF CHILDREN**  
**WARNING/AVISO**

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 below for additional Precautionary Statements.

FIRST AID	
<b>If swallowed:</b>	<ul style="list-style-type: none"><li>▪ Call a poison control center or doctor immediately for treatment advice.</li><li>▪ Have person sip a glass of water if able to swallow.</li><li>▪ Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>▪ Do not 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 mouth-to-mouth, if possible.</li><li>▪ Call a poison control center or doctor for further treatment advice.</li></ul>
<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 eye.</li><li>▪ Call a poison control center or doctor for treatment advice.</li></ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at 1-844-685-9173 for emergency medical treatment information.	

**For Chemical Emergency: Spill, Leak, Fire, Exposure, or Accident,**  
**Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)**

Serpent™ with VenomCap Technology is not manufactured, or distributed by Syngenta, seller of Warrior II with Zeon Technology®.



**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
**WARNING/AVISO**

May be fatal if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

Skin exposure may also result in a sensation described as a tingling, itching, burning, or prickly feeling. Onset may occur immediately to 4 hrs. after exposure and may last 2 - 30 hrs., without damage. Wash exposed areas once with soap and water. Relief from the skin sensation may be obtained by applying an oil-based cream.

**Personal Protective Equipment (PPE)**

Waterproof gloves are acceptable when the solvent is water. If petroleum or vegetable oil solvent is used wear gloves made of barrier laminate, or Viton ≥ 14 mils.

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of Viton ≥ 14 mils, and/or barrier laminate
- Shoes plus socks
- 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 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 clothing 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 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 are visiting the treatment area.

**DIRECTIONS FOR USE**  
**RESTRICTED USE PESTICIDE**

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
- Chemical-resistant gloves made of Viton ≥ 14 mils, and/or barrier laminate
- Shoes plus socks
- Protective eyewear

**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.

**DO NOT** enter or allow others to enter the treated areas until sprays have dried. **AVOID** working in spray mist.

Keep all unprotected persons out of operating areas or vicinity where there may be danger of drift. Certain states may require more restrictive reentry intervals; consult your State Department of Agriculture for further information.

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

**USE DIRECTIONS**

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 gals per acre by air or 10 gals 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 application volumes and/or higher use rates may improve initial and residual control.

For cutworm control, **Serpent with VenomCap Technology** may be applied before, during, or after planting. For soil-incorporated applications, use higher labeled rates for improved control.

**RESISTANCE MANAGEMENT**

For resistance management **Serpent with VenomCap Technology** contains a Group 3A insecticide. Any insect population may contain individuals naturally resistant to **Serpent with VenomCap Technology** and other Group 3A insecticide. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of **Serpent with VenomCap Technology** or other Group 3A insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues

between the individual components of a mixture. In addition, consider the following recommendation provided by Insecticide Resistance Action Committee (IRAC).

- Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the target pest(s).
  - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
  - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.
  - Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
  - Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

## 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 **Serpent with VenomCap Technology** 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 fishponds).

#### 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 fishponds).

### 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 fishponds).

## 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 wing-tip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wingspan 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, always add **Serpent with VenomCap Technology** last. Fill the tank with 1/2 - 2/3 volume of the mixing diluent. Make sure all other products are fully dispersed in the mixing diluent before adding the recommended labeled rate of **Serpent with VenomCap Technology** 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. Follow the precautions and limitations of the most restricted product in the tank mixture.

While **Serpent with VenomCap Technology** 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.

**Serpent with VenomCap Technology** is an aqueous-based formulation. It is recommended that no type of non-emulsifiable oils be used in combination with **Serpent with VenomCap Technology**. 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:

1. Contains only EPA exempt ingredients.
2. Is nonphytotoxic to the target crop.
3. Is compatible in mixture. (May be established through a jar test.)
4. Is supported locally for use with **Serpent with VenomCap Technology** 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

It is recommended that the following not be used in combination with **Serpent with VenomCap Technology** as diluents or adjuvants:

- Nonemulsifiable Oils
- Diesel Fuel
- Straight Mineral Oil

## CHEMIGATION

### Sprinkler Irrigation Application

Apply **Serpent with VenomCap Technology** 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, (see **TANK MIX APPLICATION**) rates and mixing instructions. These recommendations should be proven, through university and extension field trials, to be effective with **Serpent with VenomCap Technology** applied by chemigation.

Check the irrigation system to insure uniform application of water to all areas. Thoroughly cover the foliage for control. Maintain agitation in the pesticide supply tank.

Apply by injecting the labeled rate of **Serpent with VenomCap Technology** 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. Inject the products 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 directions, if application is being made during a normal irrigation set of a stationary sprinkler, inject labeled rate of **Serpent with VenomCap Technology** for the area covered into the system only during the end of the irrigation set for sufficient time to provide adequate coverage and product distribution.

Do not apply **Serpent with VenomCap Technology** through an irrigation system connected to a public water system. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

### Use Precautions - Sprinkler Irrigation Applications

- A. 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.
- B. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- C. If you have any questions about calibration, you should contact State Extension Service Specialists, equipment manufacturers, or other experts.
- D. 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.
- E. 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.
- F. 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.
- G. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
- H. 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.
- I. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- J. 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.
- K. 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.
- L. Any alternatives to the above required safety devices must conform to the list of EPA-approved alternative devices.
- M. Do not apply when wind speed favors drift beyond the area intended for treatment or non-uniform distribution of treated water.
- N. Do not apply through chemigation systems connected to public water systems.

## SPECIFIC USE DIRECTIONS

### AGRICULTURAL USES

Crop	Target Pests	Rate	
		lb ai/A	fl oz/A
ALFALFA AND ALFALFA GROWN FOR SEED	Alfalfa Caterpillar Army Cutworm Cutworm Species Green Cloverworm Leafhopper Species	0.015 - 0.025	0.96 - 1.60
	Alfalfa Seed Chalcid (Adult) Alfalfa Weevil Armyworm Bean Leaf Beetle (Adult) Blister Beetle Species Blue Alfalfa Aphid Clover Leaf Weevil Species Clover Root Borer (Adult) Corn Earworm Cowpea Aphid Cowpea Curculio (Adult) Cowpea Weevil (Adult) Cucumber Beetle Species (Adult) Egyptian Alfalfa Weevil Fall Armyworm <sup>1</sup> Grape Colaspis (Adult)	0.02 - 0.03	1.28 - 1.92
	Beet Armyworm <sup>1,3</sup> Blotch Leafminer <sup>3</sup>	0.03	1.92

#### Remarks:

- Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. Apply in a minimum of 2 gals per acre by air or 10 gals per acre by ground. When foliage is dense and/or pest populations are high 5 - 10 gals per acre by air or 20 gals per acre by ground and higher labeled rates are recommended. Use higher labeled rates for increased residual control.
- Apply when bees are not actively foraging, during the early morning or during the evening hours. Be aware of bee hazard resulting from a cool evening and/or morning dew. Remove bee shelters during and for 2 - 3 days following application. **Do not** apply directly to bee shelters.

