

# OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

November 28, 2023

Kyleigh Toomey Label Facilitator Atticus, LLC 940 NW Cary Parkway, Suite 200 Cary, NC 27513

Subject: Notification per PRN 98-10 – Correct Mode of Action Classification

Product Name: A115.04

EPA Registration Number: 91234-249

Application Date: 10/16/2023 Case Number: 488850

# Dear Kyleigh Toomey:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped "NOTIFICATION" and placed in our records.

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 (FIFRA) 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) lists 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 you have any questions, please contact Elizabeth Andrews at 202-566-2467 or at Andrews. Elizabeth@epa.gov.

Sincerely,

Manjula Unnikrishnan, Acting Product Manager 03

Invertebrate & Vertebrate Branch 1 Registration Division (7505T) Office of Pesticide Programs

# NOTIFICATION

91234-249

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

11/28/2023

{Note to reviewer: [Text] in brackets denotes optional or explanatory language} {Note to reviewer: {Text} in braces denotes where in the final label text will appear}

**{BOOKLET FRONT PANEL LANGUAGE}** 

# **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

# A115.04 [TM]

[Alternate Brand Name: Serpent™ with VenomCap Technology]

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

<sup>1</sup>CAS No. 91465-08-6 <sup>2</sup>Synthetic pyrethroid

## **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] [inside label booklet] for [additional] [First Aid,] [and] [Precautionary Statements] [and] [Directions for Usel.

[A115.04] is not manufactured, or distributed by Syngenta, seller of [Warrior II with Zeon Technology®.]

EPA Reg. No.: 91234-XXX

EPA Est. No.:

**Net Contents:** 

Manufactured for: Atticus, LLC

940 NW Cary Parkway, Suite 200

Cary, NC 27513

Deleted: 5000 CentreGreen Way

Deleted: 1

# **{LANGUAGE INSIDE BOOKLET}**

	FIRST AID
If swallowed:	<ul> <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>
If on skin or clothing:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If inhaled:	Move person to fresh air.     If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.     Call a poison control center or doctor for further treatment advice.
If in eyes:	<ul> <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
•	uct container or label with you when calling a poison control center or doctor, or going You may also contact SafetyCall at 1-844-685-9173 for emergency medical treatment

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)

# 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)

information.

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  $\geq$  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 gal per acre by air or 10 gal 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, **A115.04** may be applied before, during, or after planting. For soil-incorporated applications, use higher labeled rates for improved control.

## RESISTANCE MANAGEMENT

For resistance management A115.04 contains a Group  $3\underline{A}$  insecticide. Any insect population may contain individuals naturally resistant to A115.04 and other Group  $3\underline{A}$  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 A115.04 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 resistancemanagement and/or IPM recommendations for the specific sit 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 **A115.04** 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

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

#### 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, always add A115.04 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 A115.04 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 **A115.04** 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.

**A115.04** is an aqueous-based formulation. It is recommended that no type of non-emulsifiable oils be used in combination with **A115.04**. 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.)
- Is supported locally for use with A115.04 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 A115.04 as diluents or adjuvants:

- Nonemulsifiable oils
- Diesel Fuel
- Straight Mineral Oil

#### CHEMIGATION

# **Sprinkler Irrigation Application**

Apply **A115.04** 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 **A115.04** 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 **A115.04** 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 **A115.04** 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 **A115.04** 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.
- 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.

# **SPECIFIC USE DIRECTIONS**

- 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.
- 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.

			ite
Crop	Target Pests	lb ai/A	fl oz/A
ALFALFA ANI	O ALFALFA GROWN FOR SEED		
	Alfalfa Caterpillar	0.015-0.025	0.96-1.60
	Army cutworm		
	Cutworm species		
	Green Cloverworm		
	Leafhopper species		
	Looper species		
	Threecornered Alfalfa Hopper		
	Velvetbean caterpillar		
	Webworm species		
	Alfalfa Seed Chalcid (Adult)	0.02-0.03	1.28-1.92
	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)		
	Grasshoperr species		
	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 species including Lygus		
	species <sup>3</sup>		
	Spotted Alfalfa Aphid		
	Stink bug species		
	Sweet Clover Weevil (Adult)		
	Thrips species <sup>4</sup>		
	Western Yellowstriped Armyworm		
	Whitefringed Beetle species (Adult)		
	Yellowstriped Armyworm		
	Beet Armyworm <sup>1,3</sup>	0.03	1.92
	Blotch Leafminer <sup>3</sup>		
	Spider Mites <sup>2</sup>		

- 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 gal per acre by air or 10 gal per acre by ground. When foliage is dense and/or pest
  populations are high 5-10 gal per acre by air or 20 gal 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>&</sup>lt;sup>4</sup>Does not include Western Flower Thrips.

