



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

September 20, 2023

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

Subject: Notification per PRN 98-10 – Addition of non-public health pest to the label
Product Name: A198.01
EPA Registration Number: 91234-273
Application Date: 03/29/2023
Decision Number: 593559

Dear Ms. Toomey:

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

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

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you have any questions, please contact Jamey Shuler by phone at (202) 566-2898, or via email at Shuler.Jamey@epa.gov.

Sincerely,

A handwritten signature in blue ink that reads "K J Shuler".

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EPA Reg. No. 91234-273
Decision No. 593559

Kara Welch, Acting Product Manager 3
Invertebrate-Vertebrate Branch 1
Registration Division (7505T)
Office of Pesticide Programs

NOTIFICATION

91234-273

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

09/20/2023

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

RESTRICTED USE PESTICIDE

Due to toxicity to fish and aquatic organisms

For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

ZETA-CYPERMETHRIN GROUP 3A INSECTICIDE

A198.01 [™]

[Alternate Brand Name: Cortes Maxx Insecticide]

Contains zeta-cypermethrin, the active ingredient used in Mustang® Maxx.

ACTIVE INGREDIENT:	(% by weight)
Zeta-cypermethrin*.....	9.15%
OTHER INGREDIENTS**:	90.85%
TOTAL	100.0%

Contains 0.8 lb ai/gal

*Cis/trans ratio: Max. 75% (±) cis and min. 25% (±) trans

**Contains Petroleum Distillates

KEEP OUT OF REACH OF CHILDREN

WARNING/AVISO

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

FIRST AID	
If swallowed:	<ul style="list-style-type: none">• Immediately call a poison control center or doctor for treatment advice.• Do not induce vomiting unless told to do so by the poison control center or doctor.• Do not give any liquid to the person.• Do not give anything by mouth to an unconscious person.
If in eyes:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
If inhaled:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.• Call a poison control center or doctor for further treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at 1-844-685-9173 for emergency medical treatment information.	

NOTE TO PHYSICIAN

Contains petroleum distillate. Induced vomiting as first aid for this substance may result in increased risk of chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent. Vomiting should be induced only under professional supervision.

Skin exposure may also result in a sensation described as a tingling, itching, burning, or prickly feeling. Onset may occur immediately to 4 hours after exposure and may last 2 to 30 hours, without damage.

For Chemical Emergency:

Spill, Leak, Fire, Exposure, or Accident,

Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

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

[See below additional Precautionary Statements]

A198.01 is not manufactured, or distributed by FMC Corporation, seller of Mustang® Maxx.

{Note to reviewer: If used on the final product packaging, the contains statement and disclaimer will appear in close proximity on the front panel of the label.}

EPA Reg. No.: 91234-273

EPA Est. No.:

Net Contents:

Manufactured for:

Atticus, LLC

940 NW Cary Parkway, Suite 200

Cary, NC 27513

{LANGUAGE INSIDE BOOKLET}

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals
WARNING

Contains Petroleum Distillate. May be fatal if swallowed. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Avoid contact with skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash 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.

Personal Protective Equipment:

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS. Some materials that are chemical-resistant to this product are listed below.

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

- Long-sleeved shirt and long pants
- Chemical-resistant gloves: barrier laminate, or viton \geq 14 mils
- Shoes plus socks
- Protective eyewear such as goggles, face shield, or safety glasses.

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: barrier laminate, or viton \geq 14 mils
- shoes plus socks
- Protective eyewear such as goggles, face shield, or safety glasses.

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

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.
- 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 high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash waters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. **Protect pollinating insects by following label directions intended to minimize drift and to reduce risk to these organisms.**

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. 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. Do not mix or allow to come in contact with any oxidizing agent. Hazardous chemical reaction may occur.

**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.

Insect Resistance Management

For resistance management, **A198.01** contains a Group 3A insecticide. Any insect population may contain individuals naturally resistant to **A198.01** 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 should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of **A198.01** 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 should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
 - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
 - When using mixtures, consider any known cross-resistance issues between the individual components for the 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.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls, chemical-resistant gloves: barrier laminate or viton \geq 14 mils, shoes plus socks and protective eyewear such as goggles, face shield, or safety glasses.

Product Information

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, such as 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.

A198.01 should be applied continuously for the duration of the water application. **A198.01** should 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 fish ponds).

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 fish ponds).

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 fish ponds).

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 ½ swath displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 mph, applicators must use ¾ 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.

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 should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

- For ground equipment, the boom should 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.

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

APPLICATION INSTRUCTIONS

Use low rate under light to moderate infestation. Use higher labeled rates for 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.

Preventive Use

For cutworm, armyworm, or stalk borer control, apply **A198.01** 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 on this label, do not plant rotational crops within 30 days of last application.

Tank-Mixture

A198.01 may be applied in tank mixtures with other products approved for use on Alfalfa and Nongrass Animal Feeds; Artichoke, globe; Avocado; Barley; Basil; Black Sapote; Brassica Vegetables; Buckwheat; Bulb Vegetables; Bushberries; Caneberries; Canistel; Canola (Rapeseed); Celtnce; 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. 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. Follow the most restrictive directions and precautions which appear on the labels of these products. Test for compatibility of products before mixing.

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 yearly total for either active ingredient when used alone, and do not apply more than the combined maximum yearly total for both active ingredients as outlined in the table below.

Crop	Maximum Yearly Total (lb ai/A)		Maximum Yearly Total (lb ai/A) When Applying Cypermethrin and Zeta-Cypermethrin Products to the Same Crop	Maximum Yearly Total (lb ai/A) When Applying Zeta- Cypermethrin Products to the Same Crop
	Zeta- cypermethrin	Cypermethrin	Zeta-cypermethrin plus Cypermethrin	Zeta-cypermethrin
	A198.01			
Cotton	0.15	0.6	0.6	0.3
Field Corn	0.10	NA	NA	0.2
Sweet Corn	0.15	NA	NA	0.3
Eggplant	0.15	NA	NA	0.3
Pepper (Bell & Non-Bell)	0.15	NA	NA	0.3
Tomato	0.15	NA	NA	0.3
Head Lettuce	0.15	0.6	0.6	0.3
Head and Stem Brassica	0.15	0.6	0.6	0.3
Succulent Peas and Beans	0.15	NA	NA	0.3
Pecans	0.15	0.6	0.6	0.3