#### Restrictions:

- **Do not** apply more than 0.03 lb ai (1.92 fl oz or 0.12 pt of product) per acre per cutting.
- **Do not** apply more than 0.12 lb ai (7.68 fl oz or 0.48 pt of product) per acre per season.
- **Do not** apply within 1 day of harvest for forage or within 7 days of harvest for hay.

<sup>1</sup> Use higher label rates for large larvae.

<sup>2</sup> Suppression only.

<sup>3</sup> See **Resistance** statement under **Use Directions**.

<sup>4</sup> Does not include Western Flower Thrips.



Crop	Target Pests	Rate	
		lb ai/A	fl oz/A
CANOLA	Armyworm Species Cabbage Seedpod Weevil Cutworm Species Diamondback Moth	0.015 - 0.03	0.96 - 1.92
	Cabbage Aphid	0.03	1.92

**Remarks:**

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply a minimum of 2 gals of water per acre.

**Restrictions:**

- **Do not** apply within 7 days of harvest.
- **Do not** apply more than 0.09 lb ai (5.76 fl oz or 0.36 pt of product) per acre per year.

Crop	Target Pests	Rate	
		lb ai/A	fl oz/A
CEREAL GRAINS Corn (At Plant): Field Corn Popcorn Seed Corn Sweet Corn	Corn Rootworm Larvae: Mexican Northern Southern Western Cutworm Species	0.005 lb ai per 1,000 ft of row <sup>2</sup>	0.33 fl oz per 1,000 ft of row <sup>2</sup>
	Lesser Cornstalk Borer Red Imported Fire Ant <sup>1</sup> Seedcorn Beetle Seedcorn Maggot White Grub Species Wireworm Species		

**Remarks:**

- **Banded Applications** - Apply 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.
- **In-Furrow Applications** - Apply into the seed furrow through spray nozzles or microtubes, behind the planter furrow openers and in front of the press wheel.
- Apply a minimum of 3 gals finished spray per acre.

**Restrictions:**

- **Do not** harvest or graze livestock or cut treated crops for feed within 21 days of at plant application.
- **Do not** apply more than 0.09 lb ai (5.76 fl oz or 0.36 pt of product) per acre per crop at plant.
- For field corn, popcorn, and seed corn **do not** apply more than 0.12 lb ai (7.68 fl oz or 0.48 pt of product) per acre per crop from at plant and foliar applications. For sweet corn **do not** apply more than 0.48 lb ai (30.72 fl oz or 1.92 pts of product) per acre per crop from at plant and foliar applications.

<sup>1</sup> Suppression only.

<sup>2</sup> Lbs ai and Fl Oz/A of Serpent with VenomCap Technology Applied at 0.33 fl 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 ai/A	0.067	0.07	0.075	0.079	0.084	0.09
Fl oz/A	4.3	4.55	4.8	5.05	5.4	5.75

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
<b>CEREAL GRAINS</b> Corn (Foliar): Field Corn Popcorn Seed Corn	Corn Earworm <sup>1</sup> Cutworm Species Green Cloverworm	Meadow Spittlebug Western Bean Cutworm <sup>1</sup>	0.015 - 0.025	0.96 - 1.60
	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): Mexican Northern Southern Western English Grain Aphid <sup>3</sup> European Corn Borer <sup>1</sup> Fall Armyworm <sup>2</sup>	Flea Beetle Species Grasshopper Species 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 Species Tobacco Budworm <sup>1,4</sup> Webworm Species Yellowstriped Armyworm <sup>2</sup>	0.02 - 0.03	1.28 - 1.92
	Beet Armyworm <sup>4</sup> Chinch Bug Greenbug <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 <sup>1</sup>	0.03	1.92

#### Remarks:

- Apply as required by scouting, or locally prescribed corn growth stages, usually at intervals of 7 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds or other locally recommended methods.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of target location. When applying by air, apply in a minimum of 2 gals of water per acre.
- For chinch bug control, begin applications when bugs migrate from small grains or grass weeds to small corn. Direct spray to the base of corn plants. Repeat applications at 3- to 5-day intervals if needed. **Serpent with VenomCap Technology** may only suppress heavy infestations and/or subsequent migrations.
- For control of adult corn rootworm beetles (*Diabrotica* species) as part of an aerial applied corn rootworm control program use a minimum of 0.03 lb ai (1.92 fl oz of product) per acre.

#### Restrictions:

- **Do not** apply within 21 days of harvest.
- **Do not** 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. Do not feed treated corn fodder or silage to meat or dairy animals within 21 days after last treatment.
- **Do not** apply more than 0.12 lb ai (7.68 fl oz or 0.48 pt of product) per acre per crop from at plant and foliar applications.
- **Do not** apply more than 0.06 lb ai (3.84 fl oz or 0.24 pt of product) per acre after silk initiation. Do not apply more than 0.03 lb ai (1.92 fl oz or 0.12 pt of product) per acre after corn has reached the milk stage (yellow kernels with milky fluid).

<sup>1</sup>For control before the larva bores into the plant stalk or ear.

<sup>2</sup>Use higher label rates for large larvae.

<sup>3</sup>Suppression only.

<sup>4</sup>See **Resistance** statement under **Use Directions**.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
CEREAL GRAINS Sweet Corn (Foliar)	Aphid Species <sup>2,3</sup>	Fall Armyworm <sup>1</sup>	0.02 - 0.03	1.28 - 1.92
	Armyworm <sup>1</sup>	Flea Beetle Species		
	Aster Leafhopper	Grasshopper Species		
	Beet Armyworm <sup>1,3</sup>	Japanese Beetle (Adult)		
	Chinch Bug	Sap Beetle (Adult)		
	Common Cornstalk Borer	Southern Armyworm <sup>1</sup>		
	Corn Earworm	Southwestern Corn Borer		
	Corn Rootworm Beetle (Adult):	Spider Mite Species <sup>2</sup>		
	Mexican	Stink Bug Species		
	Northern	Tarnished Plant Bug		
	Southern	Webworm Species		
	Western	Western Bean Cutworm		
	Cutworm Species	Yellowstriped Armyworm <sup>1</sup>		
	European Corn Borer		0.03	1.92
	Corn Silkfly (Adult) <sup>2</sup>			

**Remarks:**

- Apply as required by scouting, or locally prescribed corn growth stages, usually at intervals of 4 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds or other locally recommended methods, target application for control before insects enter the stalk or ear.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage and ears (if present). When applying by air, apply in a minimum of 2 gals of water per acre.
- For control of adult corn rootworm beetles (*Diabrotica* species) as part of an aerial applied corn rootworm control program use a minimum of 0.025 lb ai (1.60 fl oz of product) per acre.

**Restrictions:**

- **Do not** apply within 1 day of harvest.
- **Do not** 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. Do not feed treated corn fodder or silage to meat or dairy animals within 21 days after last treatment.
- **Do not** apply more than 0.48 lb ai (30.72 fl oz or 1.92 pt of product) per acre per crop from at plant and foliar applications.

