

## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

October 3, 2025

Sharda USA LLC c/o Freddy Shelley Agent Wagner Regulatory Associates, Inc. P.O. Box 640 Hockessin, DE 19707

Subject: Approval of Label Amendment; Only Indicated Changes Reviewed – Correcting First Aid

and environmental hazards language, and revision of text in crop tables

Product Name: Sharda Zeta-cypermethrin 17.1% EC

EPA Registration Number: 83529-236

Application Date: 07/30/2025

Case Number: 665990

#### Dear Freddy Shelley:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. However, EPA reviewed only the label changes highlighted, marked, or otherwise indicated on the submitted label. Any other changes to the previously approved label that were not clearly highlighted, marked, or otherwise indicated in your submission were not reviewed and may form the basis of regulatory and/or enforcement action if later discovered by the Agency. Further, submission of a label amendment application with unidentified changes may be considered a knowing submission of false information to the Agency. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

The label submitted with the application has been stamped "Accepted Only Indicated Revisions Reviewed" and is enclosed for your records.

This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 C.F.R. § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it

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bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 C.F.R. § 152.3.

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 FIFRA and is subject to review by the Agency. If the website contains any false or misleading statement, design, or graphic, the product may be misbranded and unlawful to sell or distribute under FIFRA Sections 2(q)(1)(A) and 12(a)(1)(E). 40 C.F.R. § 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on the product label, claims made as part of the product's sale or distribution may not substantially differ from those claims approved through the registration process under FIFRA Section 12(a)(1)(B). 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 product will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Laura Rademacher at Rademacher.Laura@epa.gov.

Sincerely,

Jacquelyn Herrick, Product Manager 03 Invertebrate & Vertebrate Branch 1 Registration Division (7505T) Office of Pesticide Programs [MASTER LABEL]

## **RESTRICTED USE PESTICIDE**

Due to toxicity to fish and aquatic organisms and acute oral toxicity.

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.

ZETA-CYPERMETHRIN GROUP 3A INSECTICIDE

## **Sharda Zeta-Cypermethrin 17.1% EC**

**ABN: Pony** 

ACTIVE INGREDIENT:	WT. BY %
Zeta-cypermethrin*: S-Cyano (3-phenoxy-phenyl)methyl (+) cis/trans 3-(2,2-dichloroethenyl)-2,2	
dimethylcyclopropane carboxylate	17.1%
OTHER INGREDIENTS:	82.9%
TOTAL:	
Contains 1.5 pounds active ingredient per gallon.	

# 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 this label, find someone to explain it to you in detail.)

	FIRST AID		
IF SWALLOWED:	Immediately call a poison control center or doctor.		
	DO NOT induce vomiting unless told to do so by a poison control center or doctor.		
	DO NOT give any liquid to the person.		
	DO NOT give anything by mouth to an unconscious person.		
IF ON SKIN OR	Take off contaminated clothing.		
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:	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>		
Call a poison control center or doctor for treatment advice.			
HOTLINE NUMBER			

## For medical emergency treatment, call **1-800-222-1222**.

For non-emergency information on this product, call 1-XXX-XXXX (may include hours of service), or contact the National Pesticides Information Center (NPIC) at 1-800-858-7378. Monday through Friday, 8 AM to 12 PM PST. or at http://npic.orst.edu.

#### **NOTE TO PHYSICIAN**

Contains petroleum distillate. Vomiting must be supervised by a physician or the professional staff because of the possible pulmonary damages by aspiration pneumonia.

[Optional referral statements when booklets and container labels are used:]

[See label booklet for [additional] [complete] [First Aid,] [Precautionary Statements,] [Directions For Use,] and [Storage and Disposal.]

EPA Reg. No. 83529-236

Manufactured for:
Sharda USA LLC SU

7217 Lancaster Pike, Suite A Hockessin, Delaware 19707 ACCEPTED

ONLY INDICATED
REVISIONS REVIEWED

10/03/2025

Net Contents: \_\_\_\_\_ [Gals./L]

**EPA Est. No. XXXXX-XX-XXX** 

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

83529-236

No label revisions other than those indicated were reported to the Agency.

#### PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

May be fatal if swallowed. Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing vapors or spray mist. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. The active ingredient may cause sensitization reaction in some individuals.

#### PERSONAL PROTECTIVE EQUIPMENT

#### Handlers who may be exposed to the dilute through application or other tasks must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate or Viton ≥14 mils
- Shoes plus socks

## Handlers who may be exposed to the concentrate through mixing, loading, application, or other tasks must wear:

- Long-sleeved shirt and long pants,
- Chemical-resistant gloves made of barrier laminate or Viton ≥14 mils
- 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 exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### **USER SAFETY RECOMMENDATIONS**

#### **Users should:**

- Wash thoroughly with soap and water after handling. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- 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, aquatic invertebrates, oysters, and shrimp. **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean highwater 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 wash waters.

## **Non-Target Organism Advisory Statement**

This product is highly toxic to bees and other pollinating insects exposed to direct treatment or to residues in/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. **Protect pollinating insects by following label directions intended to minimize drift and reduce pesticide risk to these organisms.** 

#### PHYSICAL/CHEMICAL HAZARDS

**DO NOT** use or store near heat or open flame.

#### **DIRECTIONS FOR USE**

## **RESTRICTED USE PESTICIDE**

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

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

#### **AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker

{Note to reviewer: [Text] in brackets denotes optional text.}

Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves: Barrier Laminate or Viton ≥14 mils
- Shoes plus socks
- Protective eyewear

#### INSECT RESISTANCE MANAGEMENT

For resistance management, **Sharda Zeta-Cypermethrin 17.1% EC** contains a Group 3A insecticide. Any insect population may contain individuals naturally resistant to **Sharda Zeta-Cypermethrin 17.1% EC** and other Group 3A insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same fields. Appropriate resistance management strategies must be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of **Sharda Zeta-Cypermethrin 17.1% EC** 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 (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
  - Individual insecticides selected for use in mixtures must 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 targeted pests.
  - 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 insecticidal activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticides 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.

#### MANDATORY SPRAY DRIFT MANAGEMENT

#### **Aerial Applications:**

- **DO NOT** release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to select nozzle and pressure that deliver medium or coarser droplets (ASABE S641)
- **DO NOT** apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- If the windspeed is 10 mph or less, applicators must use 1/2 swath displacement upwind at the downwind edge of the field. When the windspeed is between 11 15 mph, applicators must use 3/4 swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply during temperature inversions.

### **Airblast Applications:**

- Sprays must be directed into the canopy.
- **DO NOT** apply when wind speeds exceed 15 mph at the application site.
- User must turn off outward pointing nozzles at row ends and when spraying outer row.
- **DO NOT** apply during temperature inversions.

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{Note to reviewer: [Text] in brackets denotes optional text.}

#### **Ground Boom Applications:**

- User must only apply with the nozzle height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to select nozzle and pressure that deliver medium or coarser droplets (ASABE S572).
- **DO NOT** apply when wind speeds exceed 15 mph at the application site.
- **DO NOT** apply during temperature inversions.

#### **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### Controlling Droplet Size - Ground Boom

- **Volume** Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### Controlling Droplet Size - Aircraft

• Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles must be oriented parallel with the airflow in flight.

#### **BOOM HEIGHT - Ground Boom**

• For ground equipment, the boom must remain level with the crop and have minimal bounce.

### **RELEASE HEIGHT – Aircraft**

Higher release heights increase the potential for spray drift.

#### SHIELDED SPRAYERS

• Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### **TEMPERATURE AND HUMIDITY**

• When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

## **TEMPERATURE INVERSIONS**

• Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicate an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

#### **WIND**

- Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.
- Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### **CHEMIGATION USE DIRECTIONS**

Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. **DO NOT** apply this product through any other type of irrigation system. **DO NOT** connect any irrigation system (including greenhouse systems) used for pesticide application to a public water system.

Crop injury, lack of effectiveness, or illegal residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts. 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.

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 backflow. The pesticide injection pipeline must also contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

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.

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. Systems must use a metering pump, including a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

**DO NOT** apply when wind speed favors drift beyond the area intended for treatment. **Sharda Zeta-Cypermethrin 17.1% EC** must be applied continuously for the duration of the water application. **Sharda Zeta-Cypermethrin 17.1% EC** must be diluted in sufficient volume to ensure accurate application over the area to be treated. Use the appropriate amount of water to carry the product to the target pest. Agitation is not required when a suitable diluent is used.

#### **Vegetative Filter Strips**

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

Only apply products containing zeta-cypermethrin onto fields where a maintained vegetative filter strip of at least 25 feet exists between the field edge and where a down gradient aquatic habitat exists. This minimum required width of 25 feet may be reduced or removed under the following conditions:

- For Western irrigated agriculture, a maintained vegetative filter strip of at least 10 feet wide is required. Western irrigated agriculture is defined as irrigated farmland in the following states: WA, OR, CA, ID, NV, UT, AZ, MT, WY, CO, NM, and TX (west of I-35).
  - For Western irrigated agriculture, if a sediment control basin is present, a vegetative filter strip is not required.
- In all other areas, a vegetative filter strip with a minimum width of 25 feet is required, unless the following conditions are met. The vegetative filter strip requirement may be reduced from 25 feet to 15 feet if at least one of the following applies:
  - The area of application is considered prime farmland (as defined in 7 CFR § 657.5)
  - Conservation tillage is being implemented on the area of application. Conservation tillage is defined as any system that leaves at least 30% of the soil surface covered by residue after planting. Conservation tillage practices can include mulch-till, no-till, or strip-till.
  - A functional terrace system is maintained on the area of application.
  - Water and sediment control basins for the area of application are functional and maintained.
  - The area of application is less than or equal to 10 acres.

#### Rice fields are not required to have a vegetative filter strip.

For further guidance on vegetated filter strips, refer to the following publication for information on constructing and maintaining effective buffers: Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. https://www.regulations.gov/document?D=EPA-HQ-OPP-2008-0331-0175

#### **BUFFER ZONES TO WATER BODIES**

**Ground Application**: **DO NOT** apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fishponds).

**Ultra-Low Volume (ULV) Aerial Application: DO NOT** apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fishponds).

**Non-ULV Aerial Application: DO NOT** apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fishponds).

#### **APPLICATION INSTRUCTIONS**

Use low rate under light to moderate infestation. Higher labeled rates should be used under heavy insect pressure. The rate of application is variable according to insect pressure, timing of spray and field scouting. **DO NOT** exceed maximum labeled rate.

Under hot and dry conditions, increase the spray volume and add appropriate spray adjuvant, but only to those crops which have previously demonstrated a tolerance to the adjuvant(s) under these conditions.

#### **Preventive Use**

For cutworm, armyworm, or stalk borer control, **Sharda Zeta-Cypermethrin 17.1% EC** may be applied before, during, or after planting. For soil-incorporated applications, use higher labeled rates for improved control. **DO NOT** exceed maximum labeled rate.

#### **Rotational Crops**

With the exception of the crops listed below, **DO NOT** plant rotational crops within 30 days of last application.

#### **Tank Mixtures**

Sharda Zeta-Cypermethrin 17.1% EC may be applied in tank mixtures with other products approved for use on Alfalfa and Non-Grass Animal Feeds; Artichoke, globe; Avocado; Barley; Basil; Black Sapote; Brassica Vegetables; Buckwheat; Bulb Vegetables; Bushberries; Caneberries; Canistel; Canola (Rapeseed); Celtuce; Citrus; Corn; Cotton; Cucurbit Vegetables; Florence Fennel; Fruiting Vegetables; Grapes; Grass Forage, Fodder and Hay and Grass Grown for Seed; Kohlrabi; Leaf Petiole Vegetables; Leafy Vegetables; Legume Vegetables; Mamey Sapote; Mango; Oats; Papaya; Peanut; Pistachios; Pome Fruits; Rice; Root and Tuber Vegetables; Rye; Safflower; Sapodilla; Sorghum; Soybeans; Star Apple; Stone Fruits; Sugar Beets; Sugarcane; Sunflower; Tree Nuts; Wheat; Triticale; Quinoa; and Teff.