NA = Not Applicable

Maximum Yearly Usage and PHI (Pre-Harvest Interval) for A198.01 Labeled Crops

Crop	Maximum Yearly Total/Acre for A198.01		PHI (days)
	lb ai	fl oz	
Alfalfa	0.05/cutting with a maximum of 3 cuttings per year, 0.15/year	8.0/cutting with a maximum of 24.0 per year	3 (cutting or grazing) 7 (harvesting seed)
Nongrass Animal Feeds (Forage, Fodder, Straw and Hay) Group except Alfalfa	0.025/cutting with a maximum of 3 cuttings per year, 0.75/year	4.0/cutting with a maximum of 12.0 per year	3 (cutting or grazing) 7 (harvesting seed)
Avocado, Black Sapote, Canistel, Mamey Sapote, Mango, Papaya, Sapodilla, Star Apple	0.15	24.0	1
Artichoke, globe	0.1	16.0	5
Barley, Quinoa	0.125	20.0	14
Basil	0.15	24.0	1
Caneberries	0.15	24.0	1
Bushberries	0.15	24.0	1
Brassica Vegetables	0.15	24.0	1
Bulb Vegetables	0.125	20.0	7
Celtuce, Florence Fennel	0.15	24.0	1
Citrus	0.1	16.0	1
Corn, sweet	0.15	24.0	3
Corn, field, seed, pop	0.10	16.0	7 (grain, stover, and forage)
Cotton	0.15	24.0	14
Cucurbit Vegetables	0.15	24.0	1
Fruiting Vegetables	0.15	24.0	1
Grapes	0.15	24.0	1
Grass Forage, Fodder, and Hay Group and Grass Grown for Seed	0.025/cutting	4.0/cutting	0 (Forage and Hay) 7 (Straw and Seed Screenings)
	Hay 0.10/year	16.0	
	Forage, Straw & Seed Screenings 0.125/year	20.0	
Kohlrabi	0.15	24.0	1
Leaf Petiole Vegetables	0.15	24.0	1
Leafy Vegetables	0.15	24.0	1
Legume Vegetables	0.15	24.0	1 (succulent shelled or edible-podded) 21 (dried shelled)
Oats	0.125	20.0	14
Canola (Rapeseed)	0.15	24.0	7
Pistachio	0.125	20.0	7
Safflower	0.075	12.0	14
Sunflower	0.125	20.0	30
Peanut	0.15	24.0	7
Pome Fruits	0.15	24.0	14
Rice and Wild Rice	0.10	16.0	14
Root and Tuber Vegetables (except Sugar Beet)	0.15	24.0	1
Rye	0.125	20.0	14
Sod Farms	0.125/year	20.0	0
Sorghum	0.125	20.0	14 (grain & fodder (stover)) 45 (forage (silage))
Soybeans	0.15	24.0	21

Stone Fruits	0.15	24.0	3 (cherries) 14 (all other stone fruits)
Sugar Beets	0.075	12.0	50
Sugarcane	0.10	16.0	21
Tree Nuts	0.125	20.0	7
Wheat, Triticale, and Teff	0.125	20.0	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.

{NOTE TO REVIEWER: Registrant may add or remove the following state restriction statements as required. [NOT FOR USE IN CALIFORNIA] [NOT FOR USE IN NY]}

Nongrass Animal Feeds (Forage, Fodder, Straw and Hay) Group – Except Alfalfa and Alfalfa grown for seed

Velvet Bean; Clover (*Trifolium*, *Melilotus*); Kudzu; Lespedeza; Lupin; Sainfoin; Trefoil; Vetch; Crown Vetch; and Milk Vetch

Insects Controlled	Rate of Application	Method of Application
Alfalfa Caterpillar Alfalfa Looper Alfalfa Weevil Cutworms Egyptian Alfalfa Weevil (larvae & adult) Flea Beetles Green Cloverworm Hornworms Meadow Spittlebug Potato Leafhopper Velvetbean Caterpillar Webworms Blue Alfalfa Aphid ¹ Green Peach Aphid ¹ Pea Aphid ¹ <u>Spotted Alfalfa Aphid¹</u> <u>Threecornered Alfalfa Hopper</u>	2.24 to 4.0 fl oz/A (0.014 to 0.025 lb ai/A)	Apply as insects appear in sufficient volume of water to ensure thorough coverage of foliage. Use higher labeled rate for increased pest pressure or for increased residual pest control. Do not exceed maximum labeled rate. Apply in a minimum of 2 gal/A of finished spray by aerial equipment or 10 gal/A of finished spray by ground equipment. ULV oil spray application is prohibited. Use higher volumes of finished spray to improve insect control under high temperatures, when foliage is dense and/or when insect pressure is high.
Armyworms Grasshoppers Plant Bugs (<i>Lygus</i> spp. & Stink Bugs)	2.8 to 4.0 fl oz/A (0.0175 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> Do not make applications less than 7 days apart. Do not apply more than 4 fl oz/A of product (0.025 lb ai/A) per cutting. Do not make more than 3 applications per year. Do not apply more than 12 fl oz/A of product (0.075 lb ai/A) per year. Applications may be made up to 3 days of cutting or grazing or up to 7 days of harvesting seed. <p>¹Aphid control may be variable depending on species present and host-plant relationships.</p>		

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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 Alfalfa Looper Alfalfa Weevil Cutworms Egyptian Alfalfa Weevil (larvae & adult) Flea Beetles Green Cloverworm Hornworms Meadow Spittlebug Potato Leafhopper Velvetbean Caterpillar Webworms Blue Alfalfa Aphid ¹ Green Peach Aphid ¹ Pea Aphid ¹ <u>Spotted Alfalfa Aphid¹</u> <u>Threecornered Alfalfa Hopper</u>	2.24 to 4.0 fl oz/A (0.014 to 0.025 lb ai/A)	Apply as insects appear in sufficient volume of water to ensure thorough coverage of foliage. Use higher labeled rate for increased pest pressure or for increased residual pest control. Do not exceed maximum labeled rate. Apply in a minimum of 2 gal/A of finished spray by aerial equipment or 10 gal/A of finished spray by ground equipment. ULV oil spray application is prohibited. Use higher volumes of finished spray to improve insect control under high temperatures, when foliage is dense and/or when insect pressure is high.
Armyworms Grasshoppers Plant Bugs (<i>Lygus</i> spp. & Stink Bugs)	2.8 to 4.0 fl oz/A (0.0175 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> Do not make applications less than 7 days apart. Do not make more than 2 applications per cutting. Do not apply more than 8 fl oz/A of product (0.05 lb ai/A) per cutting. Do not apply more than 24 fl oz/A of product (0.15 lb ai/A) per year. Applications may be made up to 3 days of cutting or grazing or up to 7 days of harvesting seed. <p>¹Aphid control may be variable depending on species present and host-plant relationships.</p>		

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Globe Artichoke

Insects Controlled	Rate of Application	Method of Application
Aphids ¹ Artichoke Plume Moth Lygus Bug ² Proba Bug	4.0 fl oz/A (0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic threshold levels. Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gal/A of finished spray by ground and 2 gal/A of finished spray by air). Follow appropriate spray drift precautions on this label.
<ul style="list-style-type: none"> Do not make applications less than 14 days apart. Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 4 applications per year. Do not apply more than 16.0 fl oz/A of product or 0.10 lb ai/A per year. Do not apply within 5 days of harvest. <p>¹Aids in control. ²See resistance statement under "Directions For Use" section</p>		

Tropical Fruits

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

Insects Controlled	Rate of Application	Method of Application
Avocado Lace Bug Avocado Leafhopper Avocado Leafroller Avocado Loopers Avocado Tree Girdler Avocado Whitefly Brown Soft Scale Caterpillars Mirids Omnivorous Loopers Orange Tortrix Scale Crawlers Spanworm Thrips <u>Twig Borers</u>	4.0 fl oz/A (0.025 lb ai/A)	Apply by ground equipment using sufficient water to obtain full coverage of foliage in a minimum of 20 gallons for a concentrate spray or a minimum of 100 gallons for a dilute spray. Apply by air in a minimum of 10 gal/A of finished spray. Apply when insects first appear and repeat at 7 to 10- day intervals as needed to provide control.
<ul style="list-style-type: none"> Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 6 applications per year. Do not apply more than 24.0 fl oz/A of product or 0.15 lb ai/A per year. Do not apply within 1 day of harvest. 		