		Ra	ite
Crop	Target Pests	lb ai/A	fl oz/A
CANOLA			
	Armyworm species Cabbage Seedpod Weevil Cutworm species Diamondback Moth Flea Beetle Grasshoppers Looper species Lygus Bug	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 gal of water per acre.

- **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.

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

<sup>&</sup>lt;sup>2</sup>Suppression only

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

		Rate	
Crop	Target Pests	lb ai/A	fl oz/A
CEREAL GRAINS			
Corn (at Plant):	Corn Rootworm Larvae:	0.005 lb ai per 1000 ft of	0.33 fl oz per 1000 ft of
Field Corn	Mexican	row <sup>2</sup>	row <sup>2</sup>
Popcorn	Northern		
Seed Corn	Southern		
Sweet Corn	Western		
	Cutworm species		
	Lesser Cornstalk Borer		
	Red Imported Fire Ant <sup>1</sup>		
	Seedcorn Beetle		
	Seedcorn Maggot		
	White Grubspecies		
	Wireworm species		

- 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 gal 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 pt of product) per acre per crop from at plant and foliar applications.

# <sup>1</sup>Suppression only

²Lb .	<sup>2</sup> Lb Ai And Fl Oz/A of <b>A115.04</b> Applied At 0.33 Fl Oz/1000 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
Lb 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

		R	ate
Crop	Target Pests	lb ai/A	fl oz/A
CEREAL GRAINS			
Corn (Foliar):	Corn Earworm <sup>1</sup>	0.015-0.025	0.96-1.60
Field Corn	Cutworm species		
Popcorn	Green Cloverworm Meadow		
Seed Corn	Spittlebug		
	Western Bean Cutworm <sup>1</sup>		
	Armyworm <sup>2</sup>	0.02-0.03	1.28-1.92
	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>		
	Beet Armyworm <sup>4</sup>	0.03	1.92
	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>		

- 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 gal 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.

A115.04 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.

- **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>&</sup>lt;sup>4</sup>See **Resistance** statement under **Use Directions**.

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

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

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

<sup>&</sup>lt;sup>3</sup>Suppression only

Corn Silkfly (Adult) <sup>2</sup>	0.03	1.92

- 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 gal 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>&</sup>lt;sup>3</sup>See **Resistance** statement under **Use Directions**.

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

# Remarks:

· Apply as required by scouting. Base timing and frequency of application on insect populations reaching

 $<sup>^{1}\</sup>mbox{Use}$  higher label rates for large larvae.

<sup>&</sup>lt;sup>2</sup>Suppression only

locally determined economic thresholds. Determine the need for repeat applications, usually at intervals of 5 - 7 days, by scouting.

- A115.04 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 gal 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, A115.04 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. A115.04 may only provide suppression. If satisfactory
  control is not achieved with the first application of A115.04, 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 1200 acres (or more) per day must wear dust-mist respirator.

- 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>&</sup>lt;sup>1</sup>For control before the larvae bores into the plant stalk.

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

- 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 gal 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. A115.04 may only suppress heavy infestations and/or subsequent migrations.

- **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>&</sup>lt;sup>1</sup>Use higher label rates for large larvae.

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

<sup>&</sup>lt;sup>3</sup>See Resistance statement under Use Directions.

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

- 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 gal of water per acre.
- For chinch bug control, repeat applications at 3- to 5-day intervals if needed. A115.04 may only suppress heavy infestations and/or migrations.
- Greenbug is known to have many biotypes. A115.04 may provide suppression only. In this situation, a
  second application using an alternative chemistry may be needed.

- **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>&</sup>lt;sup>1</sup>Best control is obtained before insects begin to roll leaves. Once crop has started to boot, **A115.04** may provide suppression only. Higher labeled rates and increased coverage will be necessary.