Test for compatibility of products before mixing.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### Maximum Usage When Applying Both Zeta-Cypermethrin and Cypermethrin Products to the Same Crop Within the Same Year

• **DO NOT** apply more than the maximum seasonal total for an active ingredient when used alone. If applying other products to the same crop within the same season containing alpha-cypermethrin, zeta-cypermethrin, or cypermethrin, **DO NOT** apply more than the combined maximum seasonal total of all active ingredients. The table below lists maximum totals for some uses. Consult product labels for full directions for use and rate restrictions.

	Maximum Yearly Total for Either Active Ingredient Used Alone (lb. a.i./acre)		Maximum Yearly Total When Applying Both Active Ingredients to the Same Crop (lb. a.i./acre)
Crop	Zeta-cypermethrin (as Sharda Zeta-Cypermethrin 17.1% EC)	Cypermethrin	Zeta-cypermethrin (as Sharda Zeta-Cypermethrin 17.1% EC) plus cypermethrin
Cotton	0.3	0.6	0.6
Head and Stem Brassica	0.3	0.6	0.6
Leafy Brassica Greens	0.3	0.4	0.4
Head Lettuce	0.3	0.6	0.6
Bulb Vegetables	0.25	0.5	0.5
Pecans	0.3	0.6	0.6

Maximum Yearly Usage and PHI (Pre-Harvest Interval) for Sharda Zeta-Cypermethrin 17.1% EC Labeled Crops

	Maximum Year Total/Acre for	Sharda Zeta-Cypermethrin		
Crop	17.1% EC		PHI (Days)	
	Lb. a.i.	Fl. oz.		
Alfalfa	0.01/cutting with a maximum	8.6/cutting with a	3 (cutting or grazing)	
Allalla	of 3 cuttings/season	maximum of 25.8/season	7 (harvesting seed)	
Alfalfa and Non-Grass Animal Feeds (Forage,	0.05/cutting with a maximum	4.3/cutting with a	3 (cutting or grazing)	
Fodder, Straw, and Hay) Group except Alfalfa	of 3 cuttings/season	maximum of 12.9/season	7 (harvesting seed)	
Avocado, Black Sapote, Canistel, Mamey	0.3	25.8	1	
Sapote, Mango, Papaya, Sapodilla, Star Apple	0.3	23.8	1	
Artichoke, Globe	0.2	17.2	5	
Barley, Quinoa	0.25	21.5	14	
Basil	0.3	25.8	1	
Caneberries	0.3	25.8	1	
Bushberries	0.3	25.8	1	
Brassica Vegetables	0.3	25.8	1	
Buckwheat	0.25	21.5	14	
Bulb Vegetables	0.25	21.5	7	

Celtuce, Florence Fennel	0.3	25.8	1
Citrus	0.2	17.2	1
Corn, Sweet	0.3	25.8	3
Corn, Field, Seed, Pop	0.2	17.2	7 (grain, stover, and forage)
Cotton	0.3	25.8	14
Cucurbit Vegetables	0.3	25.8	1
Fruiting Vegetables	0.3	25.8	1
Grapes	0.3	25.8	1
	0.05/cutting	4.3/cutting	0.45
Grass Forage, Fodder, and Hay Group and	Hay 0.20/season	17.2	O (Forage and Hay)
Grass Grown for Seed	Forage, Straw, and Seed Screenings 0.25/Season	21.5	7 (Straw and Seed Screenings)
Kohlrabi	0.3	25.8	1
Leafy Petiole Vegetables	0.3	25.8	1
Leafy Vegetables	0.3	25.8	1
Legume Vegetables	0.3	25.8	1 (succulent shelled or edible podded) 21 (dried shelled)
Oats	0.25	21.5	14
Canola (Rapeseed)	0.3	25.8	7
Pistachio	0.25	21.5	7
Safflower	0.15	12.9	14
Sunflower	0.25	21.5	30
Peanut	0.3	25.8	7
Pome Fruits	0.3	25.8	14
Rice and Wild Rice	0.2	17.2	14
Root and Tuber Vegetables (except Sugar Beet)	0.3	25.8	1
Rye	0.25	21.5	14
Sod Farms	0.25	21.5	0
Sorghum	0.25	21.5	14 (grain and fodder (stover)) 45 (forage (silage))
Soybeans	0.3	25.8	21
Stone Fruits	0.3	25.8	14
Sugar Beets	0.15	12.9	50
Sugarcane	0.2	17.2	21
Tree Nuts	0.25	21.5	7
Wheat, Triticale, and Teff	0.25	21.5	14

The REI (Restricted Entry Interval) is 12 hours for all labeled crops. Refer to the crop specific use directions for detailed information on application timing and any use restrictions.

#### **Pollinator Best Management Practices**

Following best management practices can help reduce the risk to terrestrial pollinators. Examples of best management practice include applying pesticides in the evening and at night when pollinators are not foraging and checking to confirm hive locations before spraying. For additional resources on pollinator best management practices, visit: https://www.epa.gov/pollinator-protection/find-best-management-practices-protect-pollinators

Managed pollinator protection plans are developed by States/Tribes to promote communication between growers, landowners, farmers, beekeepers, pesticide users, and other pest management professionals to reduce exposure of bees to pesticides. If available, visit State plans for additional information on how to protect pollinators.

#### **How to Report Bee Kills**

It is recommended that users contact both State lead agency and the U.S. Environmental Protection Agency to report bee kills due to pesticide application. Bee kills can be reported to EPA at beekill@epa.gov. To contact your State lead agency, see the current listing of State pesticide regulatory agencies at the National Pesticide Information Center's website: http://npic.orst.edu/reg/state\_agencies.html

## Non-Grass Animal Feeds (Forage, Fodder, Straw, and Hay) Group - Except Alfalfa and Alfalfa Grown For Seed

Velvet Bean; Clover; Kudzu; Lespedeza; Lupin; Sainfoin; Trefoil; Vetch; Crown Vetch; and Milk Vetch.

Insects Controlled	Rate of Application	Method of Application
Alfalfa Caterpillar	2.4 - 4.3 fl. oz./A	Apply as insects appear in sufficient volume of
Alfalfa Looper	(0.028 - 0.05 lb. a.i./A)	water to ensure thorough coverage of foliage. Use
Alfalfa Weevil		higher labeled rate for increased pest pressure or
Blue Alfalfa Aphid <sup>1</sup>		for increased residual pest control. <b>DO NOT</b> exceed
Cutworms		maximum labeled rate.
Egyptian Alfalfa Weevil (Larvae and Adults)		
Flea Beetles		Apply in a minimum of 2 gallons of finished spray
Green Cloverworm		per acre by aerial equipment or 10 gallons of
Green Peach Aphid <sup>1</sup>		finished spray per acre by ground equipment. ULV
Hornworms		oil spray application is prohibited. Higher volumes
Meadow Spittlebug		of finished spray may improve insect control under
Pea Aphid <sup>1</sup>		high temperatures, when foliage is dense and/or
Potato Leafhopper		when insect pressure is high.
Spotted Alfalfa Aphid <sup>1</sup>		
Threecornered Alfalfa Hopper		
Velvetbean Caterpillar		
Webworms		
Armyworms	3 - 4.3 fl. oz./A	
Grasshoppers	(0.035 - 0.05 lb. a.i./A)	
Plant Bugs (including Lygus spp. and Stink Bugs)		
Destrictions	·	

#### Restrictions:

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product or 0.05 lb. a.i./A per cutting and 12.9 fl. oz./A of product or 0.15 lb. a.i./A per year.
- DO NOT make more than 3 applications per year.
- Applications may be made up to 3 days of cutting or grazing or up to 7 days of harvesting seed.

<sup>1</sup>Aphid control may be variable depending on species present and host-plant relationships.

### Alfalfa; Alfalfa Grown For Seed

Lucerne, Sainfoin, Holy Clover, Esparcet, Birdsfoot Trefoil, and varieties and/or hybrids of these.

Insects Controlled	Rate of Application	Method of Application
Alfalfa Caterpillar	2.24 - 4.3 fl. oz./A	Apply as insects appear in sufficient volume of
Alfalfa Looper	(0.028 - 0.05 lb. a.i./A)	water to ensure thorough coverage of foliage. Use
Alfalfa Weevil		higher labeled rate for increased pest pressure or
Blue Alfalfa Aphid <sup>1</sup>		for increased residual pest control. <b>DO NOT</b> exceed
Cutworms		maximum labeled rate.
Egyptian Alfalfa Weevil (Larvae and Adults)		
Flea Beetles		Apply in a minimum of 2 gals. of finished spray per
Green Cloverworm		acre by aerial equipment or 10 gals. of finished
Green Peach Aphid <sup>1</sup>		spray per acre by ground equipment. ULV oil spray
Hornworms		application is prohibited. Higher volumes of finished
Meadow Spittlebug		spray may improve insect control under high
Pea Aphid <sup>1</sup>		temperatures, when foliage is dense and/or when
Potato Leafhopper		insect pressure is high.
Spotted Alfalfa Aphid <sup>1</sup>		
Threecornered Alfalfa Hopper		
Velvetbean Caterpillar		
Webworms		
Armyworms	3 - 4.3 fl. oz./A	
Grasshoppers	(0.035 - 0.05 lb. a.i./A)	
Plant Bugs (including Lygus spp. and Stink Bugs)		

#### Restrictions:

- DO NOT make applications less than 7 days apart.
- DO NOT apply more than 8.6 fl. oz./A of product or 0.1 lb. a.i./A per cutting and 25.8 fl. oz./A of productor 0.3 lb. a.i./A per year.
- DO NOT make more than 2 applications per cutting.
- Applications may be made up to 3 days of cutting or grazing or up to 7 days of harvesting seed.

<sup>1</sup>Aphid control may be variable depending on species present and host-plant relationships.

## Artichoke, Globe

Insects Controlled	Rate of Application	Method of Application
Aphids <sup>1</sup>	4.3 fl. oz./A	Apply as required by scouting. Base timing and frequency of applications on
Artichoke Plume Moth Lygus Bug <sup>2</sup>	(0.05 lb. a.i./A)	insect populations reaching locally determined economic threshold levels.
Proba Bug		Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gals. of finished spray per acre by ground and 2 gals. of finished spray per acre by air).
		Follow appropriate spray drift precautions on this label.

## Restrictions:

- **DO NOT** make applications less than 14 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 4 applications per year.
- **DO NOT** apply more than 17.2 fl. oz./A of product (0.2 lb. a.i./A) per year.
- **DO NOT** apply within 5 days of harvest.

<sup>1</sup>Aids in control.

<sup>2</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

#### **Tropical Fruits**

Avocado, Black Sapote, Canistel, Mamey Sapote, Mango, Papaya, Sapodilla, and Star Apple

Insects Controlled	Rate of Application	Method of Application
Avocado Lace Bug	4.3 fl. oz./A	Apply by ground equipment using sufficient
Avocado Leafhopper	(0.05 lb. a.i./A)	water to obtain full coverage of foliage in a
Avocado Leafroller		minimum of 20 gals. per acre for a concentrate
Avocado Loopers		spray or a minimum of 100 gals. per acre for a
Avocado Tree Girdler		dilute spray. Apply by air in a minimum of 10
Avocado Whitefly		gals. of finished spray per acre.
Brown Soft Scale		
Caterpillars		Apply when insects first appear and repeat at 7-
Mirids		to 10-day intervals as needed to provide
Omnivorous Loopers		control.
Orange Tortrix		
Scale Crawlers		
Spanworm		
Thrips		
Twig Borers		

## **Restrictions:**

- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product or 0.3 lb. a.i./A per year.
- **DO NOT** apply within 1 day of harvest.