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

Insects Controlled	Rate of Application	Method of Application
Cutworm spp., Army Cutworm Painted Lady (Thistle) Caterpillar	1.28 to 4.0 fl oz/A (0.008 to 0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds. Do not exceed maximum labeled rate. Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gal/A of finished spray by ground and 2 gal/A of finished spray by air). For chinch bug control, begin applications when bugs migrate from small grains or grass weeds. Apply sufficient spray volume to penetrate the soil/stem interface, leaf collars, and sheaths.
Armyworm, Southern Armyworm, True Armyworm, Yellow-Striped Cereal Leaf Beetle Flea Beetle spp. Pale Western Cutworm Plant Bug spp. Spittlebug Webworm spp.	1.76 to 4.0 fl oz/A (0.011 to 0.025 lb ai/A)	
Aphid spp. ^{1,2} Armyworm, Beet ² Armyworm, Fall Chinch Bug Grass Sawfly Grasshopper spp. Greenbug ^{1,2} Stink Bug spp. Thrips spp. Wheat Stem Sawfly (adult) ¹ Whitefly spp. ^{1,2}	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> Do not make applications less than 14 days apart. Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 5 applications per year. Do not apply more than 20.0 fl oz/A of product or 0.125 lb ai/A per year. Do not apply within 14 days of harvest for grain, straw, and hay. <p>¹Aids in control. ²See resistance statement under "Directions For Use" section</p>		

Basil

Insects Controlled	Rate of Application	Method of Application
Lepidoptera, Diamondback Moth Flea Beetle <i>Diabrotica</i> spp. Onion Thrips	4.0 fl oz/A (0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic threshold levels. Do not exceed maximum labeled rate. Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 20 gallons by ground and 2 gallons by air).

- Do not make applications less than 7 days apart.
- Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application.
- Do not make more than 6 applications per year.
- Do not apply more than 24 fl oz/A of product (0.15 lb ai/A) per year.
- Do not apply within 1 day of harvest.

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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 Orange Tortrix Root Weevils Vinegar Flies (Adult) Spotted Wing Drosophila	4.0 fl oz/A (0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic threshold levels. Do not exceed maximum labeled rate. Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 20 gal/A of finished spray by ground and 2 gal/A of finished spray by air).
<ul style="list-style-type: none"> • Do not make applications less than 7 days apart. • Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 6 applications per year. • Do not apply more than 24 fl oz/A of product (0.15 lb ai/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*; and cultivars, varieties, and/or hybrids of these commodities
 [*Not for use in California]

Insects Controlled	Rate of Application	Method of Application
Corn Earworm Cucumber Beetles Cutworm Diamondback Moth ¹ Flea Beetles Imported Cabbageworm Leafhoppers Saltmarsh Caterpillar Southern Cabbageworm Tobacco Budworm ¹	2.24 to 4.0 fl oz/A (0.014 to 0.025 lb ai/A)	Apply in water as necessary for insect control using a minimum of 15 gal/A of finished spray with ground equipment and 5 gal/A of finished spray by air. Use lower labeled rates of A198.01 under light to moderate insect pressure. Use higher labeled rates to control heavy to extremely heavy insect populations.

Alfalfa Looper Armyworms Cabbage Looper Cabbage Webworm Crickets Grasshoppers Ground Beetles Leafminers (adults) Lygus Bugs Onion Thrips Stinkbugs Wireworm (adults) Aphids ² Whiteflies ³	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	In areas where arid climatic conditions persist, such as California and Arizona, use higher labeled rates.
<ul style="list-style-type: none"> Do not make applications less than 7 days apart. Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 6 applications per year. Do not apply more than 24 fl oz/A of product (0.15 lb ai/A) per year. Do not apply within 1 day of harvest. <p>¹See resistance statement under "Directions For Use" section. ²Aphid control may be variable depending on species present and host-plant relationships. ³Aids in control *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</p>		

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
Armyworms Cutworms Leafminers (adults) Onion Maggot Adults Stink Bugs Aphids ¹	2.24 to 4.0 fl oz/A (0.014 to 0.025 lb ai/A)	Apply in a minimum of 20 gal/A of finished spray with ground equipment or in a minimum of 3 gal/A of finished spray by aircraft. Begin applications when pests appear and repeat as necessary to maintain control.
Onion Thrips	2.88 to 4.0 fl oz/A (0.018 to 0.025 lb ai/A)	To control Onion Thrips: Use higher labeled rates as population increases and avoid rescue situations. Use of a crop oil concentrate at 16 fl oz/A is recommended. Do not exceed maximum labeled rates.
<ul style="list-style-type: none"> Do not make applications less than 7 days apart. Do not apply more than 4.0 fl oz/A or 0.025 lb ai/A per application. Do not make more than 5 applications per year. Do not apply more than 20 fl oz/A of product (0.125 lb ai/A) per year. Do not graze livestock in treated areas or cut treated crops for feed. Do not apply within 7 days of harvest. <p>¹Aphid control may be variable depending on species present and host-plant relationships.</p>		

Celtuce; Fennel, Florence (*finocchio*)

Insects Controlled	Rate of Application	Method of Application
Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Imported Cabbageworm Leafhoppers Saltmarsh Caterpillar Tobacco Budworm ² Aphid spp. ^{2,3} Whitefly spp. ^{1,2}	2.24 to 4.0 fl oz/A (0.014 to 0.025 lb ai/A)	Apply in water as necessary for insect control using a minimum of 10 gal/A of finished spray with ground equipment and 5 gal/A of finished spray by air. Use lower labeled rates of A198.01 under light to moderate insect pressure. Use higher labeled rates to control heavy to extremely heavy insect populations.
Armyworms Ground Beetles Crickets Loopers Lygus Bugs Onion Thrips Stink Bugs Wireworm (adults)	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	In areas where arid climatic conditions persist, such as California and Arizona, use higher labeled rates.
<ul style="list-style-type: none"> • Do not make applications less than 7 days apart. • Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 6 applications per year. • Do not apply more than 24 fl oz/A of product (0.15 lb ai/A) per year. • Do not make applications within 1 day of harvest. <p>¹ Aids in control ² See resistance statement under "Directions For Use" section ³ Aphid control may be variable depending on species present and host-plant relationships.</p>		

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; Trifoliolate Orange; Uniq Fruit; and cultivars, varieties, and/or hybrids of these commodities

Insects Controlled	Rate of Application	Method of Application
Asian Cockroach Beet Armyworm Blue-Green Citrus Root Weevils Cutworms Diaprepes Root Weevil Fire Ants Fuller Rose Beetle Glassy-Winged Sharpshooter Grasshopper Katydid Leafhoppers Leafrollers Leafminers* Little Leaf Notcher Loopers Orange Tortrix Orangedog Caterpillars Plantbugs Psyllids Thrips Whiteflies	4.0 fl oz/A (0.025 lb ai/A)	Apply by ground equipment using sufficient water to obtain full coverage of foliage in a minimum of 20 gal/A of finished spray for concentrate spray or a minimum of 100 gal/A of finished spray for dilute spray. Apply by air in a minimum of 10 gal/A of finished spray. Begin applications when pest activity is noted.
<ul style="list-style-type: none"> • Do not make applications less than 14 days apart. • Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 4 applications per year. • Do not apply more than 16 fl oz/A of product (0.10 lb ai/A) per year. • Do not apply within 1 day of harvest. 		