<sup>1</sup> Use higher label rates for large larvae.<sup>2</sup>Suppression only.

<sup>3</sup> See **Resistance** statement under **Use Directions**.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
<b>CEREAL GRAINS</b>				
Rice	Bird Cherry-Oat Aphid	Rice Water Weevil (Adult)	0.025 - 0.04	1.6 - 2.56
Wild Rice	Chinch Bug	Riceworm		
	Fall Armyworm	Sharpshooter Species		
	Grasshopper Species	True Armyworm		
	Greenbug	Yellow Sugarcane Aphid		
	Leafhopper Species	Yellowstriped Armyworm		
	Rice Stink Bug			
	European Corn Borer <sup>1</sup>	Rice Stalk Borer <sup>1</sup>	0.03 - 0.04	1.92 - 2.56
	Mexican Rice Borer <sup>1</sup>	Sugarcane Borer <sup>1</sup>		
	Rice Seed Midge <sup>1</sup>			



**Remarks:**

- Apply as required by scouting. Base timing and frequency of application on insect populations reaching locally determined economic thresholds. Determine the need for repeat applications, usually at intervals of 5 - 7 days, by scouting.
- **Serpent with VenomCap Technology** can be safely used when propanil products are being used for weed control.
- Apply by air or by ground equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals of water (or total carrier volume) per acre, but ensure sufficient volume is used to provide adequate coverage. In addition, adding an emulsified crop oil (e.g., 1 pt per acre) when lower aerial application volumes are used is recommended to help improve coverage, reduce evaporation and improve efficacy.
- For control of rice water weevil in dry-seeded rice, make a foliar application as indicated by scouting for the presence of adults and/or feeding scars, usually within a time-frame of 0 - 5 days after permanent flood establishment. Do not exceed 10 days from starting permanent flood until insecticide application unless scouting indicates weevils have not been previously present. Adults may also be treated at later stages of rice development to reduce overwintering populations.
- For control of rice water weevil in water-seeded rice, make the first foliar application after pinpoint flood as indicated by scouting for the presence of adults and/or feeding scars, usually when rice has emerged 0.5 inch above the waterline. Under conditions of prolonged migration into the field, start field scouting for rice water weevil adults and/or feeding scars 3 - 5 days after the initial treatment and, if needed, apply a second application within 7 - 10 days of the first application. Adults may also be treated at later stages of rice development to reduce overwintering populations.
- California: In addition to above directions for control of rice water weevil in water-seeded rice, **Serpent with VenomCap Technology** may be applied at the 1 - 3 leaf growth stage, with the majority at the 2-leaf growth stage. Adults are vulnerable on levees and in the water. Larvae are vulnerable while feeding on the leaf prior to entering the soil. Monitor for adults, based upon field history and density of population. Monitor field edges and levee areas for adults. Treat in the following manner: a) spray the inside perimeter of the field, or b) spray the entire field.
- Greenbug is known to have many biotypes. **Serpent with VenomCap Technology** may only provide suppression. If satisfactory control is not achieved with the first application of **Serpent with VenomCap Technology**, a resistant biotype may be present. Use alternate chemistry for control.
- For control of stem borers, scout fields, when rice growth is near panicle differentiation, for early symptoms of damaging populations exhibited as discoloration (orange-tan) around the junction of the leaf sheath and leaf blade which is caused by feeding of young larvae within the sheath. Applications must be made before larvae bore into rice stems. Make the first application at panicle differentiation to 2-inch panicle for partial control. Make the second application at boot to heading for maximum control. All rice varieties are susceptible to stem borer damage, but Cocodrie and Priscilla are particularly susceptible.
- Mixers/loaders supporting aerial applications to wild rice at a rate of 0.04 lb ai per acre, and treating 1,200 acres (or more) per day must wear dust-mist respirator.

**Restrictions:**

- **Do not** release flood water within 7 days of an application.
- **Do not** apply more than 0.12 lb ai (7.68 fl oz or 0.48 pt of product) per acre per season.
- **Do not** apply more than 0.04 lb ai (2.56 fl oz or 0.16 pt of product) per acre within 21 to 27 days of harvest.
- **Do not** apply within 21 days of harvest.
- **Do not** use treated rice fields for the aquaculture of edible fish and crustacea.
- **Do not** apply as an ultra-low volume (ULV) spray.

<sup>1</sup> For control before the larvae bores into the plant stalk.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
CEREAL GRAINS	Cutworm Species	Sorghum Midge	0.015 - 0.02	0.96 - 1.28
	Armyworm	Grasshopper Species	0.02 - 0.03	1.28 - 1.92
	Beet Armyworm <sup>3</sup>	Lesser Cornstalk Borer <sup>2</sup>		
	Corn Earworm	Southwestern Corn Borer <sup>2</sup>		
	European Corn Borer <sup>2</sup>	Stink Bug Species		
	Fall Armyworm <sup>1</sup>	Webworm Species		
	Flea Beetle Species	Yellowstriped Armyworm <sup>1</sup>		
	Chinch Bug	Rice Stalk Borer <sup>2</sup>	0.03	1.92
	Mexican Rice Borer <sup>2</sup>	Sugarcane Borer <sup>2</sup>		

**Remarks:**

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or aerial equipment using sufficient water and application methods to obtain full coverage of target location. When applying by air, apply in a minimum of 2 gals of water per acre.
- For sorghum midge control, begin applications when 25% of the sorghum heads have emerged and are in tip bloom. Repeat applications at 5-day intervals if needed.
- For chinch bug control, begin applications when bugs migrate from small grains or grass weeds to small sorghum. Direct spray to the base of sorghum plants. Repeat applications at 3- to 5-day intervals if needed. **Serpent with VenomCap Technology** may only suppress heavy infestations and/or subsequent migrations.

**Restrictions:**

- **Do not** apply more than 0.08 lb ai (5.12 fl oz or 0.32 pt of product) per acre per season.
- **Do not** apply more than 0.06 lb ai (3.84 fl oz or 0.24 pt of product) per acre per season after crop emergence.
- **Do not** apply more than 0.02 lb ai (1.28 fl oz or 0.08 pt of product) per acre per season once crop is in soft-dough stage.
- **Do not** apply within 30 days of harvest.

<sup>1</sup> Use higher label rates for large larvae.

<sup>2</sup> For control before the larva bores into the plant stalk.

<sup>3</sup> See **Resistance** statement under **Use Directions**.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
<b>CEREAL GRAINS</b>	Army Cutworm	Cutworm Species	0.015 - 0.025	0.96 - 1.60
Barley	Armyworm	Grasshopper Species	0.02 - 0.03	1.28 - 1.92
Buckwheat	Bird Cherry-Oat Aphid <sup>1</sup>	Hessian Fly <sup>4</sup>		
Oats	Cereal Leaf Beetle	Orange Blossom Wheat Midge		
Rye	English Grain Aphid <sup>1</sup>	Russian Wheat Aphid <sup>1</sup>		
Triticale	Fall Armyworm	Stink Bug Species		
Wheat	Flea Beetle Species	Yellowstriped Armyworm		
Wheat Hay	Grass Sawfly		0.025 - 0.03	1.60 - 1.92
	Chinch Bug	Greenbug <sup>1,3</sup>	0.03	1.92
	Corn Leaf Aphid <sup>2</sup>	Mite Species <sup>2</sup>		

**Remarks:**

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals of water per acre.
- For chinch bug control, repeat applications at 3- to 5-day intervals if needed. **Serpent with VenomCap Technology** may only suppress heavy infestations and/or migrations.
- Greenbug is known to have many biotypes. **Serpent with VenomCap Technology** may provide suppression only. In this situation, a second application using an alternative chemistry may be needed.