<sup>&</sup>lt;sup>2</sup>Suppression only

<sup>&</sup>lt;sup>3</sup>See Resistance statement under Use Directions.

<sup>&</sup>lt;sup>4</sup>Make applications when adults emerge.

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

- 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 gal of water per acre.

- **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>&</sup>lt;sup>1</sup>For control of first and second instar only.

<sup>&</sup>lt;sup>2</sup>Suppression only

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

		Ra	ite
Crop	Target Pests	lb ai/A	fl oz/A
COTTON			
	Cutworm species Soybean Thrips Tobacco Thrips	0.015-0.02	0.96-1.28
	Cabbage Looper Cotton Fleahopper Cotton Leafperforator Cotton Leafworm Lygus Bug species <sup>3</sup> Pink Bollworm Saltmarsh Caterpillar	0.02-0.03	1.28-1.92
	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 Sweet Potato Whitefly <sup>2,3</sup> Tobacco Budworm <sup>3</sup> Twospotted Spider Mite <sup>2</sup>	0.025-0.04	1.60-2.56

- 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.
- $\bullet \qquad \text{Apply with ground or aerial equipment using sufficient water to obtain full coverage of foliage}. \\$
- Applications may also be made with equipment adapted and calibrated for ULV sprays. A115.04 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,
   A115.04 also provides ovicidal control of unhatched Heliothine species eggs.

- **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>&</sup>lt;sup>1</sup>For control of the first and second instar only.

<sup>&</sup>lt;sup>2</sup>Suppression only

# $^{3}\mbox{See}$ Resistance statement under Use Directions.

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

#### 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 gal total solution per acre.

- When applying by ground, a minimum of 10 gal 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 A115.04.

- **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>&</sup>lt;sup>3</sup>Suppression only

	Target Pests	R	ate
Crop		lb ai/A	fl oz/A
FRUITING VEGETABLES			
Eggplant	Cabbage Looper	0.015-0.025	0.96-1.60
Ground cherry	Cutworm species		
Pepino	Hornworm species		
Peppers (bell and nonbell)	Aphid species <sup>2,3</sup>	0.02-0.03	1.28-1.92
Tomatillo	Beet Armyworm <sup>1,3</sup>		
Tomato	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>		

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

<sup>&</sup>lt;sup>2</sup>Does not include Western Flower Thrips

- 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 gal of water per acre.

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

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

		R	ate
Crop	Target Pests	lb ai/A	fl oz/A
GRASS FORAGE, FODDER AND	HAY	<u>.</u>	
Pasture and Rangeland Grass,	Army Cutworm	0.015-0.025	0.96-1.6
Grass Grown for Hay or Silage	Cutworm species		
and Grass Grown for Seed	Essex Skipper		
	Range Caterpillar		
	Striped Grass Looper		
	Beet Armyworm	0.02-0.03	1.28 - 1.92
	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		
	Mitespecies <sup>3</sup>		
	Russian Wheat Aphid <sup>1</sup>		
	Southern Armyworm		
	Spittlebug species		

<sup>&</sup>lt;sup>1</sup>For control of first and second instar only

<sup>&</sup>lt;sup>2</sup>Suppression only

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

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

Stink Bug species	
Sugarcane Aphid	
Thrips species	
Tick species	
True Armyworm	
Webworm species	
Yellowstriped Armyworm	

- 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 gal total solution per acre. When
  applying by ground, apply a minimum of 7 gal 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, A115.04 may only suppress heavy infestations and/or migrations. In this situation, a second application using an alternative chemistry maybe needed.
- Greenbug is known to have many biotypes. A115.04 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.

- **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>&</sup>lt;sup>1</sup>Best control is obtained before insects begin to roll leaves.