Corn, Sweet

Insects Controlled	Rate of Application	Method of Application
Chinch Bug Corn Rootworm (Adult) Corn Silkfly Cutworms Flea Beetle Leafhoppers Japanese Beetle (Adult) Sap Beetle (adults) Tarnished Plant Bug	2.24 to 4.0 fl oz/A (0.014 to 0.025 lb ai/A)	Apply with ground or air equipment using sufficient water and application methods to ensure thorough coverage of foliage. Apply in water using a minimum of 20 gal/A of finished spray with ground equipment and a minimum of 2 gal/A of finished spray by air.
Armyworms Corn Borers Corn Earworm Grasshoppers Aphids ¹	2.8 to 4.0 fl oz/A (0.0175 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> • Apply at minimum 3 to 5 day intervals or as needed for control. • Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 6 applications per year. • Do not apply more than 24 fl oz/A of product (0.15 lb ai/A) per year. • Do not apply within 3 days of harvest of ears or forage or livestock grazing. <p>¹Aphid control may be variable depending on species present and host-plant relationships.</p>		

**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 (0.001 lb ai per 1,000 linear feet of row)	Apply as an in-furrow, band or T-band treatment using a minimum 4" band. Use table below to determine the A198.01 needs for each acre.
Row Spacings (inches)	40	30
A198.01 (lb ai/A)	0.012	0.018
A198.01 (formulated fl oz/A)	1.92	2.88
		20
		0.024
		3.84
<ul style="list-style-type: none"> • Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 4 applications per year. • Do not apply more than 16 fl oz/A of product (0.10 lb ai/A) per year including at-plant plusfoliar applications. • Do not apply within 7 days of harvest for grain, stover, and forage. 		

Foliar Use

Insects Controlled	Rate of Application	Method of Application
Cutworms	1.28 to 2.8 fl oz/A (0.008 to 0.0175 lb ai/A)	Make applications when insect populations reach economic thresholds. Refer to local Cooperative Extension Pest Management Guidelines and/or scouting results. Do not exceed maximum labeled rate.
Corn Earworm ¹ Green Cloverworm Meadow Spittlebug Western Bean Cutworm ¹	1.76 to 4.0 fl oz/A (0.011 to 0.025 lb ai/A)	
Bean Leaf Beetle Cereal Leaf Beetle Corn Borer, European Corn Borer, Southwestern Corn Rootworm Beetle Flea Beetle Grasshoppers Hop Vine Borer Hornworms Japanese Beetle (adult) Sap Beetle (adult) Southern Corn Leaf Beetle Stalk Borer Stink Bug Spp. Tobacco Budworm ² Webworms Aphids ³	2.72 to 4.0 fl oz/A (0.017 to 0.025 lb ai/A)	Apply by air or by ground equipment using sufficient water to obtain full coverage of foliage (minimum of 2 gal/A of finished spray by air and 10 gal/A of finished spray by ground). For chinch bug control, scout corn fields and make applications when bugs migrate from small grains or wild grasses to small corn. Direct spray to the base of plant. Repeat applications at 3 to 5 day intervals if needed. A198.01 may only suppress heavy infestations and/or subsequent migrations.
Armyworms (including Fall Armyworms) Chinch Bug	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> Do not make more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 4 applications per year. Do not apply more than 16 fl oz/A of product (0.10 lb ai/A) per year including At-Planting plus foliar applications. Do not apply within 7 days of harvest for grain, stover, and forage. <p>¹For control before the larva bores into the plant stalk or ear. ²See resistance statement under "Directions For Use" section. ³Control may be variable depending on species present and host-plant relationships.</p>		

Cottonseed Subgroup 20C: Cottonseed; cultivars, and/or hybrid of these commodities

Insects Controlled	Rate of Application	Method of Application
<i>Preemergent Use:</i> Cutworms	1.28 to 1.92 fl oz/A (0.008 to 0.012 lb ai/A)	Use A198.01 in the time period from 14 days prior to planting up to emergence of the crop. Apply as a broadcast spray by ground or air, banded (including T-band) or in-furrow spray using sufficient spray volume to achieve adequate coverage. Reduced volumes of water may be used with
Cutworms Tobacco Thrips Soybean (banded) Thrips	1.28 to 1.92 fl oz/A (0.008 to 0.012 lb ai/A)	
Armyworm, Fall Armyworm, Yellow Striped Boll Weevil	2.64 to 3.6 fl oz/A	

Cabbage Looper Corn Borer, European Cotton Bollworm Cotton Fleahopper Cotton Leaf Perforator Pink Bollworm Saltmarsh Caterpillar Stink Bugs Tarnished Plant Bug Other Plant Bugs Tobacco Budworm ¹	(0.0165 to 0.0225 lb ai/A)	specialized equipment. Use the higher labeled rates of A198.01 when incorporating into the soil. A198.01 may be applied in water or refined vegetable oil. When water is used, apply a minimum of one gal/A of finished spray by air or five gal/A of finished spray with ground equipment. When applying in water by air, one quart of emulsified oil may be substituted for one quart of water in the finished spray. When using oil, use a minimum of one quart per acre in the finished spray.
Armyworm, Beet ² Cotton Aphid ³ Lygus Bugs Whiteflies ⁴	2.8 to 4.0 fl oz/A (0.0175 to 0.025 lb ai/A)	Control of lepidopteran eggs may be achieved with proper timing of applications. For boll weevil control, apply A198.01 at a 3 to 4 days interval.
Grasshoppers	3.0 to 4.0 fl oz/A (0.01875 to 0.025 lb ai/A)	For control of grasshoppers, make applications based on careful field scouting. Do not exceed maximum labeled rate. Make treatment decisions based on evidence of feeding damage and presence of grasshoppers in cotton. Loss of cotyledon leaves in seedling cotton should 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 should be made on a 3 to 5-day schedule until grasshopper populations are under control or until foliage loss subsides. Increase application rates as grasshopper size and population density increases.
<ul style="list-style-type: none"> • Do not make more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 6 applications per year. • Do not apply more than 24 fl oz/A of product (0.15 lb ai/A) per year. • Do not graze or feed cotton for forage. • Do not apply within 14 days of harvest. <p>¹ See resistance statement under "Directions For Use" section. ² For control of beet armyworms only in the high plains of Texas, Arizona, and California. ³ Aphid control may be variable depending on species present and host-plant relationships. ⁴ Aids in control.</p>		

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 Cutworms Diamondback Moth Loopers Lepidopterous Larvae Flea Beetle Fleahoppers Grasshopper Plant Bug Stink Bugs Seedpod Weevil Thrips Whitefly Armyworms	4.0 fl oz/A (0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic threshold levels. Do not exceed maximum labeled rate. Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gal/A of finished spray by ground and 2 gal/A of finished spray by air).
<ul style="list-style-type: none"> Do not make applications less than 7 days apart. Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 6 applications per year. Do not apply more than 24 fl oz/A of product (0.15 lb ai/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); *Mormordica* 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.	1.28 to 4.0 fl oz/A (0.008 to 0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic threshold levels. Do not exceed maximum labeled rate.
Cabbage Looper Cucumber Beetle spp. (adult) Leafhopper spp. Melonworm Pickleworm Rindworm Squash Bug Squash Vine Borer	2.8 to 4.0 fl oz/A (0.0175 to 0.025 lb ai/A)	Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gal/A of finished spray by ground and 2 gal/A of finished spray by air).

Aphid spp. ^{1,2} Armyworm, Beet ^{1,2} Corn Earworm Leafminer ¹ Plant Bug spp. Stinkbug spp.	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> • Do not make applications less than 7 days apart. • Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 6 applications per year. • Do not apply more than 24 fl oz/A of product (0.15 lb ai/A) per year. • Do not apply within 1 day of harvest. ¹ Aids in control. ² See resistance statement under “Directions for Use” 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 Armyworm, True Armyworm, Yellow-striped Celery Leaf Tier Colorado Potato Beetle Corn Borer, European Corn Borer, Southwestern Corn Earworm Cucumber Beetle Cutworm spp. Flea Beetle Garden Webworm Green Stink Bug Hornworms Leafminers (adults) Leafhopper spp. Meadow Spittlebug Pepper Maggot (adults) Pepper Weevil Plant Bug spp. Tobacco Budworm ² Tomato Fruitworm Tomato Pinworm	2.24 to 4.0 fl oz/A (0.014 to 0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds. Do not exceed maximum labeled rate. Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gal/A of finished spray by ground and 2 gal/A of finished spray by air).