**Restrictions:**

- **Do not** apply within 30 days of harvest.
- **Do not** allow livestock to graze in treated areas or harvest treated wheat forage as feed for meat or dairy animals within 7 days after treatment. **Do not** feed treated straw to meat or dairy animals within 30 days after the last treatment.
- **Do not** apply more than 0.06 lb ai (3.84 fl oz or 0.24 pt of product) per acre per season.

<sup>1</sup> Best control is obtained before insects begin to roll leaves. Once crop has started to boot, **Serpent with VenomCap Technology** may provide suppression only. Higher labeled rates and increased coverage will be necessary.

<sup>2</sup> Suppression only.

<sup>3</sup> See **Resistance** statement under **Use Directions**.

<sup>4</sup> Make applications when adults emerge.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
<b>COLE CROPS (HEAD AND STEM BRASSICA)</b> Broccoli Brussels Sprouts Cabbage Cavalo Broccolo Cauliflower Chinese Broccoli (gai lon) Chinese Cabbage (napa) Chinese Mustard Cabbage (gai choy) Kohlrabi	Alfalfa Looper	Cutworm Species	0.015 - 0.025	0.96 - 1.60
	Cabbage Looper	Imported Cabbageworm		
	Cabbage Webworm	Southern Cabbageworm		
	Aphid Species <sup>2,3</sup>	Leafhopper Species	0.02 - 0.03	1.28 - 1.92
	Armyworm	Meadow Spittlebug		
	Beet Armyworm <sup>1,3</sup>	Plant Bug Species including <i>Lygus</i> Species <sup>3</sup>		
	Corn Earworm	Spider Mite Species <sup>2</sup>		
	Diamondback Moth <sup>3</sup>	Stink Bug Species		
	Fall Armyworm <sup>1</sup>	Thrips Species <sup>2</sup>		
	Flea Beetle Species	Vegetable Weevil (Adult)		
	Grasshopper Species	Whitefly Species <sup>2,3</sup>		
	Japanese Beetle (Adult)	Yellowstriped Armyworm		

**Remarks:**

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals of water per acre.

**Restrictions:**

- **Do not** apply within 1 day of harvest.
- **Do not** apply more than 0.24 lb ai (15.36 fl oz or 0.96 pt of product) per acre per season.

<sup>1</sup> For control of first and second instar only.

<sup>2</sup> Suppression only.

<sup>3</sup> See **Resistance** statement under **Use Directions**.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
<b>COTTON</b>	Cutworm Species	Tobacco Thrips	0.015 - 0.02	0.96 - 1.28
	Soybean Thrips			
	Cabbage Looper	<i>Lygus</i> Bug Species <sup>3</sup>	0.02 - 0.03	1.28 - 1.92
	Cotton Fleahopper	Pink Bollworm		
	Cotton Leaf Perforator	Saltmarsh Caterpillar		
	Cotton Leafworm			
	Banded-wing Whitefly <sup>2,3</sup>	Fall Armyworm	0.025 - 0.04	1.60 - 2.56
	Beet Armyworm <sup>1,3</sup>	Green Stink Bug		
	Boll Weevil	Southern Green Stink Bug		
	Brown Stink Bug	Sweet Potato Whitefly <sup>2,3</sup>		
	Cotton Aphid <sup>2,3</sup>	Tobacco Budworm <sup>3</sup>		
	Cotton Bollworm	Two-spotted Spider Mite <sup>2</sup>		
	European Corn Borer			

**Remarks:**

- Apply as required by scouting, usually at intervals of 5 - 7 days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or aerial equipment using sufficient water to obtain full coverage of foliage.
- Applications may also be made with equipment adapted and calibrated for ULV sprays. **Serpent with VenomCap Technology** may be mixed with once-refined vegetable oil and applied in a minimum of at least one qt of finished spray per acre.
- Under light bollworm/budworm infestation levels, 0.02 lb ai (1.28 fl oz of product) per acre may be applied in conjunction with intense field monitoring.
- For boll weevil control, spray on a 3- to 5-day schedule.
- When applied according to label directions for control of cotton bollworm and tobacco budworm, **Serpent with VenomCap Technology** also provides ovicidal control of unhatched *Heliothine* species eggs.

**Restrictions:**

- **Do not** apply within 21 days of harvest.
- **Do not** graze livestock in treated areas.
- **Do not** apply more than 0.2 lb ai (12.8 fl oz or 0.8 pt of product) per acre per season.
- **Do not** 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.

<sup>1</sup> For control of the first and second instar only.

<sup>2</sup> Suppression only.

<sup>3</sup> See **Resistance** statement under **Use Directions**.

Crop	Target Pests	Rate		
		lb ai/A	fl oz/A	
<b>CUCURBIT VEGETABLES</b> Chayote (fruit) Chinese Waxgourd (Chinese preserving melon) Citron Melon Cucumber Gherkin Gourd (edible) <i>Lagenaria</i> Species - includes: Hyotan, Cucuzza <i>Luffa Acutangula</i> , <i>L. cylindrical</i> - includes: Hechima, Chinese okra <i>Momordica</i> Species - includes: Balsam apple, balsam pear, bitter melon, Chinese cucumber Muskmelon (hybrids and/or cultivars of <i>Cucumis melo</i> ) - includes: True cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon Pumpkin Squash, summer ( <i>Cucurbita pepo</i> var. <i>melopepo</i> ) - includes: Crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini Squash, winter ( <i>Cucurbita maxima</i> ; <i>C. moschato</i> ) - includes: Butternut squash, calabaza, hubbard squash ( <i>C. mixta</i> ; <i>C. pepo</i> ) - includes: Acorn squash, spaghetti squash Watermelon - includes: hybrids and/or varieties of <i>Citrullus lanatus</i>	Armyworm Species <sup>1</sup> Blister Beetle Species Cabbage Looper Corn Earworm Cricket Species Cucumber Beetle Species (Adults) Cutworm Species Flea Beetle Species Grasshopper Species June Beetle Species Leaf-footed Bug Leafhopper Species <i>Lygus</i> Bug Species <sup>1</sup>  Aphid Species <sup>1</sup> Leafminer Species <sup>1,3</sup>	Melonworm Pickleworm Plant Bug Species Rindworm Species complex Saltmarsh Caterpillar Squash Beetle Squash Bug Species Squash Vine Borer Species Stink Bug Species Thrips Species <sup>1,2</sup> Tobacco Budworm <sup>1</sup> Webworm Species  Spider Mite Species <sup>3</sup> Whitefly Species <sup>1,3</sup>	0.02 - 0.03	1.28 - 1.92
		0.03	1.92	

**Remarks:**

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of all plant parts. When applying by air, apply in a minimum of 2 gals total solution per acre. When applying by ground, a minimum of 10 gals total solution per acre is recommended.
- Use higher application volumes and/or rates when foliage is dense, pest populations are high, larvae are large, weather conditions are adverse and/or as plant size increases. Use higher labeled rates for longer residual.
- Insects that bore or tunnel into leaves, vines, stems or fruit must be controlled before penetration. Only exposed insects (larvae and/or adults) can be controlled with foliar applications of **Serpent with VenomCap Technology**.