Barley (including malt barley), Buckwheat, Oats, Rye, and Quinoa

Insects Controlled	Rate of Application	Method of Application
Cutworm spp., including Army Cutworm	1.4 - 4.3 fl. oz./A	Apply as required by scouting. Base timing and
Painted Lady (Thistle) Caterpillar	(0.016 - 0.05 lb. a.i./A)	frequency of applications on insect populations
Armyworm, Southern	1.9 - 4.3 fl. oz./A	reaching locally determined economic
Armyworm, True	(0.022 - 0.05 lb. a.i./A)	thresholds. <b>DO NOT</b> exceed maximum labeled
Armyworm, Yellowstriped		rate.
Cereal Leaf Beetle		
Flea Beetle spp.		Apply by ground or air equipment using
Pale Western Cutworm		sufficient water to obtain full coverage of
Plant Bug spp.		foliage (minimum of 10 gals. of finished spray
Spittlebug		per acre by ground and 2 gals. of finished spray
Webworm spp.		per acre by air).
Aphid spp. <sup>1,2</sup>	3.4 - 4.3 fl. oz./A	
Armyworm, Beet <sup>2</sup>	(0.04 - 0.05 lb. a.i./A)	For chinch bug control, begin applications when
Armyworm, Fall		bugs migrate from small grains or grass weeds.
Chinch Bug		Apply sufficient spray volume to penetrate the
		soil/stem interface, leaf collars, and sheaths.

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	1 460 10 01 01
Grass Sawfly	
Grasshopper spp.	
Greenbug <sup>1,2</sup>	
Stink Bug spp.	
Thrips spp.	
Wheat Stem Sawfly (Adults) <sup>1</sup>	
Whitefly spp. <sup>1,2</sup>	
	·

#### Restrictions:

- **DO NOT** make applications less than 14 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 5 applications per year.
- **DO NOT** apply more than 21.5 fl. oz./A of product or 0.25 lb. a.i./A per year.
- **DO NOT** apply within 14 days of harvest for grain, straw, and hay.

Aids in control

<sup>2</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

#### Basil

Insects Controlled	Rate of Application	Method of Application
Lepidoptera (including Diamondback Moth)	4.3 fl. oz./A	Apply as required by scouting. Base timing and frequency
Flea Beetle	(0.05 lb. a.i./A)	of applications on insect populations reaching locally
Diabrotica spp.		determined economic threshold levels. <b>DO NOT</b> exceed
Onion Thrips		maximum labeled rate.
		Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gals. of finished spray per acre by ground and 2 gals. of finished spray per acre by air).

#### Restrictions:

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- **DO NOT** apply within 1 day of harvest.

#### Caneberry Crop Subgroup 13-07A

Blackberry; Loganberry, Red and Black Raspberry; Wild Raspberry; and cultivars, varieties, and/or hybrids of these commodities.

#### **Bushberry Crop Subgroup 13-07B**

Aronia Berry; Blueberry, Highbush and Lowbush; Buffalo Currant; Chilean Guava; Cranberry, Highbush; Currant, Black and Red; Elderberry; European Barberry; Gooseberry; Honeysuckle, Edible; Huckleberry; Jostaberry; Juneberry (Saskatoon berry); Lingonberry; Native Currant; Salal; Sea Buckthorn; and cultivars, varieties, and/or hybrids of these commodities.

Insects Controlled	Rate of Application	Method of Application
Leafrollers	4.3 fl. oz./A	Apply as required by scouting. Base timing and frequency of applications
Orange Tortrix	(0.05 lb. a.i./A)	on insect populations reaching locally determined economic threshold
Root Weevils		levels. <b>DO NOT</b> exceed maximum labeled rate.
		Apply by ground and air equipment using sufficient water to obtain full coverage of foliage (minimum of 20 gals. of finished spray per acre by ground and 2 gals. of finished spray per acre by air).
		Avoid applications when honeybees are actively foraging by applying
		during the early morning or evening hours.

## Restrictions:

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- DO NOT apply within 1 day of harvest.

#### Head and Stem Brassica Vegetables, Crop Group 5-16

Broccoli; Brussels Sprouts; Cauliflower; Cavalo Broccolo; Cabbage; Chinese Cabbage (napa); and cultivars, varieties, and/or hybrids of

these commodities.

#### Leafy Brassica Greens Crop Subgroup 4-16B

Arugula; Broccoli Raab; Chinese Broccoli; Cabbage, Abyssinian; Chinese Cabbage (Bok Choy); Cabbage, Seakale; Collards; Cress, Garden; Cress, Upland; Hanover Salad; Kale; Maca, Leaves; Mizuna; Mustard Greens; Radish, Leaves; Rape Greens; Rocket, Wild; Shepherd's Purse: Turnip Greens: Watercress[\*]<sup>†</sup>: and cultivars, varieties, and/or hybrids of these commodities.

Insects Controlled	Rate of Application	Method of Application
Corn Earworm	2.4 - 4.3 fl. oz./A	Apply in water as necessary for insect control
Cucumber Beetles	(0.028 - 0.05 lb. a.i./A)	using a minimum of 15 gals. of finished spray
Cutworm		per acre by ground and 5 gals. of finished spray
Diamondback Moth <sup>1</sup>		per acre by air.
Flea Beetles		
Imported Cabbageworm		Use lower rates of Sharda Zeta-Cypermethrin
Leafhoppers		17.1% EC under light to moderate insect
Saltmarsh Caterpillar		pressure. Use higher labeled rates to control
Southern Cabbageworm		heavy to extremely heavy insect populations.
Tobacco Budworm <sup>1</sup>		_
Alfalfa Looper	3.4 - 4.3 fl. oz./A	In areas where arid climatic conditions persist,
Armyworms	(0.04 - 0.05 lb. a.i./A)	including California and Arizona, higher labeled
Cabbage Looper		rates may be required.
Cabbage Webworm		
Crickets		
Grasshoppers		
Ground Beetles		
Leafminers (Adults)		
Lygus Bugs		
Onion Thrips		
Stink Bugs		
Wireworm (Adults)		
Aphids <sup>2</sup>		
Whiteflies <sup>3</sup>		

#### Restrictions:

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- **DO NOT** apply within 1 day of harvest.

#### <sup>1</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

<sup>2</sup>Aphid control may be variable depending on species present and host-plant relationships.

<sup>3</sup>Aids in control.

<sup>†</sup>For applications made to watercress, production fields must be drained of water at least 24 hours prior to the application and water must not be re-applied to the field for a minimum of 24 hours following the application.

[\*Not registered for use by California.]

#### **Bulb Vegetables Crop Group 3-07**

Chive, Fresh Leaves; Chive, Chinese, Fresh Leaves; Daylily, Bulb, Elegans Hosta; Fritillaria, Bulb and Leaves; Garlic, Bulb, Great Headed, Bulb, Serpent, Bulb; Kurrat; Lady's Leek; Leek, Leek, Wild; Lily, Bulb; Onion, Beltsville Bunching, Bulb, Chinese Bulb, Fresh, Green, Macrostem, Pearl, Potato Bulb, Tree Tops, Welsh Tops; Shallot, Bulb and Fresh Leaves; and cultivars, varieties, and/or hybrids of these commodities.

Insects Controlled	Rate of Application	Method of Application
Aphids <sup>1</sup>	2.4 - 4.3 fl. oz./A	Apply in a minimum of 20 gals. of finished spray per acre with ground
Armyworms	(0.028 - 0.05 lb. a.i./A)	equipment or in a minimum of 3 gals. of finished spray per acre by
Cutworms		aircraft. Begin applications when pests appear and repeat as
Leafminers (Adults)		necessary to maintain control.
Onion Maggot (Adults)		
Stink Bugs		To control Onion Thrips, use higher labeled rates as population
Onion Thrips	3.2 - 4.3 fl. oz./A	increases and avoid rescue situations. Use of a crop oil concentrate at
	(0.0375 - 0.05 lb. a.i./A)	16 fl. oz. per acre is recommended. <b>DO NOT</b> exceed maximum
		labeled rate.

#### **Restrictions:**

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A or 0.05 lb. a.i./A per application.

- **DO NOT** make more than 5 applications per year.
- **DO NOT** apply more than 21.5 fl. oz./A of product (0.25 lb. a.i./A) per year.
- **DO NOT** graze livestock in treated areas or cut treated crops for feed.
- DO NOT apply within 7 days of harvest.

<sup>1</sup>Aphid control may be variable depending on species present and host-plant relationships.

#### Celtuce; Fennel, Florence (finocchio)

Insects Controlled	Rate of Application	Method of Application
Aphid spp. <sup>2,3</sup>	2.4 - 4.3 fl. oz./A	Apply in water as necessary for insect control
Corn Earworm	(0.028 - 0.05 lb. a.i./A)	using a minimum of 10 gals. of finished spray
Cucumber Beetles		per acre by ground and 5 gals. of finished spray
Cutworms		per acre by air.
Diamondback Moth		
Flea Beetles		Use lower rates of Sharda Zeta-Cypermethrin
Imported Cabbageworm		17.1% EC under light to moderate insect
Leafhoppers		pressure.
Saltmarsh Caterpillar		
Tobacco Budworm <sup>2</sup>		Use higher labeled rates to control heavy to
Whitefly spp. <sup>1,2</sup>		extremely heavy insect populations.
Armyworms	3.4 - 4.3 fl. oz./A	
Crickets	(0.04 - 0.05 lb. a.i./A)	In areas where arid climatic conditions persist,
Ground Beetles		including California and Arizona, higher labeled
Loopers		rates may be required.
Lygus Bugs		
Onion Thrips		
Stink Bugs		
Wireworm (Adults)		

#### **Restrictions:**

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- **DO NOT** make applications within 1 day of harvest.

<sup>1</sup>Aids in control.

<sup>2</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

<sup>3</sup>Aphid control may be variable depending on species present and host-plant relationships.

#### **Citrus Fruits Crop Group 10-10:**

Australian Desert Lime; Australian Finger Lime; Australian Round Lime; Brown River Finger Lime; Calamondin (*Citrus mitis*; *Citrofortunella mitis*); Citrus Citron (*Citrus medica*); Citrus Hybrids (*Citrus* spp.) (includes Chironja, Tangelo, Tangor); Grapefruit (*Citrus paradisi*); Japanese Summer Grapefruit; Kumquat (*Fortunella* spp.); Lemon (*Citrus jambhiri, Citrus limon*); Lime (*Citrus aurantiifolia*); Mandarin (tangerine) (*Citrus reticulata*); Mediterranean Mandarin; Mount White Lime; New Guinea Wild Lime; Orange, Sour (*Citrus aurantium*); Orange, Sweet (*Citrus sinensis*); Pummelo (*Citrus grandis, Citrus maxima*); Russel River Lime; and Satsuma Mandarin (*Citrus unshiu*); Sweet Lime; Tachibana Orange; Tahiti Lime; Tangelo; Tangor; Trifoliate Orange; Uniq Fruit; and cultivars, varieties, and/or hybrids of these commodities.

Insects Controlled	Rate of Application	Method of Application
Armyworm, Beet	4.3 fl. oz./A	Apply by ground equipment using sufficient
Asian Cockroach	(0.05 lb. a.i./A)	water to obtain full coverage of foliage in a
Blue-Green Citrus Root Weevils		minimum of 20 gals. per acre for concentrate
Cutworms		spray or a minimum of 100 gals. per acre for
Diaprepes Root Weevil		dilute spray. Apply by air in a minimum of 10
Fire Ants		gals. of finished spray per acre.
Fuller Rose Beetle		
Glassy-Winged Sharpshooter		Begin applications when pest activity is noted.
Grasshopper		
Katydid		
Leafhoppers		
Leafrollers		
Leafminers		
Little Leaf Notcher		
Loopers		

**Orange Tortrix** 

Plant Bugs Psyllids Thrips

**Orangedog Caterpillars** 

Edder Amendment: correction of Errors			
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## Whiteflies Restrictions:

- **DO NOT** make applications less than 14 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 4 applications per year.
- **DO NOT** apply more than 17.2 fl. oz./A of product (0.2 lb. a.i./A) per year.
- DO NOT apply within 1 day of harvest.

#### Corn. Sweet

Insects Controlled	Rate of Application	Method of Application
Chinch Bug	2.4 - 4.3 fl. oz./A	Apply with ground or air equipment using
Corn Rootworm (Adults)	(0.028 - 0.05 lb. a.i./A)	sufficient water and application methods to
Corn Silkfly		ensure thorough coverage of foliage.
Cutworms		
Flea Beetle		Apply in water using a minimum of 20 gals. of
Japanese Beetle (Adults)		finished spray per acre by ground and a
Leafhoppers		minimum of 2 gals. of finished spray per acre by
Sap Beetle (Adults)		air.
Tarnished Plant Bug		
Aphids <sup>1</sup>	3 - 4.3 fl. oz./A	Apply at minimum 3- to 5-day intervals or as
Armyworms	(0.035 - 0.05 lb. a.i./A)	needed for control.
Corn Borers		
Corn Earworm		
Grasshoppers		

#### **Restrictions:**

- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- **DO NOT** apply within 3 days of harvest of ears or forage or livestock grazing.