Aphid spp. ^{2,3} Armyworm, Beet ² Armyworm, Fall Cabbage Looper Grasshoppers Lygus Bugs Brown Stink Bug Tomato Psyllid Thrips spp. ^{1,2} Whitefly spp. ^{1,2}	3.2 to 4.0 fl oz/A (0.020 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> Do not make applications less than 7 days apart. Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 6 applications per year. Do not apply more than 24 fl oz/A of product (0.15 lb ai/A) per year. Do not apply within 1 day of harvest. ¹ Aids in control ² See resistance statement under "Directions For Use" section. ³ 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 Lady Bird Beetle Cutworm species	2.0 to 4.0 fl oz/A (0.0125 to 0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic threshold levels. Do not exceed maximum labeled rate.
Eastern Grape Leafhopper Variegated Leafhopper Western Grape Leafhopper Grape Berry Moth Japanese Beetle (adult) Vinegar Flies (Adult) Spotted Wing Drosophila	4.0 fl oz/A (0.025 lb ai/A)	Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gal/A of finished spray by ground and 2 gal/A of finished spray by air).
<ul style="list-style-type: none"> Do not make applications less than 7 days apart. Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 6 applications per year. Do not apply more than 24 fl oz/A of product (0.15 lb ai/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, Zoysia Grass, Sudangrass and Sorghum Forages and their hybrids

Insects Controlled	Rate of Application	Method of Application
Alfalfa Caterpillar Alfalfa Looper Alfalfa Weevil Cutworms Egyptian Alfalfa Weevil (larvae & adult) Flea Beetles Green Cloverworm Hornworms Meadow Spittlebug Potato Leafhopper Velvetbean Caterpillar Webworms Blue Alfalfa Aphid ¹ Green Peach Aphid ¹ Pea Aphid ¹ Spotted Alfalfa Aphid ¹ Threecornered Alfalfa Hopper	2.24 to 4.0 fl oz/A (0.014 to 0.025 lb ai/A)	Apply as insects appear in sufficient volume of water to ensure thorough coverage of foliage. Use higher labeled rate for increased pest pressure or for increased residual pest control. Do not exceed maximum labeled rate. Apply in a minimum of 2 gal/A of finished spray by aerial equipment or 10 gal/A of finished spray by ground equipment. ULV oil spray application is prohibited. Higher volumes of finished spray may improve insect control under high temperatures, when foliage is dense and/or when insect pressure is high.
Armyworms Bermudagrass Stem Maggot Fly (adult only) ² Cereal Leaf Beetle Chinch Bug Grass Mealybug Grasshoppers Plant Bugs (Lygus spp. & Stink Bugs)	2.8 to 4.0 fl oz/A (0.0175 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> • 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 4.0 fl oz/A of product (0.025 lb ai/A) per cutting. • For hay, do not make more than 4 applications per year. • For hay, do not apply more than 16 fl oz/A of product (0.10 lb ai/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 20 fl oz/A of product (0.125 lb ai/A) per year. • Applications may be made up to harvest for forage and hay; within 7 days of harvest for straw and seed screenings. <p>¹ Aphid control may be variable depending on species present and host-plant relationships.</p> <p>² Apply after cutting and as grass starts to resprout. Only controls the adult flies, does not control the larvae feeding inside grass stem.</p>		

Kohlrabi

Insects Controlled	Rate of Application	Method of Application
Corn Earworm Cucumber Beetles Cutworm Diamondback Moth ¹ Flea Beetles Imported Cabbageworm Leafhoppers Saltmarsh Caterpillar Southern Cabbageworm Tobacco Budworm ¹	2.24 to 4.0 fl oz/A (0.014 to 0.025 lb ai/A)	Apply in water as necessary for insect control using a minimum of 15 gal/A of finished spray with ground equipment and 5 gal/A of finished spray by air. Use lower labeled rates of A198.01 under light to moderate insect pressure. Use higher labeled rates to control heavy to extremely heavy insect populations.
Alfalfa Looper Armyworms Cabbage Looper Cabbage Webworm Crickets Grasshoppers Ground Beetles Leafminers (adults) Lygus Bugs Onion Thrips Stinkbugs Wireworm (adults) Aphids ² Whiteflies ³	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	In areas where arid climatic conditions persist, such as California and Arizona, use higher labeled rates.
<ul style="list-style-type: none"> • Do not make applications less than 7 days apart. • Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 6 applications per year. • Do not apply more than 24 fl oz/A of product (0.15 lb ai/A) per year. • Do not apply within 1 day of harvest. <p>¹ See resistance statement under "Directions For Use" section.</p> <p>² Aphid control may be variable depending on species present and host-plant relationships.</p> <p>³ Aids in control</p>		

Leaf 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 Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Imported Cabbageworm Leafhoppers Saltmarsh Caterpillar Tobacco Budworm ² Aphid spp. ^{2,3} Whitefly spp. ^{1,2}	2.24 to 4.0 fl oz/A (0.014 to 0.025 lb ai/A)	Apply in water as necessary for insect control using a minimum of 10 gal/A of finished spray with ground equipment and 5 gal/A of finished spray by air. Use lower labeled rates of A198.01 under light to moderate insect pressure. Use higher labeled rates to control heavy to extremely heavy insect populations. In areas where arid climatic conditions persist, such as California and Arizona, use higher labeled rates.
Armyworms Ground Beetles Crickets Loopers Lygus Bugs Onion Thrips Stink Bugs Wireworm (adults)	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> • Do not make applications less than 7 days apart. • Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 6 applications per year. • Do not apply more than 24 fl oz/A of product (0.15 lb ai/A) per year. • Do not make applications within 1 day of harvest. <p>¹ Aids in control ² See resistance statement under "Directions For Use" section ³ Aphid control may be variable depending on species present and host-plant relationships.</p>		

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; DoI-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

[*Not for use in California]

Insects Controlled	Rate of Application	Method of Application
Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Imported Cabbageworm Leafhoppers Saltmarsh Caterpillar Tobacco Budworm ² Aphid spp. ^{2,3} Whitefly spp. ^{1,2}	2.24 to 4.0 fl oz/A (0.014 to 0.025 lb ai/A)	Apply in water as necessary for insect control using a minimum of 10 gal/A of finished spray with ground equipment and 5 gal/A of finished spray by air. Use lower labeled rates of A198.01 under light to moderate insect pressure. Use higher labeled rates to control heavy to extremely heavy insect populations. In areas where arid climatic conditions persist, such as California and Arizona, use higher labeled rates.
Armyworms Ground Beetles Crickets Loopers Lygus Bugs Onion Thrips Stink Bugs Wireworm (adults)	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> • Do not make applications less than 7 days apart. • Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 6 applications per year. • Do not apply more than 24 fl oz/A of product (0.15 lb ai/A) per year. • Do not make applications within 1 day of harvest. <p>¹Aids in control ²See resistance statement under “Directions For Use” section ³Aphid control may be variable depending on species present and host-plant relationships.</p>		