**Restrictions:**

- **Do not** apply more than 0.18 lb ai (11.5 fl oz or 0.72 pt of product) per acre per season.
- **Do not** apply within 1 day of harvest.

<sup>1</sup>See **Resistance** statement under **Use Directions**.

<sup>2</sup>Does not include Western Flower Thrips.

<sup>3</sup>Suppression only.

Crop	Target Pests	Rate	
		lb ai/A	fl oz/A
<b>FRUITING VEGETABLES</b> Eggplant Ground Cherry Pepino Peppers (bell and nonbell) Tomatillo Tomato	Cabbage Looper Cutworm Species	0.015 - 0.025	0.96 - 1.60
	Aphid Species <sup>2,3</sup> Beet Armyworm <sup>1,3</sup> Blister Beetle Species Colorado Potato Beetle <sup>3</sup> Cucumber Beetle Species (Adult) European Corn Borer <sup>4</sup> Fall Armyworm <sup>1</sup> Flea Beetle Species Grasshopper Species Japanese Beetle (Adult) Leafhopper Species Leafminer Species <sup>2</sup> Meadow Spittlebug Pepper Weevil (Adult) <sup>2</sup>	Plant Bug Species Southern Armyworm <sup>1</sup> Spider Mite Species <sup>2</sup> Stalk Borer <sup>4</sup> Stink Bug Species Thrips <sup>5</sup> Tobacco Budworm <sup>3</sup> Tomato Fruitworm Tomato Pinworm Tomato Psyllid <sup>2,3</sup> Vegetable Weevil (Adult) Whitefly Species <sup>2,3</sup> Yellowstriped Armyworm <sup>1</sup>	0.02 - 0.03 1.28 - 1.92

**Remarks:**

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals of water per acre.

**Restrictions:**

- **Do not** apply within 5 days of harvest.
- **Do not** apply more than 0.36 lb ai (23.04 fl oz or 1.44 pts of product) per acre per season.

<sup>1</sup>For control of first and second instar only.

<sup>2</sup>Suppression only.

<sup>3</sup>See **Resistance** statement under **Use Directions**.

<sup>4</sup>For control before the larva bores into the plant stalk or fruit.

<sup>5</sup>Does not include Western Flower Thrips.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
<b>GRASS FORAGE, FODDER AND HAY</b> Pasture and Rangeland Grass, Grass Grown for Hay or Silage and Grass Grown for Seed	Army Cutworm Cutworm Species Essex Skipper	Range Caterpillar Striped Grass Looper	0.015 - 0.025	0.96 - 1.6
	Beet Armyworm Billbug Species <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 Species Cricket Species English Grain Aphid <sup>1</sup> Fall Armyworm Flea Beetle Species Grass Mealybug Grass Sawfly (Adult) Grasshopper Species	Green June Beetle (Adult) Greenbug <sup>1,2</sup> Japanese Beetle (Adult) Katydid Species Leafhopper Species Mite Species <sup>3</sup> Russian Wheat Aphid <sup>1</sup> Southern Armyworm Spittlebug Species Stink Bug Species Sugarcane Aphid Thrips Species Tick Species True Armyworm Webworm Species Yellowstriped Armyworm	0.02 - 0.03	1.28 - 1.92

#### Remarks:

- Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals total solution per acre. When applying by ground, apply a minimum of 7 gals total solution per acre.
- Use higher application volumes and rates when foliage is dense, pest populations are high, larvae are large and/or weather conditions are adverse. Use higher labeled rates for longer residual.
- For chinch bug control, **Serpent with VenomCap Technology** may only suppress heavy infestations and/or migrations. In this situation, a second application using an alternative chemistry may be needed.
- Greenbug is known to have many biotypes. **Serpent with VenomCap Technology** may provide suppression only. In this situation, a second application using an alternative chemistry may be needed.
- Pasture and rangeland grass may be used for grazing or cut for forage 0 days after application. Do not cut grass to be dried and harvested for hay until 7 days after the last application.

#### Grass grown for seed:

- Straw, hay 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.

#### Restrictions:

- **Do not** apply more than 0.03 lb ai (1.92 fl oz or 0.12 pt of product) per acre 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 ai per acre which have not been cut between applications.
- **Do not** apply more than 0.09 lb ai (5.76 fl oz or 0.36 pt of product) per acre per season.

<sup>1</sup> Best control is obtained before insects begin to roll leaves.

<sup>2</sup> See **Resistance** statement under **Use Directions**.

<sup>3</sup> Suppression only.



Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
<b>LEGUME VEGETABLES (BEANS AND PEAS)</b> <b>Edible Podded (only)</b> <i>Canavalia ensiformis</i> - Jackbean <i>Canavalia gladiata</i> - Sword bean <i>Glycine max</i> - Soybean (immature seed) <b>Edible Podded, Succulent Shelled or Dried Shelled</b> <i>Cajanus cajan</i> - Pigeon pea <i>Phaseolus</i> Species - includes: field, kidney, lima, navy, pinto, runner, snap, tepary and wax beans <i>Pisum</i> Species - includes: dwarf, edible-pod, English, field, garden, green snow and sugar snap peas <i>Vigna</i> Species - includes: adzuki, asparagus, moth, mung, rice, urd and yardlong beans, black-eye pea, catjang, Chinese longbean, cowpea, Crowder pea, Southern pea <b>Succulent Shelled or Dried Shelled</b> <i>Vicia faba</i> - Broadbean (favabean) <b>Dried Shelled (only)</b> <i>Cicer arietinum</i> - Chickpea (garbanzo bean) <i>Cyamopsis tetragonoloba</i> - Guar <i>Lablab purpureus</i> - Lablab bean (hyacinth bean) <i>Lupinus</i> Species - includes: grain, sweet, white and sweet white lupines <i>Lens esculenta</i> - Lentils	Cutworm Species Green Cloverworm Imported Cabbageworm	Mexican Bean Beetle Saltmarsh Caterpillar Velvetleaf Caterpillar	0.015 - 0.025	0.96 - 1.60
	Alfalfa Caterpillar Aphid Species <sup>4</sup> Armyworm <sup>2</sup> Bean Leaf Beetle Bean Leaf Skeletonizer Blister Beetle Species Corn Earworm Corn Rootworm Beetle Species (Adult) Cucumber Beetle Species (Adult) Curculio and Weevil Species <sup>1</sup> (Foliage and Pod Feeding Adults and Larvae) European Corn Borer Fall Armyworm <sup>2</sup> Flea Beetle Species (Adult) Flea Hopper Species Grasshopper Species	Japanese Beetle (Adult) Leafhopper Species Leaf-tier Species Looper Species Meadow Spittlebug Painted Lady Butterfly (Larvae) Plant Bug Species including <i>Lygus</i> Species <sup>4</sup> Stalk Borer <sup>1</sup> Stink Bug Species Three-cornered Alfalfa Hopper Thrips Species <sup>4,5</sup> Tobacco Budworm <sup>4</sup> Webworm Species Western Bean Cutworm Western Yellowstriped Armyworm <sup>2</sup> Yellowstriped Armyworm <sup>2</sup>	0.02 - 0.03	1.28 - 1.92
	Beet Armyworm <sup>3,4</sup> Leafminer Species <sup>3,4</sup> Lesser Cornstalk Borer <sup>3</sup>	Soybean Looper <sup>3,4</sup> Spider Mite Species <sup>3</sup> Whitefly Species <sup>3,4</sup>	0.03	1.92

#### Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals of water per acre.

#### Restrictions:

- For edible podded and succulent shelled legume vegetables, **do not** apply within 7 days of harvest.
- For dried shelled legume vegetables, **do not** apply within 21 days of harvest.
- **Do not** apply more than 0.12 lb ai (7.68 fl oz or 0.48 pt of product) per acre per season.
- For succulent and dried shelled peas and beans, **do not** graze livestock in treated areas or harvest vines for forage or hay.

<sup>1</sup> For control before the larva bores into the plant stalk or pods.

<sup>2</sup> Use higher label rates for large larvae.

<sup>3</sup> For suppression only.

<sup>4</sup> See **Resistance** statement under **Use Directions**.

<sup>5</sup> Does not include Western Flower Thrips.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
<b>LEGUME VEGETABLES (SOYBEANS)</b> Soybeans	Bean Leaf Beetle	Mexican Bean Beetle	0.015 - 0.025	0.96 - 1.60
	Cabbage Looper	Painted Lady (Thistle) Caterpillar		
	Corn Earworm	Potato Leafhopper		
	Corn Rootworm Beetle (Adult): Mexican Northern Southern Western Cutworm Species Green Cloverworm	Saltmarsh Caterpillar Soybean Aphids <sup>4</sup> Threecornered Alfalfa Hopper Thrips Species <sup>5</sup> Velvetbean Caterpillar Woolly Bear Caterpillar		
	Armyworm <sup>1</sup>	Plant Bug Species	0.025 - 0.03	1.60 - 1.92
	Blister Beetle Species	Silver-spotted Skipper		
	European Corn Borer	Stink Bug Species		
	Fall Armyworm <sup>1</sup>	Tobacco Budworm <sup>3</sup>		
	Grasshopper Species	Webworm Species	0.03	1.92
	Japanese Beetle (Adult)	Yellowstriped Armyworm <sup>1</sup>		
	Beet Armyworm <sup>2,3</sup>	Soybean Looper <sup>2,3</sup>	0.03	1.92
	Lesser Cornstalk Borer <sup>2</sup>	Spider Mite Species <sup>2</sup>		

#### Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or aerial equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals of water per acre.
- For control of adult corn rootworm beetles (*Diabrotica* species) as part of an aerial-applied corn rootworm control program use a minimum of 0.02 lb ai (1.28 fl oz of product) per acre.

#### Restrictions:

- **Do not** apply within 30 days of harvest.
- **Do not** apply more than 0.06 lb ai (3.84 fl oz or 0.24 pt of product) per acre per season.
- **Do not** graze or harvest treated soybean forage, straw, or hay for livestock feed.

<sup>1</sup> Use higher label rates for large larvae.

<sup>2</sup> Suppression only.

<sup>3</sup> See **Resistance** statement under **Use Directions**.

<sup>4</sup> Use lower rates for early season applications and/or lighter populations.

<sup>5</sup> Does not include Western Flower Thrips.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
LETTUCE (HEAD AND LEAF)	Alfalfa Looper Cabbage Looper Cutworm Species	Green Cloverworm Imported Cabbageworm Saltmarsh Caterpillar	0.015 - 0.025	0.96 - 1.60
	Aphid Species <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 Species Grasshopper Species Japanese Beetle (Adult)	Leafhopper Species Meadow Spittlebug Plant Bug Species including <i>Lygus</i> Species <sup>3</sup> Southern Armyworm Spider Mite Species <sup>2</sup> Stink Bug Species Tobacco Budworm <sup>3</sup> Vegetable Weevil (Adult) Whitefly Species <sup>2,3</sup>	0.02 - 0.03	1.28 - 1.92

**Remarks:**

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals of water per acre.

**Restrictions:**

- **Do not** apply within 1 day of harvest.
- **Do not** apply more than 0.3 lb ai (19.2 fl oz or 1.2 pts of product) per acre per season.

<sup>1</sup> For control of first and second instar only.

<sup>2</sup> Suppression only.

<sup>3</sup> See **Resistance** statement under **Use Directions**.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
ONION (BULB) AND GARLIC	Cutworm Species Leafminer Species (Adult)	Onion Maggot (Adult) Seedcorn Maggot (Adult)	0.015 - 0.025	0.96 - 1.60
	Aphid Species <sup>2</sup> Armyworm Species <sup>1</sup> Flower Thrips <sup>2,3</sup> Onion Thrips <sup>3</sup>	Plant Bug Species Stink Bug Species Tobacco Thrips <sup>3</sup> Western Flower Thrips <sup>2,3</sup>	0.02 - 0.03	1.28 - 1.92

**Remarks:**

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Use the higher label rates as thrips population increases and avoid rescue situations.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals of water per acre.
- For thrips control by aerial application, the addition of 1% COC v/v, 1/4% NIS v/v or a silicone adjuvant (follow manufacturers use directions) may enhance the deposition of the spray and increase plant coverage.

**Restrictions:**

- **Do not** apply within 14 days of harvest.
- **Do not** apply more than 0.24 lb ai (15.36 fl oz or 0.96 pt of product) per acre per season.

<sup>1</sup> For control of the first and second instar only.

<sup>2</sup> Suppression only.

<sup>3</sup> See **Resistance** statement under **Use Directions**.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
PEANUTS	Cutworm Species Green Cloverworm Potato Leafhopper	Red-necked Peanut Worm Threecornered Alfalfa Hopper Velvetbean Caterpillar	0.015 - 0.025	0.96 - 1.60
	Bean Leaf Beetle Corn Earworm Fall Armyworm <sup>1</sup> Grasshopper Species Southern Corn Rootworm (Adult)	Stink Bug Species Tobacco Thrips Vegetable Weevil Whitefringed Beetle (Adult)	0.02 - 0.03	1.28 - 1.92
	Aphid Species <sup>2</sup> Beet Armyworm <sup>2,3</sup> Lesser Cornstalk Borer <sup>2</sup>	Soybean Looper <sup>2,3</sup> Spider Mite Species <sup>2</sup>	0.03	1.92

**Remarks:**

- Apply as required by scouting, usually at intervals of 7 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or aerial equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals of water per acre.