<sup>1</sup>Aphid control may be variable depending on species present and host-plant relationships.

Corn (Field), Field Corn Grown for Seed, Popcorn - At-Plant Application

Insects Controlled	Rate of Application		Method of Application			
Cutworms	0.16 fl. oz. per 1,000 linear feet of row		Apply as an in-furrow, band or T-band treatment using a			
	(0.002 lb. a.i. per 1,000 linear feet of row)		row) minimum 4" band. Use table below to determine the			
			Sharda Zeta-Cypermethrin 17.1% EC needs for each acr			
Row Spacings (Inches)			40"	30"	20"	
Sharda Zeta-Cypermethrin 17.1% EC (lb. a.i. per acre)		0.024		0.036	0.048	
Sharda Zeta-Cypermethrin 17.1% EC (fl. oz. per acre)		2	2.05	3.08	4.1	

#### **Restrictions:**

- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 4 applications per year.
- **DO NOT** apply more than 17.2 fl. oz./A of product (0.2 lb. a.i./A) per year including at-plant plus foliar applications.
- **DO NOT** apply within 7 days of harvest for grain, stover, and forage.

#### Corn (Field), Field Corn Grown for Seed, Popcorn - Foliar Use

Insects Controlled	Rate of Application	Method of Application			
Cutworms	1.4 - 3 fl. oz./A	Make applications when insect populations			
	(0.016 - 0.035 lb. a.i./A)	reach economic thresholds. Refer to local			
Corn Earworm <sup>1</sup>	1.9 - 4.3 fl. oz./A	Cooperative Extension Pest Management			
Green Cloverworm	(0.022 - 0.05 lb. a.i./A)	Guidelines and/or scouting results. <b>DO NOT</b>			
Meadow Spittlebug		exceed maximum labeled rate.			
Western Bean Cutworm <sup>1</sup>					
Aphids <sup>3</sup>	2.9 - 4.3 fl. oz./A	Apply by air or by ground equipment using			
Bean Leaf Beetle	(0.034 - 0.05 lb. a.i./A)	sufficient water to obtain full coverage of			
Cereal Leaf Beetle		foliage (minimum of 2 gals. of finished spray per			

Corn Borer, European		acre by air and 10 gals. of finished spray per
Corn Borer, Southwestern		acre by ground).
Corn Rootworm Beetle		
Flea Beetle		For chinch bug control, scout corn fields and
Grasshoppers		make applications when bugs migrate from
Hop Vine Borer		small grains or wild grasses to small corn. Direct
Hornworms		spray to the base of plant. Repeat applications
Japanese Beetle (Adults)		at 3- to 5-day intervals if needed. <b>Sharda Zeta-</b>
Sap Beetle (Adults)		Cypermethrin 17.1% EC may only suppress
Southern Corn Leaf Beetle		heavy infestations and/or subsequent
Stalk Borer		migrations.
Stink Bug spp.		
Tobacco Budworm <sup>2</sup>		
Webworms		
Armyworms (including Fall Armyworms)	3.4 - 4.3 fl. oz./A	
Chinch Bug	(0.04 - 0.05 lb. a.i./A)	

- **DO NOT** make more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 4 applications per year.
- DO NOT apply more than 17.2 fl. oz./A of product (0.2 lb. a.i./A) per year including at-planting plus foliar applications.
- **DO NOT** apply within 7 days of harvest for grain, stover, and forage.

#### **Cottonseed Subgroup 20C:**

Cottonseed; cultivars, and/or hybrid of these commodities.

Insects Controlled	Rate of Application	Method of Application
Pre-Emergent Use:	1.4 - 2 fl. oz./A	Use <b>Sharda Zeta-Cypermethrin 17.1% EC</b> in the time period from 14
Cutworms	(0.016 - 0.024 lb. a.i./A)	days prior to planting up to emergence of the crop. Apply as a broadcast spray by ground or air, banded (including T-band) or infurrow spray using sufficient spray volume to achieve adequate coverage. Reduced volumes of water may be used with specialized equipment. Use the higher labeled rates of <b>Sharda Zeta-Cypermethrin 17.1% EC</b> when incorporating into the soil.
Cutworms	1.4 - 2 fl. oz./A	Sharda Zeta-Cypermethrin 17.1% EC may be applied in water or
Soybean (Banded) Thrips Tobacco Thrips	(0.016 - 0.024 lb. a.i./A)	refined vegetable oil. When water is used, apply a minimum of 1 gallon of finished spray per acre by air or 5 gals. of finished spray with
Armyworm, Fall Armyworm, Yellowstriped Boll Weevil Cabbage Looper Corn Borer, European Cotton Bollworm Cotton Fleahopper Cotton Leaf Perforator Pink Bollworm Saltmarsh Caterpillar Stink Bugs Tarnished Plant Bug Other Plant Bugs	2.8 - 3.8 fl. oz./A (0.033 - 0.045 lb. a.i./A)	ground equipment. When applying in water by air, 1 quart of emulsified oil may be substituted for 1 quart of water in the finished spray. When using oil, use a minimum of 1 quart per acre in the finished spray.  Control of lepidopteran eggs may be achieved with proper timing of applications.  For boll weevil control, apply Sharda Zeta-Cypermethrin 17.1% EC at a 3- to 4-day intervals.  For control of grasshoppers, make applications based on careful field scouting. DO NOT exceed maximum labeled rate.
Tobacco Budworm <sup>1</sup> Armyworm, Beet <sup>2</sup> Cotton Aphid <sup>3</sup> Lygus Bugs Whiteflies <sup>4</sup> Grasshoppers	3 - 4.3 fl. oz./A (0.035 - 0.05 lb. a.i./A) 3.2 - 4.3 fl. oz./A (0.0375 - 0.05 lb. a.i./A)	Make treatment decisions based on evidence of feeding damage and presence of grasshoppers in cotton. Loss of cotyledon leaves in seedling cotton must be considered more important than leaf loss in older cotton. Make applications on a broadcast basis since grasshoppers are highly mobile. Adjust rates based on populations of grasshopper found in fields.
		Applications must be made on a 3- to 5-day schedule until grasshopper populations are under control or until foliage loss

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

<sup>&</sup>lt;sup>2</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

<sup>&</sup>lt;sup>3</sup>Control may be variable depending on species present and host-plant relationships.

	subsides.	Increase	application	rates	as	grasshopper	size	and
	population density increases.							

- **DO NOT** make more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per season.
- **DO NOT** make more than 6 application per year.
- **DO NOT** graze or feed cotton for forage.
- **DO NOT** apply within 14 days of harvest.

#### <sup>1</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

<sup>2</sup>For control of beet armyworms only in the high plains of Texas, Arizona, and California.

<sup>3</sup>Aphid control may be variable depending on species present and host-plant relationships.

<sup>4</sup>Aids in control.

#### Rapeseed Subgroup 20A

Canola; Crambe; Rapeseed; Borage; Cuphea; Echium; Flax seed; Gold of Pleasure; Hare's-Ear Mustard; Lesquerella; Lunaria; Meadowfoam; Milkweed; Mustard seed; Oil Radish; Poppy Seed; Sesame; Sweet Rocket; and cultivars, varieties, and/or hybrids of these commodities.

Insects Controlled	Rate of Application	Method of Application
Aphids	4.3 fl. oz./A	Apply as required by scouting. Base timing and
Armyworms	(0.05 lb. a.i./A)	frequency of applications on insect populations
Cutworms		reaching locally determined economic threshold
Diamondback Moth		levels. <b>DO NOT</b> exceed maximum labeled rate.
Flea Beetle		
Fleahoppers		Apply by ground or air equipment using sufficient
Grasshopper		water to obtain full coverage of foliage (minimum of
Lepidopterous Larvae		10 gals. of finished spray per acre by ground and 2
Loopers		gals. of finished spray per acre by air).
Plant Bug		
Seedpod Weevil		
Stink Bugs		
Thrips		
Whitefly		

#### **Restrictions:**

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- **DO NOT** apply within 7 days of harvest.

#### **Cucurbit Vegetables Crop Group 9**

Chayote (fruit); Chinese Waxgourd (Chinese Preserving Melon); Citron Melon; Cucumber; Gherkin; Gourd (edible) (including hyotan, cucuzza, hechima, Chinese okra); *Momordica* spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); Muskmelon (hybrids and/or cultivars of *Cucumis melo*) (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon); Pumpkin; Summer Squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini); Winter Squash (includes butternut squash, calabaza, hubbard squash, acorn squash, and spaghetti squash); Watermelon (includes hybrids and varieties).

Insects Controlled	Rate of Application	Method of Application
Cutworm spp.	1.4 - 4.3 fl. oz./A	Apply as required by scouting. Base timing and
	(0.016 - 0.05 lb. a.i./A)	frequency of applications on insect populations
Cabbage Looper	3 - 4.3 fl. oz./A	reaching locally determined economic threshold
Cucumber Beetle spp. (Adults)	(0.035 - 0.05 lb. a.i./A)	levels. <b>DO NOT</b> exceed maximum labeled rate.
Leafhopper spp.		
Melonworm		Apply by ground or air equipment using sufficient
Pickleworm		water to obtain full coverage of foliage (minimum of
Rindworm		10 gals. of finished spray per acre by ground and 2
Squash Bug		gals. of finished spray per acre by air).
Squash Vine Borer		
Aphid spp. <sup>1,2</sup>	3.4 - 4.3 fl. oz./A	
Armyworm, Beet <sup>1,2</sup>	(0.04 - 0.05 lb. a.i./A)	
Corn Earworm		
Leafminer <sup>1</sup>		

	rage 10 OI
Plant Bug spp.	
Stink Bug spp.	

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- DO NOT apply within 1 day of harvest.

<sup>1</sup>Aids in control.

<sup>2</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

## Fruiting Vegetables Crop Group 8-10

African Eggplant; Bush Tomato; Cocona; Currant Tomato; Eggplant; Garden Huckleberry; Goji Berry; Groundcherry (*Physalis* spp.); Martynia; Naranjilla; Okra; Pea Eggplant; Pepino (Melon pear); Pepper (Bell and Non-bell); Roselle; Scarlet Eggplant; Sunberry; Tomatillo; Tomato; Tree Tomato; and cultivars, varieties, and/or hybrids of these commodities.

Insects Controlled	Rate of Application	Method of Application
Armyworm, Southern	2.4 - 4.3 fl. oz./A	Apply as required by scouting. Base timing and
Armyworm, True	(0.028 - 0.05 lb. a.i./A)	frequency of applications on insect populations
Armyworm, Yellowstriped		reaching locally determined economic
Celery Leaf Tier		thresholds. <b>DO NOT</b> exceed maximum labeled
Colorado Potato Beetle		rate.
Corn Borer, European		
Corn Borer, Southwestern		Apply by ground or air equipment using
Corn Earworm		sufficient water to obtain full coverage of
Cucumber Beetle		foliage (minimum of 10 gals. of finished spray
Cutworm spp.		per acre by ground and 2 gals. of finished spray
Flea Beetle		per acre by air).
Garden Webworm		
Green Stink Bug		
Hornworms		
Leafminers (Adults)		
Leafhopper spp.		
Meadow Spittlebug		
Pepper Maggot (Adults)		
Pepper Weevil		
Plant Bug spp.		
Tobacco Budworm <sup>2</sup>		
Tomato Fruitworm		
Tomato Pinworm		]
Aphid spp. <sup>2,3</sup>	3.4 - 4.3 fl. oz./A	
Armyworm, Beet <sup>2</sup>	(0.04 - 0.05 lb. a.i./A)	
Armyworm, Fall		
Brown Stink Bug		
Cabbage Looper		
Grasshoppers		
Lygus Bugs		
Thrips spp. <sup>1,2</sup>		
Tomato Psyllid		
Whitefly spp. <sup>1,2</sup>		

#### **Restrictions:**

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- **DO NOT** apply within 1 day of harvest.