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

<sup>&</sup>lt;sup>3</sup>Suppression only

		Ra	te
Crop	Target Pests	lb ai/A	fl oz/A
LEGUME VEGETABLES (BEANS AI	ND PEAS)		
Edible Podded (only)	Cutworm species	0.015-0.025	0.96-1.60
	Green Cloverworm		
Canavalia ensiformis	Imported Cabbageworm		
-jackbean	Mexican Bean Beetle		
	Saltmarsh Caterpillar		
Canavalia gladiate	Velvetleaf Caterpillar		
-sword bean	Alfalfa Caterpillar	0.02-0.03	1.28-1.92
Glycine max	Aphid species <sup>4</sup>		
-soybean (immature seed)	Armyworm <sup>2</sup>		
,,	Bean Leaf Beetle		
Edible Podded, Succulent Shelled or	Bean Leafskeletonizer		
Dried Shelled	Blister Beetle species		
	Corn Earworm		
Cajanus cajan - Pigeon pea	Corn Rootworm Beetle species (Adult)		
	Cucumber Beetle species (Adult)		
Phaseolus species - Includes:	Curculio and Weevil species <sup>1</sup>		
field, kidney, lima, navy, pinto,	(foliage and pod feeding adults and		
runner, snap, tepary and wax beans	larvae)		
Pisum species – includes:	European Corn Borer		
dwarf, edible-pod, English, field,	Fall Armyworm <sup>2</sup>		
garden, green snow and sugar snap	Flea Beetle species (Adult)		
peas	Flea Hopper species		
Vigna species – includes:	Grasshopper species		
adzuki, asparagus, moth, mung, rice,	Japanese Beetle (Adult)		
urd and yardlong beans, black-eye	Leafhopper species		
pea, catjang, Chinese longbean,	Leaftier species		
cowpea, Crowder pea, Southern pea	Looper Species		
	Meadow Spittlebug		
Succulent Shelled or Dried Shelled	Painted Lady Butterfly (Larva)		
	Plant Bug species including Lygus		
<i>Vicia faba</i> – broadbean (favabean)	species <sup>4</sup>		
Dried Shallad (amb.)	Stalk Borer <sup>1</sup>		
Dried Shelled (only)	Stink Bug species		
Cicer arietimum – chickpea (garbanzo	Threecornered Alfalfa Hopper		
bean)	Thrips species <sup>4,5</sup>		
,	Tobacco Budworm⁴		
Cyamopsis tetragonoloba – guar	Webworm species		
	Western Bean Cutworm		
Lablab pupureus – Lablab bean	Western Yellowstriped Armyworm <sup>2</sup>		
(hyacinth bean)	Yellowstriped Armyworm <sup>2</sup>		
tundana anatas dan U	Beet Armyworm <sup>3,4</sup>	0.03	1.92
Lupinus species – includes:	Leafminer species <sup>3,4</sup>		
grain, sweet, white and sweet white	Lesser Cornstalk Borer <sup>3</sup>		
lupines	Soybean Looper <sup>3,4</sup>		
Lens esculata - Lentils			
Ecris escarata Ecriciis	·		
Lens esculata - Lentils	Spider Mitespecies <sup>3</sup> Whitefly species <sup>3,4</sup>		

- 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 gal of water per acre.

- 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>&</sup>lt;sup>5</sup>Does not include Western Flower Thrips.

		Ra	te
Crop	Target Pests	lb ai/A	fl oz/A
LEGUME VEGI	ETABLES (SOYBEANS)	<u>.</u>	
Soybeans	Bean Leaf Beetle	0.015-0.025	0.96-1.60
	Cabbage Looper		
	Corn Earworm		
	Corn Rootworm Beetle (Adult):		
	Mexican		
	Northern		
	Southern		
	Western		
	Cutworm species		
	Green Cloverworm		
	Mexican Bean Beetle		
	Painted Lady (Thistle) Caterpillar		
	Potato Leafhopper		
	Saltmarsh Caterpillar		
	Soybean Aphids <sup>4</sup>		
	Threecornered Alfalfa Hopper		
	Thrips species <sup>5</sup>		
	Velvetbean Caterpillar		
	Woollybear Caterpillar		
	Armyworm <sup>1</sup>	0.025-0.03	1.60-1.92
	Blister Beetle species		
	European Corn Borer		
	Fall Armyworm <sup>1</sup>		
	Grasshopper species		
	Japanese Beetle (Adult)		
	Plant Bug species		
	Silverspotted Skipper		

 $<sup>^{1}\</sup>mbox{For control}$  before the larva bores into the plant stalk or pods.