**Restrictions:**

- **Do not** apply within 14 days of harvest.
- **Do not** apply more than 0.12 lb ai (7.68 fl oz or 0.48 pt of product) per acre per season.

<sup>1</sup> Use higher label rates for large larvae.

<sup>2</sup> Suppression only.

<sup>3</sup> See **Resistance** statement under **Use Directions**.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
POME FRUITS Apple Crabapple Loquat Mayhaw Oriental Pear Pear Quince	Apple Aphid Apple Maggot (Adult) Cherry Fruit Fly Species (Adult) Codling Moth Green Fruitworm Japanese Beetle Leafhopper Species Leafroller Species Lesser Appleworm Omnivorous Leafroller Orange Tortrix Oriental Fruit Moth Pear Psylla <sup>1</sup>	Pear Sawfly Periodical Cicada Plant Bug Species Plum Curculio Rosy Apple Aphid San Jose Scale (fruit infestations only) Spirea Aphid <sup>1</sup> Stink Bug Species Tent Caterpillar Species Tentiform Leafminer Species Tree Borer Species Tufted Apple Budworm Webworm Species	0.02 - 0.04	1.28 - 2.56

**Remarks:**

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds and IPM recommendations.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply in a minimum of 5 gals of water per acre, but use higher volumes as appropriate for thorough coverage.

**Restrictions:**

- **Do not** apply within 21 days of harvest.
- **Do not** apply more than 0.2 lb ai (12.8 fl oz or 0.80 pt of product) per acre per year.
- **Do not** apply more than 0.16 lb ai (10.24 fl oz or 0.64 pt of product) per acre per year post bloom.

<sup>1</sup> Suppression only.

Crop	Target Pests	Rate	
		lb ai/A	fl oz/A
<b>STONE FRUITS</b> Apricot Chickasaw Plum Damson Plum Japanese Plum Nectarine Peach Plum Plumcot Prune Sweet and Tart Cherry	American Plum Borer Apple Maggot (Adult) Black Cherry Aphid Cherry Fruit Fly Species (Adult) Codling Moth Green Fruitworm Japanese Beetle June Beetle Leafhopper Species Leafroller Species Oriental Fruit Moth	Peach Twig Borer Peachtree Borer Species Pear Sawfly Periodical Cicada Plant Bug Species Plum Curculio Rose Chafer Stink Bug Species Tent Caterpillar Species Thrips Species	0.02 - 0.04 1.28 - 2.56

**Remarks:**

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic threshold and IPM recommendations.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply a minimum of 5 gals of water per acre, but use higher volumes as appropriate for thorough coverage.

**Restrictions:**

- **Do not** apply within 14 days of harvest.
- **Do not** apply more than 0.2 lb ai (12.8 fl oz or 0.80 pt of product) per acre per year.
- **Do not** apply more than 0.16 lb ai (10.24 fl oz or 0.64 pt of product) per acre per year post bloom.

Crop	Target Pests	Rate	
		lb ai/A	fl oz/A
<b>SUGARCANE</b>	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>	0.025 - 0.04 1.60 - 2.56

**Remarks:**

- Apply as required by scouting, usually at intervals of 7 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply a minimum of 2 gals of water per acre.

**Restrictions:**

- **Do not** apply within 21 days of harvest.
- **Do not** apply more than 0.16 lb ai (10.24 fl oz or 0.64 pt of product) per acre per season.

<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 **Use Directions**.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
SUNFLOWER	Cutworm Species	Sunflower Beetle	0.015 - 0.025	0.96 - 1.60
	Banded Sunflower Moth	Seed Weevil (Adult)	0.02 - 0.03	1.28 - 1.92
	Fall Armyworm <sup>1</sup>	Spotted Cabbage Looper		
	Grasshopper Species	Stem Weevil (Adult)		
	Head-clipper Weevil (Adult)	Stink Bug Species		
	Japanese Beetle (Adult)	Sunflower Maggot (Adult)		
	Leafhopper Species	Sunflower Moth		
	Meadow Spittlebug	Woolly Bear Caterpillar		
	Painted Lady (Thistle) Caterpillar			
	Beet Armyworm <sup>2,3</sup>	Spider Mite Species <sup>2</sup>	0.03	1.92

#### Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of sunflower heads and/or foliage. When applying by air, apply in a minimum of 2 gals of water per acre.

#### Restrictions:

- **Do not** apply within 45 days of harvest.
- **Do not** apply more than 0.12 lb ai (7.68 fl oz or 0.48 pt of product) per acre per season.
- **Do not** apply more than 0.09 lb ai (5.76 fl oz or 0.36 pt of product) per acre per season after bloom initiation.
- **Do not** apply as an ultra-low volume (ULV) spray.

<sup>1</sup> Use higher label rates for large larvae.

<sup>2</sup> Suppression only.

<sup>3</sup> See **Resistance** statement under **Use Directions**.

Crop	Target Pests		Rate	
			lb ai/A	fl oz/A
TOBACCO	Armyworm Species <sup>1</sup>	Salt Marsh Caterpillar	0.015 - 0.03	0.96 - 1.92
	Blister Beetle Species	Stinkbug Species		
	Cabbage Looper	Tobacco Aphid Species <sup>2,3</sup>		
	Corn Earworm	Tobacco Budworm <sup>3</sup>		
	Cucumber Beetle Species (Adult)	Tobacco Flea Beetle (Adult)		
	Cutworm Species	Tobacco Hornworm		
	Grasshopper Species	Tobacco Thrips Species <sup>2</sup>		
	Japanese Beetle (Adult)	Tomato Hornworm		
	Katydid Species	Tree Cricket Species		
	Plant Bug Species <sup>3</sup>	Vegetable Weevil (Adult)		
	Potato Tuberworm	Webworm Species		

#### Remarks:

- Apply as required by scouting, usually at intervals of 7 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage. When applying by air, apply in a minimum of 2 gals of water per acre.

#### Restrictions:

- **Do not** apply within 40 days of harvest.
- **Do not** apply more than 0.09 lb ai (5.76 fl oz or 0.36 pt of product) per acre per year.

<sup>1</sup> For control of first and second instars only.

<sup>2</sup> Suppression only.

<sup>3</sup> See **Resistance** statement under **Use Directions**.



Crop	Target Pests	Rate	
		lb ai/A	fl oz/A
<b>TREE NUTS</b> Almond Beech Nut Brazil Nut Butternut Cashew Chestnut Chinquapin Filbert (Hazelnut) Hickory Nut Macadamia Nut (Bush Nut) Pistachio Walnut, Black Walnut, English (Persian)	Ants Chinch Bug Codling Moth Filbertworm Leaf-footed Bug Leafroller Species Navel Orangeworm Peach Twig Borer Plant Bug Species Stink Bug Species Walnut Aphid Walnut Husk Fly Species (Adult)	0.02 - 0.04	1.28 - 2.56
Pecan	Hickory Shuckworm Pecan Aphid Species Pecan Casebearer Species Pecan Phylloxera Species Pecan Spittlebug Pecan Weevil Stink Bug Species	0.02 - 0.04	1.28 - 2.56

#### Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply in a minimum of 5 gals of water/per acre, but use higher labeled rates as appropriate for thorough coverage.