Legume Vegetables

At-plant Application

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; Guar 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. White grub Wireworm spp.	4.0 fl oz/A (0.025 lb ai/A)	For Cutworm spp: Apply at planting on the soil surface in a 5 – 7 inch band in a minimum of 2 – 7 gal/A of finished spray or broadcast in a minimum of 10 gal/A of finished spray. 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 gal/A of finished spray.
<ul style="list-style-type: none"> Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 6 applications per year. Do not apply more than 24 fl oz/A of product (0.15 lb ai/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/ 1000 linear feet	lb ai/ 1000 linear feet
30	0.23	0.0014
20	0.15	0.00096
15	0.115	0.0007

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; Guar 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. Thistle Caterpillar (Painted Lady) Saltmarsh Caterpillar Silverspotted Skipper	1.28 to 4.0 fl oz/A (0.008 to 0.025 lb ai/A)	Apply as required by scouting, usually at intervals of 5 or more days. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds. Do not exceed maximum labeled rate.
Alfalfa Caterpillar Armyworm, Southern Armyworm, True Armyworm, Yellow-striped Bean Leaf Beetle Blister Beetle spp. Colorado Potato Beetle Corn Borer, European Corn Borer, Southwestern Corn Earworm Corn Rootworm Beetle (adult) Cowpea Curculio Cucumber Beetle Flea Beetle Green Cloverworm Ground Beetles Imported Cabbageworm Japanese Beetle Leaf Skeletonizer spp. Leafhopper spp.	2.72 to 4.0 fl oz/A (0.017 to 0.025 lb ai/A)	Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gal/A of finished spray by ground and 2 gal/A of finished spray by air).

Leafminers (adults) Mexican Bean Beetle Pea Weevil Pea Leaf Weevil Plant Bug spp. Potato Leafhopper Seedcorn Beetle Seedcorn Maggot (adult) Spittlebug Three-Cornered Alfalfa Hopper Tobacco Budworm ² Velvetbean Caterpillar Webworm spp. Woolly Bear Caterpillar		
Aphid spp. ^{2,3} Armyworm, Beet ² Armyworm, Fall Grasshoppers Lesser Cornstalk Borer ¹ Looper spp. ² Stink Bug spp. Thrips spp. ^{1,2} Whitefly spp. ^{1,2}	3.2 to 4.0 fl oz/A (0.020 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> Do not make applications less than 5 days apart. Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 6 applications per year. Do not apply more than 24 fl oz/A of product (0.15 lb ai/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 <p>¹ Aids in control ² See resistance statement under "Directions For Use" section ³ Aphid control may be variable depending on species present and host-plant relationships.</p>		

Peanut

Insects Controlled	Rate of Application	Method of Application
Cutworm spp. Green Cloverworm Velvetbean Caterpillar Red-necked Peanut Worm	1.28 to 4.0 fl oz/A (0.008 to 0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic threshold levels. Do not exceed maximum labeled rate.
Bean Leaf Beetle Leafhopper spp. Southern Corn Rootworm (adult) Vegetable Weevil Whitefringed Beetle (adult)	1.76 to 4.0 fl oz/A (0.011 to 0.025 lb ai/A)	Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gal/A of finished spray by ground and 2 gal/A of finished spray by air).

Aphid spp. ^{1,2} Armyworm, Beet ^{1,2} Armyworm, Fall ^{1,2} Corn Earworm Grasshopper spp. Lesser Cornstalk Borer ^{1,2} Soybean Looper ^{1,2} Stink Bug spp. ^{1,2} Tobacco Thrips ²	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> Do not make applications less than 14 days apart. Do not apply more than 4.0 fl oz/A or 0.025 lb ai/A per application. Do not make more than 6 applications per year. Do not apply more than 24 fl oz/A of product (0.15 lb ai/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. ¹ Aids in control. ² See resistance statement under "Directions For Use" section.		

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

[*Not for use in California]

Insects Controlled	Rate of Application	Method of Application
Apple Maggot Codling Moth European Apple Sawfly Green Fruitworm Japanese Beetle Lesser Appleworm Oblique Banded Leafroller Oriental Fruit Moth Pandemis Leafroller Pear Psylla Plum Curculio Potato Leafhopper Redbanded Leafroller Rosy Apple Aphid Spirea Aphid Spotted Tentiform Leafminer Stink Bugs Tarnished Plant Bug Tufted Apple Bud Moth Variegated Leafroller White Apple Leafhopper	1.28 to 4.0 fl oz/A (0.008-0.025 lb ai/A)	Begin applications at delayed dormant through first cover as common to the production areas and the target pest species. Apply in a full season spray program. Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic threshold levels. Do not exceed maximum labeled rate. Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (for ground application use a minimum of 20 gal/A of finished spray for concentrate spray or a minimum of 100 gal/A of finished spray for dilute spray; for air application use a minimum of 10 gal/A of finished spray). Do not make applications when honey bees are actively foraging by applying during the early morning or evening hours.
<ul style="list-style-type: none"> Do not make applications less than 7 days apart. Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 6 applications per year. 		

- Do not apply more than 24 fl oz/A of product (0.15 lb ai/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 Armyworm, True Armyworm, Yellow Striped Grasshoppers Green Bug Leafhopper Spp. Rice Water Weevil (adult) Oat Birdcherry Aphid ¹ Wild Rice Worm Mexican Rice Borer ² Rice Stalk Borer ² Sugarcane Borer ²	3.2 to 4.0 fl oz/A (0.020 to 0.025 lb ai/A)	Apply as needed based on pest thresholds determined by scouting practices. Refer to Extension Scouting guidelines for scouting techniques, pest thresholds and treatment timing and treatment intervals. Determine the need for repeat applications, usually at intervals of 7 days, by scouting. Do not exceed maximum labeled rate. A198.01 can be safely applied in conjunction with approved rice herbicides. Apply by air or ground equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 5 gal/A of water. For increased control, use crop oil concentrate at 16 fl oz/A.
Chinch Bug Rice Stink Bug	2.64 to 4.0 fl oz/A (0.0165 to 0.025 lb ai/A)	For control of rice water weevil in dry seeded rice, make a foliar application as indicated by scouting for the presence of adults and/or feeding scars, usually within a time-frame of 0-5 days after permanent flood establishment. Do not exceed 10 days from starting permanent flood until insecticide application unless scouting indicates adult weevils are not present. Treat adults 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. Treat adults at later stages of rice development to reduce overwintering populations. Green bug is known to have many biotypes. A198.01 may only provide suppression. If satisfactory control is not achieved with the first application of A198.01 , a resistant biotype may be present. Use alternate chemistry for control.

- Do not make applications less than 7 days apart.
- Do not release floodwater within 7 days of an application.
- Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application.
- Do not make more than 4 applications per year.

- Do not apply more than 16 fl oz/A of product (0.10 lb ai/A) (1.0 pints) 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.

¹ Aphid control may be variable depending on species present and host-plant relationships

² Control before larvae bore into the plant stalk

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.	1.28 to 4.0 fl oz/A (0.008 to 0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic threshold levels. Do not exceed maximum labeled rate.
Cabbage Looper Cucumber Beetle European Corn Borer Flea beetle spp. Leafhopper spp. Southern Corn Rootworm (adult) Vegetable Weevil Whitefringed Beetle (adult)	1.76 to 4.0 fl oz/A (0.011 to 0.025 lb ai/A)	Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gal/A of finished spray by ground and 2 gal/A of finished spray by air).
Aphid spp. ^{1,2} Armyworm, Beet ^{1,2} Armyworm, Yellowstriped Cabbage Maggot Colorado Potato Beetle ² Grasshopper spp. Imported Cabbageworm Potato Leafhopper Tarnished Plant Bug	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	

- Do not make applications less than 4 days apart.
- Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application.
- Do not make more than 6 applications per year.
- Do not apply more than 24 fl oz/A of product (0.15 lb ai/A) per year.
- Leaves of Root and Tuber Vegetables cannot be used for food or feed.
- Do not apply within 1 day of harvest.