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

<sup>&</sup>lt;sup>3</sup>For suppression only

<sup>&</sup>lt;sup>4</sup>See Resistance statement under Use Directions.

Stink Bug species Tobacco Budworm <sup>3</sup> Webworm species Yellowstriped Armyworm <sup>1</sup>		
Beet Armyworm <sup>2,3</sup> Lesser Cornstalk Borer <sup>2</sup> Soybean Looper <sup>2,3</sup> Spider Mitespecies <sup>2</sup>	0.03	1.92

- 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 gal 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.

- **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>&</sup>lt;sup>1</sup>Use higher label rates for large larvae.

<sup>&</sup>lt;sup>2</sup>Suppression only

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

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

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

		Ra	te
Crop	Target Pests	lb ai/A	fl oz/A
LETTUCE (F	HEAD AND LEAF)		
	Alfalfa Looper Cabbage	0.015-0.025	0.96-1.60
	Looper Cutworm species		
	Green Cloverworm		
	Imported Cabbageworm		
	Saltmarsh Caterpillar		
	Aphid species <sup>2,3</sup>	0.02-0.03	1.28-1.92
	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 Lygus species <sup>3</sup>		
	Southern Armyworm		
	Spider Mitespecies <sup>2</sup>		
	Stink Bug species		
	Tobacco Budworm <sup>3</sup>		
	Vegetable Weevil (Adult)		
	Whitefly species <sup>2,3</sup>		

- 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 gal of water per acre.

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

<sup>&</sup>lt;sup>1</sup>For control of first and second instar only

<sup>&</sup>lt;sup>2</sup>Suppression only

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

		Rate				
Crop	Target Pests	lb ai/A	fl oz/A			
ONION (BUL	ONION (BULB) AND GARLIC					
	Cutworm species Leafminer species (Adult) Onion Maggot (Adult) Seed corn 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			

- 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 gal 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.

- **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>&</sup>lt;sup>3</sup>See Resistance statement under Use Directions.

		Rate	
Crop	Target Pests	lb ai/A	fl oz/A
PEANUTS		•	
	Cutworm species Green Cloverworm Potato Leafhopper Rednecked Peanut Worm Threecornered Alfalfa Hopper Velvetbean Caterpillar	0.015-0.025	0.96-1.60
	Bean Leaf Beetle Corn Earworm Fall Armyworm¹ Grasshopper species Southern Corn Rootworm (Adult)	0.02-0.03	1.28-1.92

<sup>&</sup>lt;sup>1</sup>For control of the first and second instar only

<sup>&</sup>lt;sup>2</sup>Suppression only

Stink Bug species Tobacco Thrips Vegetable Weevil Whitefringed Beetle (Adult)		
Aphid species <sup>2</sup> Beet Armyworm <sup>2,3</sup>	0.03	1.92
Lesser Cornstalk Borer <sup>2</sup> Soybean Looper <sup>2,3</sup>		
Spider Mitespecies <sup>2</sup>		

- 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 gal of water per acre.

- **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>&</sup>lt;sup>3</sup>See **Resistance** statement under **Use Directions**.

		Rate		Rate	ate
Crop	Target Pests	lb ai/A	fl oz/A		
POME FRUITS					
Apple	Apple Aphid	0.02-0.04	1.28-2.56		
Crabapple	Apple Maggot (Adult)				
Loquat	Cherry Fruit Fly species (Adult)				
Mayhaw	Codling Moth				
Oriental Pear	Green Fruitworm				
Pear	Japanese Beetle				
Quince	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>				

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

<sup>&</sup>lt;sup>2</sup>Suppression only

Stink Bug species	
Tent Caterpillar species	
Tentiform Leaf Miner species	
Tree Borer species	
Tufted Apple Budworm	
Webworm species	

- 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 gal 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

		Rate		
Crop	Target Pests	lb ai/A	fl oz/A	
STONE FRUITS				
Apricot	American Plum Borer	0.02-0.04	1.28-2.56	
Chickasaw Plum	Apple Maggot (Adult)			
Damson Plum	Black Cherry Aphid			
Japanese Plum	Cherry Fruit Fly species (Adult)			
Nectarine	Codling Moth			
Peach	Green Fruitworm			
Plum	Japanese Beetle			
Plumcot	June Beetle			
Prune	Leafhopper species			
Sweet and Tart Cherry	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			

- 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 gal 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.