<sup>1</sup>Aids in control.

<sup>2</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

<sup>3</sup>Aphid control may be variable depending on species present and host-plant relationships.

#### Small Fruit Vine Climbing (except fuzzy kiwifruit) Subgroup 13-07F

Amur River Grape; Gooseberry; Grape; Kiwifruit, Hardy: Maypop; Schisandra Berry; cultivars, varieties, and/or hybrids of these

#### commodities.

Insects Controlled	Rate of Application	Method of Application
Asian Lady Bird Beetle	2.15 - 4.3 fl. oz./A	Apply as required by scouting. Base timing and
Lady Bird Beetle	(0.025 - 0.05 lb. a.i./A)	frequency of applications on insect populations
Cutworm spp.		reaching locally determined economic threshold
Eastern Grape Leafhopper	4.3 fl. oz./A	levels. <b>DO NOT</b> exceed maximum labeled rate.
Grape Berry Moth	(0.05 lb. a.i./A)	
Japanese Beetle (Adults)		Apply by ground or air equipment using sufficient
Spotted Wing Drosophila		water to obtain full coverage of foliage (minimum of
Variegated Leafhopper		10 gals. of finished spray per acre by ground and 2
Vinegar Flies (Adults)		gals. of finished spray per acre by air).
Western Grape Leafhopper		
Doctrictions	·	

#### Restrictions:

- **DO NOT** make applications less than 7 days apart.
- DO NOT apply more than 4.3 fl. oz./A of product (0.05 fl. oz./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- **DO NOT** apply within 1 day of harvest.

Grass Forage, Fodder, and Hay Group and Grass Grown for Seed and Pasture and Rangeland Bahiagrass, Barnyardgrass, Bentgrass, Bermudagrass, Kentucky Bluegrass, Big Bluestem, Smooth Bromegrass, Buffalograss, Reed Canarygrass, Centipedegrass, Crabgrass, Cupgrass, Dallisgrass, Sand Dropseed, Kentucky Fescue, Meadow Foxtail, Eastern Gramagrass, Side-Oats Grama, Guinea Grass, Indian Grass, Johnsongrass, Lovegrass, Napiergrass, Oatgrass, Orchardgrass, Pangolagrass, Paspalum, Redtop, Italian Ryegrass, St. Augustine Grass, Sprangletop, Squirreltailgrass, Stargrass, Switchgrass, Timothy, Crested Wheatgrass, Wildrye Grass and Zoysia Grass. Also included are Sudangrass and Sorghum Forages and their hybrids.

Insects Controlled	Rate of Application	Method of Application
Alfalfa Caterpillar	2.4 - 4.3 fl. oz./A	Apply as insects appear in sufficient volume of
Alfalfa Looper	(0.028 - 0.05 lb. a.i./A)	water to ensure thorough coverage of foliage.
Alfalfa Weevil		Use higher labeled rate for increased pest
Blue Alfalfa Aphid <sup>1</sup>		pressure or for increased residual pest control.
Cutworms		<b>DO NOT</b> exceed maximum labeled rate.
Egyptian Alfalfa Weevil (Larvae and Adults)		
Flea Beetles		Apply in a minimum of 2 gals. of finished spray
Green Cloverworm		per acre by aerial equipment or 10 gals. of
Green Peach Aphid <sup>1</sup>		finished spray per acre by ground equipment.
Hornworms		
Meadow Spittlebug		ULV oil spray application is prohibited. Higher
Pea Aphid <sup>1</sup>		volumes of finished spray may improve insect
Potato Leafhopper		control under high temperatures, when foliage
Spotted Alfalfa Aphid <sup>1</sup>		is dense and/or when insect pressure is high.
Threecornered Alfalfa Hopper		
Velvetbean Caterpillar		
Webworms		
Armyworms	3 - 4.3 fl. oz./A	
Cereal Leaf Beetle	(0.035 - 0.05 lb. a.i./A)	
Chinch Bug		
Grass Mealybug		
Grasshoppers		
Plant Bugs (including <i>Lygus</i> spp. and Stink Bugs)		

## **Restrictions:**

- **DO NOT** make applications less than 7 days apart for forage and hay; not less than 17 days for straw and seed screenings.
- DO NOT spray livestock. Allow application to dry before letting livestock graze on treated area.
- DO NOT apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per cutting.
- For hay, **DO NOT** make more than 4 applications per year.
- For hay, **DO NOT** apply more than 17.2 fl. oz./A of product (0.2 lb. a.i./A) per year.
- For forage, straw, and seed screenings, DO NOT make more than 5 applications per year.
- For forage, straw, and seed screenings, DO NOT apply more than 21.5 fl. oz./A of product (0.25 lb. a.i./A) per year.
- Applications may be made up to harvest for forage and hay; within 7 days of harvest for straw and seed screenings.

<sup>1</sup>Aphid control may be variable depending on species present and host-plant relationships.

Insects Controlled	Rate of Application	Method of Application
Corn Earworm	2.4 - 4.3 fl. oz./A	Apply in water as necessary for insect control
Cucumber Beetles	(0.028 - 0.05 lb. a.i./A)	using a minimum of 15 gals. of finished spray
Cutworm		per acre with ground equipment and 5 gals. of
Diamondback Moth <sup>1</sup>		finished spray per acre by air.
Flea Beetles		
Imported Cabbageworm		Use lower rates of Sharda Zeta-Cypermethrin
Leafhoppers		17.1% EC under light to moderate insect
Saltmarsh Caterpillar		pressure. Use higher labeled rates to control
Southern Cabbageworm		heavy to extremely heavy insect populations.
Tobacco Budworm <sup>1</sup>		
Alfalfa Looper	3.4 - 4.3 fl. oz./A	In areas where arid climatic conditions persist,
Aphids <sup>2</sup>	(0.04 - 0.05 lb. a.i./A)	including California and Arizona, higher labeled
Armyworms		rates may be required.
Cabbage Looper		
Cabbage Webworm		
Crickets		
Grasshoppers		
Ground Beetles Leafminers (Adults)		
Lygus Bugs		
Onion Thrips		
Stink Bugs		
Whiteflies <sup>3</sup>		
Wireworm (Adults)		

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 fl. oz./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- **DO NOT** apply within 1 day of harvest.

#### <sup>1</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

 $^{2}$ Aphid control may be variable depending on species present and host-plant relationships.

<sup>3</sup>Aids in control.

## **Leafy Petiole Vegetables Crop Subgroup 22B**

Cardoon; Celery; Celery, Chinese; Fuki; Rhubarb; Udo; Zuiki; cultivars, varieties, and hybrids of these commodities.

Insects Controlled	Rate of Application	Method of Application
Corn Earworm	2.4 - 4.3 fl. oz./A	Apply in water as necessary for insect control
Cucumber Beetles	(0.028 - 0.05 lb. a.i./A)	using a minimum of 10 gals. of finished spray
Cutworms		per acre with ground equipment and 5 gals. of
Diamondback Moth		finished spray per acre by air.
Flea Beetles		
Imported Cabbageworm		Use lower rates of Sharda Zeta-Cypermethrin
Leafhoppers		17.1% EC under light to moderate insect
Saltmarsh Caterpillar		pressure. Use higher labeled rates to control
Tobacco Budworm <sup>2</sup>		heavy to extremely heavy insect populations.
Aphid spp. <sup>2,3</sup>		
Whitefly spp. <sup>1,2</sup>		In areas where arid climatic conditions persist,
Armyworms	3.4 - 4.3 fl. oz./A	including California and Arizona, higher labeled
Ground Beetles	(0.04 - 0.05 lb. a.i./A)	rates may be required.
Crickets		
Loopers		
Lygus Bugs		
Onion Thrips		
Stink Bugs		
Wireworm (Adults)		
Daratulation of		

#### **Restrictions:**

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- **DO NOT** make applications within 1 day of harvest.

<sup>1</sup>Aids in control.

<sup>2</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

3Aphid control may be variable depending on species present and host-plant relationships.

#### Leafy Greens Crop Subgroup 4-16A

Chinese Amaranth; Leafy Amaranth; Aster, Indian; Blackjack; Cat's Whiskers; Cham-chwi; Cham-na-mul; Chervil, Fresh Leaves; Chipilin; Chrysanthemum, Garland; Cilantro, Fresh Leaves; Corn Salad; Cosmos; Dandelion, leaves; Dang-gwi, leaves; Dillweed; Dock; Dol-nam-mul; Ebolo; Endive; Escarole; Flameflower; Feather Cockscomb; Good King Henry; Huauzontle; Jute, Leaves; Lettuce, Bitter; Lettuce, Head and Leaf; Orach; Parsley, Fresh Leaves; Plantain, Buckhorn; Primrose, English; Purslane, Garden; Purslane, Winter; Radicchio; Spinach; Spinach Malabar; Spinach, New Zealand; Spinach, Tanier; Swiss Chard; Violet, Chinese, leaves; and cultivars, varieties, and hybrids of these commodities.

Insects Controlled	Rate of Application	Method of Application
Aphid spp. <sup>2,3</sup>	2.4 - 4.3 fl. oz./A	Apply in water as necessary for insect control
Corn Earworm	(0.028 - 0.05 lb. a.i./A)	using a minimum of 10 gals. of finished spray
Cucumber Beetles		per acre with ground equipment and 5 gals. of
Cutworms		finished spray per acre by air.
Diamondback Moth		
Flea Beetles		Use lower rates of Sharda Zeta-Cypermethrin
Imported Cabbageworm		17.1% EC on under light to moderate insect
Leafhoppers		pressure. Use higher labeled rates to control
Saltmarsh Caterpillar		heavy to extremely heavy insect populations.
Tobacco Budworm <sup>2</sup>		
Whitefly spp. <sup>1,2</sup>		In areas where arid climatic conditions persist,
Armyworms	3.4 - 4.3 fl. oz./A	including California and Arizona, higher labeled
Crickets	(0.04 - 0.05 lb. a.i./A)	rates may be required.
Ground Beetles		
Loopers		
Lygus Bugs		
Onion Thrips		
Stink Bugs		
Wireworm (Adults)		

#### Restrictions:

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- **DO NOT** make applications within 1 day of harvest.

<sup>1</sup>Aids in control.

<sup>2</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

<sup>3</sup>Aphid control may be variable depending on species present and host-plant relationships.

## Legume Vegetables – At-Plant Application

#### **Dried (except Soybeans)**

African Yam-Bean; American Potato Bean; Bean (*Lupinus* spp.; includes Andean Lupin; Blue Lupin; Grain Lupin; Sweet Lupin; White Lupin; White Sweet Lupin; Yellow Lupin); Bean (*Phaseolus* spp.; includes Black Bean; Cranberry Bean; Dry Bean; Field Bean; French Bean; Garden Bean; Great Northern Bean; Green Bean; Kidney Bean; Lima Bean; Navy Bean; Pink Bean; Pinto Bean; Red Bean; Scarlett Runner Bean; Tepary Bean; Yellow Bean); Bean (*Vigna* spp.; includes Adzuki Bean; Blackeyed Pea; Asparagus Bean; Catjang Bean; Chinese longbean; Cowpea; Crowder Pea; Mung Bean; Moth Bean; Rice Bean; Southern Pea; Urd Bean; Yardlong Bean; Broad Bean; Goa Bean; Horse Gram; Jackbean; Lablab Bean; Morama Bean; Sword Bean; Winged Pea; Velvet Bean; Vegetable Soybean; cultivars, varieties, and/or hybrids of these commodities.

#### Dried Shelled Pea and Bean (except Soybeans), Dried cultivars of bean (Lupinus spp.)

Pea (*Pisum* spp.; includes Field Pea, Dry Pea, Green Pea, Garden pea); Chickpea; Lentil; Grass-Pea; Pigeon Pea; cultivars, varieties, and/or hybrids of these commodities.

Insects Controlled	Rate of Application	Method of Application
Cutworm spp.	4.3 fl. oz./A	For cutworm spp., apply at planting on the soil surface in a 5 - 7-inch
White Grub	(0.05 lb. a.i./A)	band in a minimum of 2 - 7 gals. of finished spray per acre or broadcast
Wireworm spp.		in a minimum of 10 gals. of finished spray per acre.
		For white grubs and wireworms, apply in-furrow or in a 3 - 4 inch T-Band (band over the open furrow) at planting in a minimum of 2 - 7

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## gals. of finished spray per acre.