¹ Aids in control.

² See resistance statement under "Directions For Use" section.

Safflower

Insects Controlled	Rate of Application	Method of Application
Cutworms <i>Lygus</i> spp.	4.0 fl oz/A (0.025 lb ai/A)	Apply as needed based on pest thresholds determined by scouting 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. Do not exceed maximum labeled rate. Apply with ground or air equipment using sufficient water and application methods to ensure thorough coverage of foliage. Apply in water using a minimum of 2 gal/A of finished spray.
<ul style="list-style-type: none"> Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 3 applications per year. Do not apply more than 12 fl oz/A of product (0.075 lb ai/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, Zoysia Grass, Sudangrass and Sorghum Forages and their hybrids.

Insects Controlled	Rate of Application	Method of Application
Alfalfa caterpillar Alfalfa looper Alfalfa weevil Ant spp. Blue alfalfa aphid ¹ Cutworm spp. Egyptian alfalfa weevil Flea beetle spp. Green cloverworm Green peach aphid ¹ Hornworm spp. Meadow spittlebug Pea aphid ¹ Potato leafhopper Spotted alfalfa aphid ¹ Threecornered alfalfa hopper Velvetbean caterpillar Webworm spp.	2.24 to 4.0 fl oz/A (0.014 to 0.025 lb ai/A)	Apply as insects appear in sufficient volume of water to ensure thorough coverage of foliage. Use higher labeled rate for increased pest pressure or for increased residual pest control. Do not exceed maximum labeled rate. Apply in a minimum of 2 gal/A of finished spray by aerial equipment or 10 gal/A of finished spray by ground equipment. ULV oil spray application is prohibited. Use higher volumes of finished spray to improve insect control under high temperatures, when foliage is dense and/or when insect pressure is high.

Armyworm, Southern Armyworm, true Armyworm, yellowstriped Cereal leaf beetle Chinch bug Grass mealybug Grasshopper spp. Plant bug spp. Stinkbug spp.	2.8 to 4.0 fl oz/A (0.0175 to 0.025 lb ai/A)	
Armyworm, fall	3.2 – 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> Do not apply more than 4 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 5 applications per year. Do not apply more than 20 fl oz/A of product (0.125 lb ai/A) per year. Applications may be made up to harvest. <p>¹Aphid control may be variable depending on species present and host-plant relationships.</p>		

Sorghum (Grain) and Millet

Insects Controlled	Rate of Application	Method of Application
Cutworm spp. Sorghum Midge	1.28 to 4.0 fl oz/A (0.008 to 0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds. Do not exceed maximum labeled rate.
Armyworm, Fall Armyworm, Southern Armyworm, True Armyworm, Yellow-Striped Corn Borer, European ¹ Corn Borer, Southwestern ¹ Corn Earworm Flea Beetle spp. Hornworms Stink Bug spp. Webworm spp.	1.76 to 4.0 fl oz/A (0.011 to 0.025 lb ai/A)	Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gal/A of finished spray by ground and 2 gal/A of finished spray by air). The addition of one to two quarts of emulsified oil per acre to the spray solution may improve spray deposition and insect control.
Aphid spp. ^{2,3} Armyworm, Beet ³ Chinch Bug False Chinch Bug Grasshopper spp. Lesser Cornstalk Borer ¹ Thrips spp. ^{3,4} Whitefly spp. ^{3,4}	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	For sorghum midge control, begin applications when 25% of the sorghum heads have emerged and are in tip bloom. Repeat applications at 10- day intervals if needed. For chinch bug control, begin applications when bugs migrate from small grains or grass weeds to small sorghum. Direct spray to the base of plants with sufficient spray volume to penetrate the soil/stem interface, leaf collars, and sheaths.

- Do not make applications less than 10 days apart.
- Do not apply more than 4 fl oz/A of product (0.025 lb ai/A) per application.
- Do not make more than 5 applications per year.
- Do not apply more than 20 fl oz/A of product (0.125 lb ai/A) per year.
- Do not apply within 14 days of harvest for grain and stover; within 45 days of harvest for forage.

¹ For control before the larva bores into the plant stalk.

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

³ See resistance statement under “Directions For Use” section

⁴ Aids in control

Soybeans

Insects Controlled	Rate of Application	Method of Application
Cutworm spp. Painted Lady (Thistle) Caterpillar Saltmarsh Caterpillar Silverspotted Skipper	1.28 to 4.0 fl oz/A (0.008 to 0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds. Do not exceed maximum labeled rate.
Alfalfa Caterpillar Armyworm, Southern Armyworm, True Armyworm, Yellowstriped Bean Leaf Beetle ¹ Blister Beetle spp. Colorado Potato Beetle Corn Borer, European Corn Earworm Corn Rootworm Beetle (adult) Cowpea Curculio Cucumber Beetle European Corn Borer Flea Beetle 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 (adult) Soybean Aphid Spittlebug Three-Cornered Alfalfa Hopper Tobacco Budworm 2 Velvetbean Caterpillar Webworm spp. Woollybear Caterpillar	2.8 to 4.0 fl oz/A (0.0175 to 0.025 lb ai/A)	Apply with either aerial or ground equipment using sufficient spray volume to obtain full coverage of the plant and foliage. Use a minimum of 2 gal/A of finished spray by air or 10 gal/A of finished spray by ground. The addition of one to two quarts of emulsified oil per acre to the spray solution may improve spray deposition and insect control.

Armyworm, Beet Armyworm, Fall Grasshopper spp. Lesser Cornstalk Borer ³ Looper spp. ² Stink Bug spp. Thrips spp. ^{2,3} Whitefly spp. ^{2,3}	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)
Kudzu Bug (aka bean Plataspid)	4.0 fl oz/A (0.025 lb ai/A)
<ul style="list-style-type: none"> 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 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 6 applications per year. Do not apply more than 24 fl oz/A of product (0.15 lb ai/A) per year. Do not apply within 21 days of harvest. <p>¹ Use higher labeled rate for increased pest pressure, increased residual pest control, or later-season applications. Do not exceed maximum labeled rate.</p> <p>² See resistance statement under "Directions For Use" section</p> <p>³ Aids in control</p>	

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, and Japanese Plum, Klamath Plum, and Prune Plum); Plumcot; Sloe; and cultivars, varieties, and/or hybrids of these commodities

[*Not for use in California]

Insects Controlled	Rate of Application	Method of Application
American Plum Borer Black Cherry Aphid Cherry Fruit Fly Green Fruitworm Leafrollers Leafhoppers Lesser Peach Tree Borer Peach Tree Borer Peach Twig Borer Plum Curculio Oriental Fruit Moth Rose Chafer Stink Bugs Tarnished Plant Bug Tufted Apple Budmoth <u>Western Cherry Fruit Fly</u>	1.28-4.0 fl oz/A (0.008-0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic threshold levels. Do not exceed maximum labeled rate. Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (for ground application use a minimum of 20 gal/A of finished spray for concentrate spray or a minimum of 100 gal/A of finished spray for dilute spray; for air application use a minimum of 10 gal/A of finished spray).
Vinegar Flies (Adult) Spotted Wing Drosophila	4.0 fl oz/A (0.025 lb ai/A)	

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- Do not make applications less than 7 days apart.
- Do not apply more than 4 fl oz/A of product (0.025 lb ai/A) per application.
- Do not make more than 6 applications per year.
- Do not apply more than 24 fl oz/A of product (0.15 lb ai/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 3 days of harvest for cherries and 14 days of harvest for all other listed stone fruits.