		Rate		
Crop	Target Pests	lb ai/A	fl oz/A	
SUGARCANE				
	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 Cranefly 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 gal of water per acre.

- **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>&</sup>lt;sup>3</sup>See **Resistance** statement under **Use Directions**.

		Rate	
Crop	Target Pests	lb ai/A	fl oz/A
SUNFLOWER	SUNFLOWER		
	Cutworm species	0.015-0.025	0.96-1.60
	Sunflower Beetle		
	Banded Sunflower Moth	0.02-0.03	1.28-1.92
	Fall Armyworm <sup>1</sup>		
	Grasshopper species		
	Head-Clipper Weevil (Adult)		

<sup>&</sup>lt;sup>1</sup>For control before the larva bores into the plant stalk

<sup>&</sup>lt;sup>2</sup>Suppression only of beetles active above ground

Japanese Beetle (Adult)		
Leafhopper species		
Meadow Spittlebug		
Painted Lady (Thistle)		
Caterpillar Seed Weevil (Adult)		
Spotted Cabbage Looper		
Stem Weevil (Adult)		
Stink Bug species		
Sunflower Maggot (Adult)		
Sunflower Moth		
Woollybear Caterpillar		
Beet Armyworm <sup>2,3</sup>	0.03	1.92
Spider Mitespecies <sup>2</sup>		

- 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 gal of water per acre.

- **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>&</sup>lt;sup>3</sup>See **Resistance** statement under **Use Directions**.

		Ra	ite
Crop	Target Pests	lb ai/A	fl oz/A
TOBACCO			
	Armyworm species <sup>1</sup>	0.015-0.03	0.96-1.92
	Blister Beetle species		
	Cabbage Looper		
	Corn Earworm		
	Cucumber Beetle species (Adult)		
	Cutworm species		
	Grasshopper species		
	Japanese Beetle (Adult)		
	Katydid species		
	Plant Bug species <sup>3</sup>		
	Potato Tuberworm		
	Salt Marsh Caterpillar		
	Stinkbug species		
	Tobacco Aphid species <sup>2,3</sup>		
	Tobacco Budworm <sup>3</sup>		

 $<sup>^{1}\</sup>mbox{Use}$  higher label rates for large larvae.

<sup>&</sup>lt;sup>2</sup>Suppression only

Tobacco Flea Beetle (Adult)
Tobacco Hornworm
Tobacco Thrips species <sup>2</sup>
Tomato Hornworm
Tree Cricket species
Vegetable Weevil (Adult)
Webworm species

- 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 gal 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>&</sup>lt;sup>3</sup>See **Resistance** statement under **Use Directions.** 

		Ra	te
Crop	Target Pests	lb ai/A	fl oz/A
TREE NUTS			
Almond	Ants	0.02-0.04	1.28-2.56
Beech Nut	Chinch Bug		
Brazil Nut	Codling Moth		
Butternut	Filbertworm		
Cashew	Leaffooted Bug		
Chestnut	Leafroller species		
Chinquapin	Navel Orange worm		
Filbert (Hazlenut)	Peach Twig Borer		
Hickory Nut	Plant Bug species		
Macadamia Nut (Bush Nut)	Stink Bug species		
Pistachio	Walnut Aphid		
Walnut, Black	Walnut Husk Fly species (Adult)		
Walnut, English (Persian)			
Pecan	Hickory Shuckworm	0.02-0.04	1.28-2.56
	Pecan Aphid species		
	Pecan Casebearer species		
	Pecan Phylloxera species		
	Pecan Spittlebug		
	Pecan Weevil		
	Stink Bug species		

# 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.

<sup>&</sup>lt;sup>1</sup>For control of first and second instars only

<sup>&</sup>lt;sup>2</sup>Suppression only

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 gal 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.