#### **Restrictions:**

- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year including at-plant plus foliar applications.
- **DO NOT** apply within 21 days of harvest for dried shelled peas or beans.

Row Spacing (Inches)	Fl. oz./1,000 linear feet	Lb. a.i./1,000 linear feet
30	0.247	0.0027
20	0.164	0.0019
15	0.123	0.0014

#### Legume Vegetables - Foliar Use

#### **Edible-Podded Beans**

Bean (*Phaseolus* spp.; includes French Bean; Garden Bean; Green Bean; Scarlett Runner Bean; Snap Bean; Kidney Bean; Navy Bean; Wax Bean); Bean (*Vigna* spp.; includes Asparagus Bean; Catjang Bean; Chinese Longbean; Cowpea; Moth Bean; Mung Bean; Rice Bean; Urd Bean; Yardlong Bean); Goa Bean; Guar Bean; Jackbean; Lablab Bean; Vegetable Soybean; Sword Bean; Winged Pea; Velvet Bean; cultivars, varieties, and/or hybrids of these commodities.

## **Edible-Podded Peas**

Pea (*Pisum* spp.; includes Dwarf Pea, Edible Podded Pea, Green Pea, Snap Pea, Snow Pea, Sugar Snap Pea); Grass-Pea; Lentil; Pigeon Pea; Chickpea; cultivars, varieties, and/or hybrids of these commodities.

#### **Succulent Shelled Beans**

Bean (*Phaseolus* spp.; includes Lima Bean; Scarlett Runner Bean; Wax Bean); Bean (*Vigna* spp.; includes Blackeyed Pea; Moth Bean; Catjang Bean; Cowpea; Crowder Pea; Southern Pea); Bean (*Lupinus* spp.; includes Andean Lupin; Blue Lupin; Grain Lupin; Sweet Lupin; White Lupin; White Sweet Lupin; Yellow Lupin); Broad Bean; Jackbean; Goa Bean; Lablab Bean; Vegetable Soybean; Velvet Bean; cultivars, varieties, and/or hybrids of these commodities.

#### **Succulent Shelled Peas**

Chickpea; Pea (*Pisum* spp.; includes English Pea, Garden Pea, Green Pea); Pigeon Pea; Lentil; cultivars, varieties, and/or hybrids of these commodities.

#### **Dried Shelled Beans (except Soybean)**

African Yam-Bean; American Potato Bean; Bean (*Lupinus* spp.; includes Andean Lupin; Blue Lupin; Grain Lupin; Sweet Lupin; White Lupin; White Sweet Lupin; Yellow Lupin); Bean (*Phaseolus* spp.; includes Black Bean; Cranberry Bean; Dry Bean; Field Bean; French Bean; Garden Bean; Great Northern Bean; Green Bean; Kidney Bean; Lima Bean; Navy Bean; Pink Bean; Pinto Bean; Red Bean; Scarlett Runner Bean; Tepary Bean; Yellow Bean); Bean (*Vigna* spp.; includes Adzuki Bean; Blackeyed Pea; Asparagus Bean; Catjang Bean; Chinese Longbean; Cowpea; Crowder Pea; Mung Bean; Moth Bean; Rice Bean; Southern Pea; Urd Bean; Yardlong Bean); Broad Bean; Goa Bean; Horse Gram; Jackbean; Lablab Bean; Morama Bean; Sword Bean; Winged Pea; Velvet Bean; Vegetable Soybean; cultivars, varieties, and/or hybrids of these commodities.

#### **Dried Shelled Peas**

Pea (*Pisum* spp.; includes Field Pea, Dry Pea, Green Pea, Garden Pea); Chickpea; Lentil; Grass-Pea; Pigeon Pea; cultivars, varieties, and/or hybrids of these commodities.

Insects Controlled	Rate of Application	Method of Application
Cutworm spp.	1.4 - 4.3 fl. oz./A	Apply as required by scouting, usually at
Saltmarsh Caterpillar	(0.016 - 0.05 lb. a.i./A)	intervals of 5 or more days. Base timing and
Silverspotted Skipper		frequency of applications on insect populations
Thistle Caterpillar (Painted Lady)		reaching locally determined economic
Alfalfa Caterpillar	3 - 4.3 fl. oz./A	thresholds. <b>DO NOT</b> exceed maximum labeled
Armyworm, Southern	(0.035 - 0.05 lb. a.i./A)	rate.
Armyworm, True		
Armyworm, Yellowstriped		Apply by ground or air equipment using
Bean Leaf Beetle		sufficient water to obtain full coverage of
Blister Beetle spp.		foliage (minimum of 10 gals. of finished spray
Colorado Potato Beetle		per acre by ground and 2 gals. of finished spray
Corn Borer, European		per acre by air).
Corn Borer, Southwestern		
Corn Earworm		
Corn Rootworm Beetle (Adults)		
Cowpea Curculio		
Cucumber Beetle		

		Page <b>21</b> of
Flea Beetle		
Green Cloverworm		
Ground Beetles		
Imported Cabbageworm		
Japanese Beetle		
Leaf Skeletonizer spp.		
Leafhopper spp.		
Leafminers (Adults)		
Mexican Bean Beetle		
Pea Leaf Weevil		
Pea Weevil		
Plant Bug spp.		
Potato Leafhopper		
Seedcorn Beetle		
Seedcorn Maggot (Adults)		
Spittlebug		
Threecornered Alfalfa Hopper		
Tobacco Budworm <sup>2</sup>		
Velvetbean Caterpillar		
Webworm spp.		
Woolly Bear Caterpillar		
Aphid spp. <sup>2,3</sup>	3.4 - 4.3 fl. oz./A	
Armyworm, Beet <sup>2</sup>	(0.04 - 0.05 lb. a.i./A)	
Armyworm, Fall		
Grasshoppers		
Lesser Cornstalk Borer <sup>1</sup>		
Looper spp. <sup>2</sup>		
Stink Bug spp.		
Thrips spp. <sup>1,2</sup>		
Whitefly spp. <sup>1,2</sup>		

- **DO NOT** make applications less than 5 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- DO NOT apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year including at-plant plus foliar applications.
- **DO NOT** apply within 1 day of harvest for succulent shelled or edible-podded peas or beans; within 21 days for dried shelled peas or beans.

#### **Peanut**

Insects Controlled	Rate of Application	Method of Application
Cutworm spp.	1.4 - 4.3 fl. oz./A	Apply as required by scouting. Base timing and
Green Cloverworm	(0.016 - 0.05 lb. a.i./A)	frequency of applications on insect populations
Velvetbean Caterpillar		reaching locally determined economic
Red-Necked Peanut Worm		threshold levels. <b>DO NOT</b> exceed maximum
Bean Leaf Beetle	1.9 - 4.3 fl. oz./A	labeled rate.
Leafhopper spp.	(0.022 - 0.05 lb. a.i./A)	
Southern Corn Rootworm (Adults)		Apply by ground or air equipment using
Vegetable Weevil		sufficient water to obtain full coverage of
Whitefringed Beetle (Adults)		foliage (minimum of 10 gals. of finished spray
Aphid spp. <sup>1,2</sup>	3.4 - 4.3 fl. oz./A	per acre by ground and 2 gals. of finished spray
Armyworm, Beet <sup>1,2</sup>	(0.04 - 0.05 lb. a.i./A)	per acre by air).
Armyworm, Fall <sup>1,2</sup>		
Corn Earworm		
Grasshopper spp.		
Lesser Cornstalk Borer <sup>1,2</sup>		
Soybean Looper <sup>1,2</sup>		
Stink Bug spp. <sup>1,2</sup>		
Tobacco Thrips <sup>2</sup>		
Restrictions:		

<sup>&</sup>lt;sup>1</sup>Aids in control.

<sup>&</sup>lt;sup>2</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

<sup>&</sup>lt;sup>3</sup>Aphid control may be variable depending on species present and host-plant relationships.

- **DO NOT** make applications less than 14 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- DO NOT make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- DO NOT graze livestock in treated areas.
- **DO NOT** use treated vines or hay for animal feed.
- **DO NOT** apply within 7 days of harvest.

## Pome Fruit Crop Group 11-10

Apple; Azarole; Crabapple; Loquat; Mayhaw; Medlar; Pear; Asian Pear; Quince; Chinese Quince; Japanese Quince; Tejocote; and cultivars, varieties, and/or hybrids of these commodities.

Insects Controlled	Rate of Application	Method of Application
Apple Maggot	1.4 - 4.3 fl. oz./A	Begin applications at delayed dormant through
Codling Moth	(0.016 - 0.05 lb. a.i./A)	first cover as common to the production areas
European Apple Sawfly		and the target pest species. Apply in a full
Green Fruitworm		season spray program.
Japanese Beetle		
Lesser Appleworm		Apply as required by scouting. Base timing and
Oblique Banded Leafroller		frequency of applications on insect populations
Oriental Fruit Moth		reaching locally determined economic
Pandemis Leafroller		threshold levels. DO NOT exceed maximum
Pear Psylla		labeled rate.
Plum Curculio		
Potato Leafhopper		Apply by ground or air equipment using
Redbanded Leafroller		sufficient water to obtain full coverage of
Rosy Apple Aphid		foliage (for ground application use a minimum
Spirea Aphid		of 20 gals. per acre for concentrate spray or a
Spotted Tentiform Leafminer		minimum of 100 gals. per acre for dilute spray;
Stink Bugs		for air application use a minimum of 10 gals. of
Tarnished Plant Bug		finished spray per acre).
Tufted Apple Bud Moth		
Variegated Leafroller		Avoid applications when honeybees are actively
White Apple Leafhopper		foraging by applying during the early morning
		or evening hours.

## **Restrictions:**

- DO NOT make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- **DO NOT** apply as a ULV spray.
- **DO NOT** feed or allow livestock to graze on cover crops from treated orchards.
- DO NOT apply within 14 days of harvest.

#### **Rice and Wild Rice**

Insects Controlled	Rate of Application	Method of Application
Armyworm, Fall	3.4 - 4.3 fl. oz./A	Apply as needed based on pest thresholds determined by scouting
Armyworm, True	(0.04 - 0.05 lb. a.i./A)	practices. Refer to Extension Scouting guidelines for scouting techniques,
Armyworm, Yellowstriped		pest thresholds and treatment timing and treatment intervals.
Grasshoppers		Determine the need for repeat applications, usually at intervals of 7 days,
Green Bug		by scouting. <b>DO NOT</b> exceed maximum labeled rate.
Leafhopper spp.		
Mexican Rice Borer[*]		Sharda Zeta-Cypermethrin 17.1% EC can be safely applied in conjunction
Oat Birdcherry Aphid <sup>1</sup>		with approved rice herbicides.
Rice Stalk Borer		
Rice Water Weevil (Adults)		Apply by air or ground equipment using sufficient water to obtain full
Sugarcane Borer[*]		coverage of foliage. When applying by air, apply in a minimum of 5 gals.
Wild Rice Worm		of water per acre. For increased control, crop oil concentrate at 16 fl. oz.
Chinch Bug	2.8 - 4.3 fl. oz./A	per acre may be used.
Rice Stink Bug	(0.033 - 0.05 lb. a.i./A)	
		For control of rice water weevil in dry seeded rice, make a foliar

<sup>&</sup>lt;sup>1</sup>Aids in control.

<sup>&</sup>lt;sup>2</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

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 adult weevils are not 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 application after flooding when scouting indicates the presence of adults and/or feeding scars. Begin application 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.

Green bug is known to have many biotypes. Sharda Zeta-Cypermethrin 17.1% EC may only provide suppression. If satisfactory control is not achieved with the first application of Sharda Zeta-Cypermethrin 17.1% EC, a resistant biotype may be present. Use alternate chemistry for control.

#### Restrictions:

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** release floodwater within 7 days of an application.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 4 applications per year.
- DO NOT apply more than 17.2 fl. oz./A of product (0.2 lb. a.i./A) (1 pint) per year.
- **DO NOT** use treated rice field for the aquaculture of edible fish and crustacea.
- **DO NOT** apply as an ultra-low volume (ULV) spray.
- DO NOT apply within 14 days of harvest.