#### Restrictions:

- **Do not** apply within 14 days of harvest.
- **Do not** apply more than 0.16 lb ai (10.24 fl oz or 0.64 pt of product) per acre per year.
- **Do not** apply more than 0.12 lb ai (7.68 fl oz or 0.48 pt of product) per acre per year post bloom.

Crop	Target Pests	Rate	
		lb ai/A	fl oz/A
<b>TUBEROUS AND CORM VEGETABLES (Potato, Sweet Potato, Yams and Related)</b> Arracacha Arrowroot Artichoke (Chinese and Jerusalem only) Canna (edible) Cassava (bitter and sweet) Chayote (root) Chufa Dasheen Ginger Leren Potato Sweet Potato Tanier Turmeric Yam (bean and true)	Cutworm Species Leafhopper Species Saltmarsh Caterpillar Sweet Potato Hornworm Woolly Bear Caterpillar Species Aphid Species <sup>1</sup> Armyworm Species <sup>1</sup> Blister Beetle Species Colorado Potato Beetle <sup>1</sup> Corn Earworm Cricket Species Cucumber Beetle Species (Adults) European Corn Borer Flea Beetle Species (Adults) Grasshopper Species Looper Species <sup>1</sup> Leafminer Species <sup>1,3</sup> Spider Mite Species <sup>3</sup> Lygus Bug Species <sup>1</sup> Plant Bug Species Potato Psyllid Potato Tuberworm Stink Bug Species Sweet Potato Leaf Beetle (Adults) Sweet Potato Vine Borer Thrips Species <sup>1,2</sup> Tortoise Beetle Species Webworm Species Weevil Species (Adults) Whitefly Species <sup>1,3</sup>	0.015 - 0.025	0.96 - 1.60
		0.02 - 0.03	1.28 - 1.92
		0.03	1.92

**Remarks:**

- Apply as required by scouting, usually at intervals of 7 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of all above ground plant parts. When applying by air, apply in a minimum of 2 gals total solution per acre. When applying by ground, a minimum of 10 gals total solution per acre is recommended.
- Use higher application volumes and/or labeled rates when foliage is dense, pest populations are high, larvae are large, weather conditions are adverse and/or as plant size increases. Use higher labeled rates for longer residual.
- Insects that bore or tunnel 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 **Serpent with VenomCap Technology**.

**Restrictions:**

- **Do not** apply more than 0.12 lb ai (7.68 fl oz or 0.48 pt of product) per acre per season.
- **Do not** apply within 7 days of harvest.

<sup>1</sup> See **Resistance** statement under **Use Directions**.

<sup>2</sup> Does not include Western Flower Thrips.

<sup>3</sup> Suppression only.

Crop	Target Pests	Rate	
		lb ai/A	fl oz/A
<b>CONIFER AND DECIDUOUS TREES</b> Plantations and Nurseries	Bagworm Balsam Twig Aphid Balsam Woolly Aphid Birch Leafminer Black Pine Weevil Elm Leaf Beetle European Elm Bark Beetle Gypsy Moth Japanese Beetle June Beetle Species Leaf Beetle Species Leafroller Species May Beetle Species Mealybug Species <sup>1</sup> Pales Weevil Pine Chafer Pine Colaspis Beetle Pine Conelet Bug Pine Leaf Chermid Pine Needle Scale Pine Sawfly Species Pine Tip Moth Species Pine Tortoise Scale Pine Weevil Species Poplar Aphid Species Sawfly Species Spittlebug Species Spruce Budworm Tent Caterpillar Species Tussock Moth Species Webworm Species	0.02 - 0.04	1.28 - 2.56

**Remarks:**

- To control exposed foliage, flower, cone, seed and bark feeding insects, apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds.
- Apply with ground equipment using sufficient water to obtain full coverage of target site. When applying by air, apply a minimum of 2 gals of water per acre.

**Restriction:**

- **Do not** apply more than 0.24 lb ai (15.36 fl oz or 0.96 pt of product) per acre per year.

<sup>1</sup> Suppression only.

Crop	Target Pests	Rate	
		lb ai/A	fl oz/A
<b>CONIFER AND DECIDUOUS TREES</b> Seed Orchards	Coneworm Species Seed Bug Species Thrips Species	See Remarks	See Remarks

**Remarks:**

- For high volume sprayers, dilute 2.56 fl oz per 100 gals of water and apply 5 - 10 gals of finished spray per tree.
- For low volume sprayers, dilute 10 fl oz per 100 gals of water and apply 100 gals of finished spray per acre.
- For aerial applications, apply 7.5 fl oz per acre in a minimum of 10 gals finish spray per acre.

**Restriction:**

- **Do not** apply more than 0.5 lb ai (32 fl oz or 2 pts of product) per acre per year.

The following use does not fall within the scope of the Worker Protection Standard for agricultural pesticides (40CFR Part 170).

Use Site	Target Pests	Rate	
		lb ai/A	fl oz/A
Non-Cropland (Excluding Public Land)	See <b>Crop Outlets</b> on this <b>Serpent with VenomCap Technology</b> label for target pests and rates.	See <b>Crop Outlets</b>	See <b>Crop Outlets</b>

**Remarks:**

- Spray non-cropland adjacent to agricultural areas to control migratory insects, which may threaten crops.
- Follow **Use Directions**, rates and spray recommendations found elsewhere in this label for the adjacent crop outlet and target pests.
- Use highest labeled rates for dense/large foliage, high insect populations and larger larval stages.
- Repeat as necessary to maintain control.

**Restrictions:**

- **Do not** exceed 0.2 lb ai (12.8 fl oz or 0.8 pt of product) per acre per year.
- **Do not** graze livestock in treated areas.

**Rate Conversion Chart**

Lb ai per Acre	Fl oz per Acre	Pints per Acre	Treated Acres per Gals
0.015	0.96	0.06	133
0.02	1.28	0.08	100
0.025	1.60	0.10	80
0.03	1.92	0.12	67
0.035	2.24	0.14	57
0.04	2.56	0.16	50

## STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with sand, earth, or synthetic absorbent. Remove to chemical waste area. DO NOT ALLOW PRODUCT TO FREEZE.

**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:

**Plastic 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 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 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 by other procedures approved by state and local authorities.

**Plastic 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. Fill the container 1/4 full with water. Recap 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, or by other procedures allowed by state and local authorities.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!

## LIMITATION OF WARRANTY AND LIABILITY

**IMPORTANT: READ BEFORE USE.** Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability. **CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of ATTICUS, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, ATTICUS, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label. **LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither ATTICUS, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

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