		F	Rate
Crop	Target Pests	lb ai/A	fl oz/A
<b>TUBEROUS AND CORM</b>	VEGETABLES		
(Potato, Sweet Potato,	Yams and Related)		
Arracacha Arrowroot Artichoke (Chinese and Jerusalemonly) Canna (edible) Cassava (bitter and sweet) Chayote (root) Chufa Dasheen	Cutworm species Leafhopper species Saltmarsh Caterpillar Sweet Potato Hornworm Woolybear Caterpillar species  Aphid species <sup>1</sup> Armyworm species <sup>1</sup> Blister Beetle species Colorado Potato Beetle <sup>1</sup> Corn Earworm	0.015-0.025	1.28-1.92
Ginger Leren Potato Sweet Potato Tanier Turmeric Yam (bean and true)	Cricket species Cucumber Beetle species (adults) European Corn Borer Flea Beetle species (adults) Grasshopper species Looper species Loper species Lygus Bug species 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) Leafminer species <sup>1,3</sup> Spider Mite species <sup>3</sup> Whitefly species <sup>1,3</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 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 gal total
  solution per acre. When applying by ground, a minimum of 10 gal 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
  A115.04.

- **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>&</sup>lt;sup>3</sup>Suppression only

		Ra	te
Crop	Target Pests	lb ai/A	fl oz/A
CONIFER AND DECIDUO	US TREES		
Plantations and Nurseries	Bagworm	0.02-0.04	1.28-2.56
	Balsam Twig Aphid		
	Balsam Wooly 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		

<sup>&</sup>lt;sup>1</sup>See Resistance statement under Use Directions.

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

Tent Caterpillar species	
Tussock Moth species	
Webworm species	

- 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 gal 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

	Target Pests	Rate		
Crop		lb ai/A	fl oz/A	
CONIFER AND DECIDUOUS TREES				
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 gal of water and apply 5-10 gal of finished spray per
- For low volume sprayers, dilute 10 fl oz per 100 gal of water and apply 100 gal of finished spray per
- For aerial applications, apply 7.5 fl oz per acre in a minimum of 10 gal finish spray per acre.

#### Restriction:

• **Do not** apply more than 0.5 lb ai (32 fl oz or 2 pt 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).

		Rate	
Use Site	Target Pests	lb ai/A	fl oz/A
Non-Cropland (Excluding Public Land)	See Crop Outlets on this <b>A115.04</b> label for target pests and rates.	See Crop Outlets	See Crop Outlets

#### 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 Gal
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]: Non-refillable 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 ¼ 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.

[A115.04] is a trademark of Atticus, LLC

[Warrior II with Zeon Technology®] is a registered trademark of a Syngenta Group Company.

#### **{LANGUAGE ON LABEL AFFIXED TO CONTAINER}**

#### 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

# A115.04[™]

[Alternate Brand Name: Serpent™ with VenomCap Technology] Contains lambda-cyhalothrin, the active ingredient used in [Warrior II with Zeon Technology®.]

ACTIVE INGREDIENT:	(% by weight)
Lambda-cyhalothrin <sup>1,2</sup>	22.8%
OTHER INGREDIENTS:	<u>77.2%</u>
TOTAL	100.0%
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Contains 2.08 lb of active ingredient per gallon and is a capsule suspension. <sup>1</sup>CAS No. 91465-08-6

<sup>2</sup>Synthetic pyrethroid

# **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 evolain it to you in detail )

explain it to you in detail.)			
FIRST AID			
If swallowed:	Call a poison control center or doctor immediately for treatment advice.		
	<ul> <li>Have person sip a glass of water if able to swallow.</li> </ul>		
	<ul> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> </ul>		
	<ul> <li>Do not give anything by mouth to an unconscious person.</li> </ul>		
If on skin or	Take off contaminated clothing.		
clothing:	<ul> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> </ul>		
	Call a poison control center or doctor for treatment advice.		
If inhaled:	Move person to fresh air.		
	<ul> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> </ul>		
	<ul> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>		
If in eyes:	Hold eye open and rinse slowly and gently with water for 15-20 minutes.		
	<ul> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> </ul>		
	<ul> <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 enter 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)

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.

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.

#### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or 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:

[For 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.

[For 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 ¼ 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!

See inside label booklet for additional Precautionary Statements and Directions for Use.

[A115.04] is not manufactured, or distributed by Syngenta, seller of [Warrior II with Zeon Technology®.]

Manufactured for: EPA Reg. No.: 91234-XXX Atticus, LLC EPA Est. No.: Parkway, Suite 200 NET CONTENTS: 40 NW Can

Cary, NC 27513

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