<sup>1</sup>Aphid control may be variable depending on species present and host-plant relationships. [\*Not registered for use by California.]

#### Root and Tuber Vegetables Crop Group 1 (except Sugar Beet)

Arracacha; Arrowroot; Artichoke (Chinese and Jerusalem); Garden Beet; Edible Burdock; Edible Canna; Carrot; Cassava (Bitter and Sweet); Celeriac (Celery Root); Chayote (Root); Turnip-Rooted Chervil; Chicory; Chufa; Dasheen (Taro); Ginger; Ginseng; Horseradish; Leren; Turnip-Rooted Parsley; Parsnip; Potato; Oriental Radish (Daikon); Radish; Rutabaga; Salsify (Oyster Plant); Black Salsify; Spanish Salsify; Skirret; Sweet Potato; Tanier (Cocoyam); Turmeric; Turnip; Yam Bean; and Yam (True).

Insects Controlled	Rate of Application	Method of Application
Cutworm spp.	1.4 - 4.3 fl. oz./A	Apply as required by scouting. Timing and
	(0.016 - 0.05 lb. a.i./A)	frequency of applications must be based upon
Cabbage Looper	1.9 - 4.3 fl. oz./A	insect populations reaching locally determined
Cucumber Beetle	(0.022 - 0.05 lb. a.i./A)	economic thresholds levels. DO NOT exceed
European Corn Borer		maximum labeled rate.
Flea Beetle spp.		
Leafhopper spp.		Apply by ground or air equipment using
Southern Corn Rootworm (Adults)		sufficient water to obtain full coverage of
Vegetable Weevil		foliage (minimum of 10 gals. of finished spray
Whitefringed Beetle (Adults)		per acre by ground and 2 gals. of finished spray
Aphid spp. <sup>1,2</sup>	3.4 - 4.3 fl. oz./A	per acre by air).
Armyworm, Beet <sup>1,2</sup>	(0.04 - 0.05 lb. a.i./A)	
Armyworm, Yellowstriped		
Cabbage Maggot		
Colorado Potato Beetle <sup>2</sup>		
Grasshopper spp.		
Imported Cabbageworm		
Potato Leafhopper		
Tarnished Plant Bug		
Restrictions:		

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- DO NOT make applications less than 4 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- Leaves of Root and Tuber Vegetables cannot be used for food or feed.
- DO NOT apply within 1 day of harvest.

<sup>1</sup>Aids in control.

<sup>2</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

## Safflower

Insects Controlled	Rate of Application	Method of Application
Cutworms	4.3 fl. oz./A	Apply as needed based on pest thresholds determined by scouting
Lygus spp.	(0.05 lb. a.i./A)	practices. Refer to Extension Scouting guidelines for scouting
		techniques, pest thresholds and treatment timing and treatment
		intervals. Determine the need for repeat applications, at a minimum of
		14-day intervals, by scouting. <b>DO NOT</b> exceed maximum labeled rate.
		Apply with ground or air equipment using sufficient water and
		application methods to insure thorough coverage of foliage. Apply in
		water using a minimum of 2 gals. of finished spray per acre.

#### Restrictions:

- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 3 applications per year.
- **DO NOT** apply more than 12.9 fl. oz./A of product (0.15 lb. a.i./A) per year.
- **DO NOT** apply within 14 days of harvest.

#### **Sod Farms**

Bahiagrass, Barnyardgrass, Bentgrass, Bermudagrass, Kentucky Bluegrass, Big Bluestem, Smooth Bromegrass, Buffalograss, Reed Canarygrass, Centipedegrass, Crabgrass, Cupgrass, Dallisgrass, Sand Dropseed, Kentucky Fescue, Meadow Foxtail, Eastern Gramagrass, Side-Oats Grama, Guinea Grass, Indian Grass, Johnsongrass, Lovegrass, Napiergrass, Oatgrass, Orchardgrass, Pangolagrass, Paspalum, Redtop, Italian Ryegrass, St. Augustine Grass, Sprangletop, Squirreltailgrass, Stargrass, Switchgrass, Timothy, Crested Wheatgrass, Wildrye Grass and Zoysia Grass. Also included are Sudangrass and Sorghum Forages and their hybrids.

Insects Controlled	Rate of Application	Method of Application
Alfalfa Caterpillar	2.4 - 4.3 fl. oz./A	Apply as insects appear in sufficient volume of
Alfalfa Looper	(0.028 - 0.05 lb. a.i./A)	water to ensure thorough coverage of foliage.
Alfalfa Weevil		
Ant spp.		Use higher labeled rate for increased pest
Blue Alfalfa Aphid <sup>1</sup>		pressure or for increased residual pest control.
Cutworm spp.		<b>DO NOT</b> exceed maximum labeled rate.
Egyptian Alfalfa Weevil		
Flea Beetle spp.		Apply in a minimum of 2 gals. of finished spray
Green Cloverworm		per acre by aerial equipment or 10 gals. of
Green Peach Aphid <sup>1</sup>		finished spray per acre by ground equipment.
Hornworm spp.		
Meadow Spittlebug		ULV oil spray application is prohibited. Higher
Pea Aphid <sup>1</sup>		volumes of finished spray may improve insect
Potato Leafhopper		control under high temperatures, when foliage
Spotted Alfalfa Aphid <sup>1</sup>		is dense and/or when insect pressure is high.
Threecornered Alfalfa Hopper		
Velvetbean Caterpillar		
Webworm spp.		
Armyworm, Southern	3 - 4.3 fl. oz./A	
Armyworm, True	(0.035 - 0.05 lb. a.i./A)	
Armyworm, Yellowstriped		
Cereal Leaf Beetle		
Chinch Bug		
Grass Mealybug		
Grasshopper spp.		
Plant Bug spp.		
Stink Bug spp.		
Armyworm, Fall	3.4 - 4.3 fl. oz./A	
	(0.04 - 0.05 lb. a.i./A)	

- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 5 applications per year.
- DO NOT apply more than 21.5 fl. oz./A of product (0.25 lb. a.i./A) per year.
- Applications may be made up to harvest.

<sup>1</sup>Aphid control may be variable depending on species present and host-plant relationships.

Sorghum (Grain) and Millet

Insects Controlled	Rate of Application	Method of Application
Cutworm spp.	1.4 - 4.3 fl. oz./A	Apply as required by scouting. Base timing and
Sorghum Midge	(0.016 - 0.05 lb. a.i./A)	frequency of applications on insect populations
Armyworm, Fall	1.9 - 4.3 fl. oz./A	reaching locally determined economic thresholds. <b>DO</b>
Armyworm, Southern	(0.022 - 0.05 lb. a.i./A)	<b>NOT</b> exceed maximum allowable rate.
Armyworm, True		
Armyworm, Yellowstriped		Apply by ground or air equipment using sufficient water
Corn Borer, European <sup>1</sup>		to obtain full coverage of foliage (minimum of 10 gals.
Corn Borer, Southwestern <sup>1</sup>		of finished spray per acre by ground and 2 gals. of
Corn Earworm		finished spray per acre by air). The addition of 1 - 2 qts.
Flea Beetle spp.		of emulsified oil per acre to the spray solution may
Hornworms		improve spray deposition and insect control.
Stink Bug spp.		
Webworm spp.		For sorghum midge control, begin applications when
Aphid spp. <sup>2,3</sup>	3.4 - 4.3 fl. oz./A	25% of the sorghum heads have emerged and are in tip
Armyworm, Beet <sup>3</sup>	(0.04 - 0.05 lb. a.i./A)	bloom. Repeat applications at 10-day intervals if
Chinch Bug		needed. For chinch bug control, begin applications
False Chinch Bug		when bugs migrate from small grains or grass weeds to
Grasshopper spp.		small sorghum. Direct spray to the base of plants with
Lesser Cornstalk Borer <sup>1</sup>		sufficient spray volume to penetrate the soil/stem
Thrips spp. <sup>3,4</sup>		interface, leaf collars, and sheaths.
Whitefly spp. <sup>3,4</sup>		

#### **Restrictions:**

- **DO NOT** make applications less than 10 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 5 applications per year.
- **DO NOT** apply more than 21.5 fl. oz./A of product (0.25 lb. a.i./A) per year.
- **DO NOT** apply within 14 days of harvest for grain and stover; within 45 days of harvest for forage.

#### Sovheans

Soybeans		
Insects Controlled	Rate of Application	Method of Application
Cutworm spp.	1.4 - 4.3 fl. oz./A	Apply as required by scouting. Base timing and
Painted Lady (Thistle) Caterpillar	(0.016 - 0.05 lb. a.i./A)	frequency of applications must be based upon insect
Saltmarsh Caterpillar		populations reaching locally determined economic
Silverspotted Skipper		thresholds. <b>DO NOT</b> exceed maximum labeled rate.
Alfalfa Caterpillar	3 - 4.3 fl. oz./A	
Armyworm, Southern	(0.035 - 0.05 lb. a.i./A)	Apply with either aerial or ground equipment using
Armyworm, True		sufficient spray volume to obtain full coverage of the
Armyworm, Yellowstriped		plant and foliage. Use a minimum of 2 gals. of finished
Bean Leaf Beetle <sup>1</sup>		spray per acre by air or 10 gals. of finished spray per
Blister Beetle spp.		acre by ground. The addition of 1 - 2 qts. of emulsified
Colorado Potato Beetle		oil per acre to the spray solution may improve spray
Corn Borer, European		deposition and insect control.
Corn Earworm		
Corn Rootworm Beetle (Adults)		
Cowpea Curculio		
Cucumber Beetle		
European Corn Borer		
Flea Beetle		

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

<sup>&</sup>lt;sup>2</sup>Aphid control may be variable depending on species present and host-plant relationships.

<sup>&</sup>lt;sup>3</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

<sup>&</sup>lt;sup>4</sup>Aids in control.

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Green Cloverworm	
Hornworms	
Imported Cabbageworm	
Japanese Beetle	
Leaf Skeletonizer spp.	
Leafhopper spp.	
Leafminers (Adults)	
Mexican Bean Beetle	
Pea Leaf Weevil	
Plant Bug spp.	
Potato Leafhopper	
Seedcorn Maggot (Adults)	
Soybean Aphid	
Spittlebug	
Threecornered Alfalfa Hopper	
Tobacco Budworm <sup>2</sup>	
Velvetbean Caterpillar	
Webworm spp.	
Woollybear Caterpillar	
Armyworm, Beet	3.4 - 4.3 fl. oz./A
Armyworm, Fall	(0.04 - 0.05 lb. a.i./A)
Grasshopper spp.	
Lesser Cornstalk Borer <sup>3</sup>	
Looper spp. <sup>2</sup>	
Stink Bug spp.	
Thrips spp. <sup>2,3</sup>	
Whitefly spp. <sup>2,3</sup>	

#### **Restrictions:**

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** graze or harvest treated soybean forage, straw, or hay for livestock feed.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- **DO NOT** apply within 21 days of harvest.

<sup>1</sup>Use higher labeled rate for increased pest pressure, increased residual pest control, or later-season applications. **DO NOT** exceed maximum labeled rate.

<sup>2</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

<sup>3</sup>Aids in control

#### **Stone Fruit Crop Group 12-12**

Apricot; Apricot, Japanese; Capulin; Cherry (Black, Nanking, Sweet, and Tart); Jujube, Chinese; Nectarine; Peach; Plum (including American Plum, beach Plum, Canada Plum, Cherry Plum, Chickasaw Plum, Damson Plum, Japanese Plum, Klamath Plum, and Prune Plum): Plumcot: Sloe: and cultivars, varieties, and/or hybrids of these commodities.

Insects Controlled	Rate of Application	Method of Application
American Plum Borer	1.4 - 4.3 fl. oz./A	Apply as required by scouting. Base timing and
Black Cherry Aphid	(0.016 - 0.05 lb. a.i./A)	frequency of applications on insect populations
Cherry Fruit Fly		reaching locally determined economic threshold
Green Fruitworm		levels. <b>DO NOT</b> exceed maximum labeled rate.
Leafhoppers		
Leafrollers		Apply by ground or air equipment using sufficient
Lesser Peach Tree Borer		water to obtain full coverage of foliage (for ground
Oriental Fruit Moth		application use a minimum of 20 gals. per acre for
Peach Tree Borer		concentrate spray or a minimum of 100 gals. per acre
Peach Twig Borer		for dilute spray; for air application use a minimum of
Plum Curculio		10 gals. of finished spray per acre).
Rose Chafer		
Stink Bugs		
Tarnished Plant Bug		
Tufted Apple Budmoth		
Western Cherry Fruit Fly		
Restrictions:		

**DO NOT** make applications less than 7 days apart.

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- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 6 applications per year.
- **DO NOT** apply more than 25.8 fl. oz./A of product (0.3 lb. a.i./A) per year.
- DO NOT apply as a ULV spray.
- **DO NOT** feed or allow livestock to graze on cover crops from treated orchards.
- DO NOT apply within 14 days of harvest.

#### **Sugar Beet**

Insects Controlled	Rate of Application	Method of Application
Foliar Application:	2.4 - 4.3 fl. oz./A	Make applications when insect populations reach economic
Aphids <sup>1</sup>	(0.028 - 0.05 lb. a.i./A)	threshold levels. Refer to local Cooperative Extension Pest
Armyworms		Management Guidelines and/or scouting results.
Blister Beetles		
Click Beetles		Apply by air or by ground equipment using sufficient water to
Cutworms		obtain full coverage of foliage (minimum of 2 gals. of finished spray
Flea Beetles		per acre by air and 10 gals. of finished spray per acre by ground).
Grasshoppers		
Heliothis spp.		
Leafhoppers		
Leafminer (Adults)		
Loopers		
Lygus Bugs		
Sugar Beet Crown Borer		
Sugar Beet Root Maggot (Adults)		
Thistle Caterpillar		
Webworms		
Zebra Caterpillar		
At-Plant Application:	4.3 fl. oz./A	For light to moderate infestations only. Make a 3 - 4-inch T-Band
Sugar Beet Root Maggot (Larvae) <sup>2</sup>	(0.05 lb. a.i./A)	(band over the open furrow) at planting in a minimum of 3 - 5 gals.
		of finished spray per acre.
White Grub		Apply in-furrow or in a 3 - 4-inch T-Band (band over the open
Wireworm		furrow) at planting in a minimum of 3 - 5 gals. of finished spray per
		acre.
Cutworm spp.		Apply at planting on the soil surface in a 5 - 7-inch band or
		broadcast in a minimum of 3 - 5 gals. of finished spray per acre.

#### **Restrictions:**

- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 3 applications per year.
- **DO NOT** apply more than 12.9 fl. oz./A of product (0.15 lb. a.i./A) per year including at-plant plus foliar applications.
- **DO NOT** apply within 50 days of harvest for tops or roots.

<sup>1</sup>Aphid control may be variable depending on species present and host-plant relationships.

<sup>2</sup>Suppression only.

## Sugarcane

Insects Controlled	Rate of Application	Method of Application
Sugarcane Borer	3.2 - 4.3 fl. oz./A	Make applications when insect populations reach economic
Mexican Rice Borer	(0.0375 - 0.05 lb. a.i./A)	thresholds. Refer to local Cooperative Extension Pest
		Management Guidelines and/or scouting results. <b>DO NOT</b> exceed maximum labeled rate.
		Apply by air or ground equipment using sufficient water to obtain full coverage of foliage (minimum of 2 gals. of finished spray per acre by air and 10 gals. of finished spray per acre by ground).

#### **Restrictions:**

- DO NOT make applications less than 21 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 4 applications per year.
- **DO NOT** apply more than 17.2 fl. oz./A of product (0.2 lb. a.i./A) per year.
- DO NOT apply within 21 days of harvest.

## Sunflower Crop Subgroup 20B (except Safflower) - At-Plant Application

Calendula; Castor Oil Plant; Chinese Tallowtree; Euphorbia; Evening Primrose; Jojoba; Niger Seed; Rose Hip; Stokes Aster; Sunflower, Tallowwood; Tea Oil Plant; Vernonia; and cultivars, varieties, and/or hybrids of these.

Insects Controlled	Rate of Application	Method of Application
Cutworm spp.	4.3 fl. oz./A	For white grubs and wireworms, apply in-furrow or in a 3 - 4-inch T-
White Grub	(0.05 lb. a.i./A)	Band (band over the open furrow) at planting in a minimum of 3 - 5
Wireworm		gals. of finished spray per acre.
		For cutworm spp., apply at planting on the soil surface in a 5 - 7-inch band or broadcast in a minimum of 3 - 5 gals. of finished spray per
		acre.

#### Restrictions:

- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 5 applications per year.
- **DO NOT** apply more than 21.5 fl. oz./A of product (0.25 lb. a.i./A) per year including at-plant plus foliar applications.
- **DO NOT** graze livestock in treated areas or cut treated crops for feed.
- **DO NOT** apply within 30 days of harvest.

#### Sunflower Crop Subgroup 20B (except Safflower) - Foliar Use

Calendula; Castor Oil Plant; Chinese Tallowtree; Euphorbia; Evening Primrose; Jojoba; Niger Seed; Rose Hip; Stokes Aster; Sunflower, Tallowwood; Tea Oil Plant; Vernonia; and cultivars, varieties, and/or hybrids of these.

Insects Controlled	Rate of Application	Method of Application
Cutworm spp.	1.4 - 4.3 fl. oz./A	Apply with ground or air equipment using sufficient
Thistle Caterpillar (Painted Lady)	(0.016 - 0.05 lb. a.i./A)	water and application methods to insure thorough
Armyworm	2.72 - 4.3 fl. oz./A	coverage of foliage.
Banded Sunflower Moth	(0.032 - 0.05 lb. a.i./A)	
Grasshopper spp.		Apply in a minimum of 2 gals. of finished spray per
Grey Sunflower Seed Weevil (Adults)		acre by aerial equipment or 10 gals. of finished
Head-Clipper Weevil (Adults)		spray per acre by ground equipment. Begin
Japanese Beetle		applications when pest appears and repeat as
Leafhopper spp.		necessary to maintain control.
Red Sunflower Seed Weevil (Adults)		
Saltmarsh Caterpillar		Use higher labeled rate for increased residual pest
Stem Weevil (Adults)		control.
Sunflower Beetle		
Sunflower Butterfly		<b>DO NOT</b> exceed maximum labeled rate.
Sunflower Maggot		
Sunflower Moth		
Webworm spp.		
Wooly Bear Caterpillar		
Armyworm, Beet	3.4 - 4.3 fl. oz./A	
Armyworm, Fall	(0.04 - 0.05 lb. a.i./A)	
Long-Horned Beetle (Dectes Stem Borer Adult)		
Pale Striped Flea Beetle		
Stink Bug spp.		
Postrictions		

## Restrictions:

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 5 applications per year.
- DO NOT apply more than 21.5 fl. oz./A of product (0.25 lb. a.i./A) per year including at-plant plus foliar applications.
- DO NOT graze livestock in treated areas or cut treated crops for feed
- Avoid applications when honeybees are actively foraging by applying during the early morning or evening hours.
- DO NOT apply within 30 days of harvest.

#### **Tree Nuts Crop Group 14-12**

African nut-tree; Almond; Beech Nut; Brazil Nut; Brazilian Pine; Bunya; Burr Oak; Butternut; Cajou Nut; Candlenut; Cashew; Chestnut; Chinquapin; Coconut; Coquito Nut; Dika Nut; Ginkgo; Guiana Chestnut; Filbert (Hazelnut); Heartnut; Hickory Nut; Japanese Horse-Chestnut; Macadamia Nut; Mongongo Nut; Monkey-Pot; Monkey Puzzle Nut; Okari Nut; Pachira Nut; Peach Palm Nut; Pecan; Pequi; Pili Nut; Pine Nut; Pistachio; Sapucaia Nut; Tropical Almond; Walnut (Black and English); Yellowhorn; and cultivars, varieties, and/or hybrids of these commodities.

 •		
Insects Controlled	Rate of Application	Method of Application

Black Pecan Aphid	4.3 fl. oz./A	Apply as required by scouting. Base timing and
Codling Moth	(0.05 lb. a.i./A)	frequency of applications on insect populations
Filbert Worm		reaching locally determined economic
Hickory Shuckworm		threshold levels. <b>DO NOT</b> exceed maximum
Leaffooted Bugs		labeled rate.
Navel Orangeworm		
Oblique Banded Leafroller		Apply by ground or air equipment using
Peach Twig Borer		sufficient water to obtain full coverage of
Pecan Leaf Casebearer		foliage (minimum of 10 gals. of finished spray
Pecan Nut Casebearer		per acre by ground and 2 gals. of finished spray
Pecan Phylloxera		per acre by air).
Pecan Weevil		
Plant Bugs		Avoid applications when honeybees are actively
Stink Bugs		foraging by applying during the early morning
Walnut Aphid		or evening hours.
Walnut Husk Fly		
Yellow Pecan Aphid		

- **DO NOT** make applications less than 7 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 5 applications per year.
- **DO NOT** apply more than 21.5 fl. oz./A of product (0.25 lb. a.i./A) per year.
- **DO NOT** apply within 7 days of harvest.

#### Wheat, Triticale, and Teff

Insects Controlled	Rate of Application	Method of Application
Cutworm spp., including Army Cutworm	1.4 - 4.3 fl. oz./A	Apply as required by scouting. Base Timing and frequency
Painted Lady (Thistle Caterpillar)	(0.016 - 0.05 lb. a.i./A)	of applications on insect populations reaching locally
Armyworm, Southern	1.9 - 4.3 fl. oz./A	determined economic thresholds. <b>DO NOT</b> exceed
Armyworm, True	(0.022 - 0.05 lb. a.i./A)	maximum labeled rate.
Armyworm, Yellowstriped		
Cereal Leaf Beetle		Apply by ground or air equipment using sufficient water
Flea Beetle spp.		to obtain full coverage of foliage (minimum of 10 gals. of
Pale Western Cutworm		finished spray per acre by ground and 2 gals. of finished
Plant Bug spp.		spray per acre by air).
Spittlebug		
Webworm spp.		For chinch bug control, begin applications when bugs
Aphid spp. <sup>1,2</sup>	3.4 - 4.3 fl. oz./A	migrate from small grains or grass weeds. Apply sufficient
Armyworm, Beet <sup>2</sup>	(0.04 - 0.05 lb. a.i./A)	spray volume to penetrate the soil/stem interface, leaf
Armyworm, Fall		collars, and sheaths.
Chinch Bug		
Grass Sawfly		
Grasshopper spp.		
Greenbug <sup>2,3</sup>		
Stink Bug spp.		
Thrips spp. <sup>2,3</sup>		
Wheat Stem Sawfly (Adults) <sup>3</sup>		
Whitefly spp. <sup>2,3</sup>		

## Restrictions:

- **DO NOT** make applications less than 14 days apart.
- **DO NOT** apply more than 4.3 fl. oz./A of product (0.05 lb. a.i./A) per application.
- **DO NOT** make more than 5 applications per year.
- **DO NOT** apply more than 21.5 fl. oz./A of product (0.25 lb. a.i./A) per year.
- **DO NOT** apply within 14 days of harvest for grain, forage, and hay.

<sup>1</sup>Aphid control may be variable depending on species present and host-plant relationships.

<sup>2</sup>See the **INSECT RESISTANCE MANAGEMENT** section.

<sup>3</sup>Aids in Control.

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE: DO NOT** freeze. Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. **DO NOT** put concentrate or dilute material into food or drink containers. In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.

**PESTICIDE DISPOSAL:** To avoid wastes, use all material in this container by application according to label directions. If these wastes cannot be used 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 in proper disposal methods.

#### **CONTAINER HANDLING:**

[Less Than or Equal to 5 Gallons] [Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.]

[Greater Than 5 Gallons] [Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system Repeat this rinsing procedure two more times.

[Greater Than 5 Gallons] [Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration.]

[For Bulk and Mini-Bulk Containers] [Refillable container. Refill this container with pesticide only. **DO NOT** use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by State and local authorities.]

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

#### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

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

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