Sugar Beet

Insects Controlled	Rate of Application	Method of Application
Foliar Application: Armyworms Blister Beetles Click Beetles Cutworms Flea Beetles Grasshoppers Heliothis spp. Leafhoppers Leafminer (adults) Loopers Lygus Bugs Sugar Beet Root Maggot (adult) Sugar Beet Crown Borer Thistle Caterpillar Webworms Zebra Caterpillar Aphids ¹	2.24 to 4.0 fl oz/A (0.014 to 0.025 lb ai/A)	Make applications when insect populations reach economic threshold levels. Refer to local Cooperative Extension Pest Management Guidelines and/or scouting results. Apply by air or by ground equipment using sufficient water to obtain full coverage of foliage (minimum of 2 gal/A of finished spray by air and 10 gal/A of finished spray by ground).
At Plant Application: Sugar Beet Root Maggot (larvae) ²	4.0 fl oz/A (0.025 lb ai/A)	For light to moderate infestations only. Make a 3–4-inch T-Band (band over the open furrow) at planting in a minimum of 3-5 gal/A of finished spray.
White Grub Wireworm		Apply in-furrow or in a 3 - 4-inch T-Band (band over the open furrow) at planting in a minimum of 3-5 gal/A of finished spray.
Cutworm species		Apply at planting on the soil surface in a 5-7inch band or broadcast in a minimum of 3-5 gal/A of finished spray.
<ul style="list-style-type: none"> • Do not apply more than 4 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 3 applications per year. • Do not apply more than 12 fl oz/A of product (0.075 lb ai/A) per year including at plant plus foliar applications. • Do not apply within 50 days of harvest for tops or roots. ¹ Aphid control may be variable depending on species present and host-plant relationships. ² Suppression only		

Sugarcane

Insects Controlled	Rate of Application	Method of Application
Sugarcane Borer Mexican Rice Borer	3.0 to 4.0 fl oz/A (0.01875 to 0.025 lb ai/A)	Make applications when insect populations reach economic thresholds. Refer to local Cooperative Extension Pest Management Guidelines and/or scouting results. Do not exceed maximum labeled rate. Apply by air or ground equipment using sufficient water to obtain full coverage of foliage (minimum of 2 gal/A of finished spray by air and 10 gal/A of finished spray by ground).
<ul style="list-style-type: none"> Do not make applications less than 21 days apart. Do not apply more than 4 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 4 applications per year. Do not apply more than 16 fl oz/A of product (0.10 lb ai/A) per year. Do not apply within 21 days of harvest. 		

Sunflower Crop Subgroup 20B (except Safflower)

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

At-plant Application

Insects Controlled	Rate of Application	Method of Application
Cutworm spp. White Grub Wireworm	4.0 fl oz/A (0.025 lb ai/A)	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 3 – 5 gal/A of finished spray. For Cutworm spp: Apply at planting on the soil surface in a 5 – 7 inch band or broadcast in a minimum of 3 – 5 gal/A of finished spray.
<ul style="list-style-type: none"> Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. Do not make more than 5 applications per year. Do not apply more than 20 fl oz/A of product (0.125 lb ai/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. 		

Foliar Use

Insects Controlled	Rate of Application	Method of Application
Thistle Caterpillar (Painted Lady) Cutworm species	1.28 to 4.0 fl oz/A (0.008 to 0.025 lb ai/A)	Apply with ground or air equipment using sufficient water and application methods to ensure thorough coverage of foliage.
Sunflower Beetle Sunflower Moth Sunflower Maggot Stem Weevil (adult) Grasshopper species Leafhopper species Head-Clipper Weevil (adult) Red Sunflower Seed Weevil (adult) Grey Sunflower Seed Weevil (adult) Saltmarsh Caterpillar Banded Sunflower Moth Armyworm Sunflower Butterfly Woolly Bear Caterpillar Japanese Beetle Webworm species	2.6 to 4.0 fl oz/A (0.016 to 0.025 lb ai/A)	Apply in a minimum of 2 gal/A of finished spray by aerial equipment or 10 gal/A of finished spray by ground equipment. Begin applications when pest appears and repeat as necessary to maintain control. Use higher labeled rate for increased residual pest control. Do not exceed maximum labeled rate.
Long-Horned Beetle (Dectes) Stem Borer adult) Beet Armyworm Fall Armyworm Stink Bug Species Pale striped Flea Beetle	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> • Do not make applications less than 7 days apart. • Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 5 applications per year. • Do not apply more than 20 fl oz/A of product (0.125 lb ai/A) per year including at-plant plus foliar applications. • Do not graze livestock in treated areas or cut treated crops for feed • Do not make applications when honey bees 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; Candlerut; 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 Codling Moth Filbert Worm Hickory Shuckworm Leaffooted Bugs Navel Orangeworm Oblique-banded Leafroller Peach Twig Borer Pecan Leaf Casebearer Pecan Nut Casebearer Pecan Phylloxera Pecan Weevil Plant Bugs Stink Bugs Walnut Aphid Walnut Husk Fly Yellow Pecan Aphid	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic threshold levels. Do not exceed maximum labeled rate. Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gal/A of finished spray by ground and 2 gal/A of finished spray by air).
<ul style="list-style-type: none"> • Do not make applications less than 7 days apart. • Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 5 applications per year. • Do not apply more than 20 fl oz/A of product (0.125 lb ai/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., Army Cutworm Painted Lady (Thistle) Caterpillar	1.28 to 4.0 fl oz/A (0.008 to 0.025 lb ai/A)	Apply as required by scouting. Base timing and frequency of applications on insect populations reaching locally determined economic thresholds. Do not exceed maximum labeled rate.
Armyworm, Southern Armyworm, True Armyworm, Yellowstriped Cereal Leaf Beetle Flea Beetle spp. Pale Western Cutworm Plant Bug spp. Spittlebug Webworm spp.	1.76 to 4.0 fl oz/A (0.011 to 0.025 lb ai/A)	Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gal/A of finished spray by ground and 2 gal/A of finished spray by air). For chinch bug control, begin applications when bugs migrate from small grains or grass weeds. Apply sufficient spray volume to penetrate the soil/stem interface, leaf collars, and sheaths.
Aphid spp. ^{1,2} Armyworm, Beet ² Armyworm, Fall Chinch Bug Grass Sawfly Grasshopper spp. Greenbug ^{2,3} Stink Bug spp. Thrips spp. ^{2,3} Wheat Stem Sawfly (adult) ³ Whitefly spp. ^{2,3}	3.2 to 4.0 fl oz/A (0.02 to 0.025 lb ai/A)	
<ul style="list-style-type: none"> • Do not make applications less than 14 days apart. • Do not apply more than 4.0 fl oz/A of product (0.025 lb ai/A) per application. • Do not make more than 5 applications per year. • Do not apply more than 20 fl oz/A of product (0.125 lb ai/A) per year. • Do not apply within 14 days of harvest for grain, forage, and hay. <p>¹Aphid control may be variable depending on species present and host-plant relationships. ²See resistance statement under "Directions For Use" section ³Aids in Control</p>		

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

PESTICIDE DISPOSAL: Pesticide spray mixture or rinsate that cannot be used should be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

[For plastic containers ≤ 5 gallons: Nonrefillable Container: Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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 puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

[For plastic containers > 5 gallons: Nonrefillable container: Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

IMITATION OF WARRANTY AND LIABILITY

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

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

A198.01 is a trademark of Atticus, LLC
Mustang® is a registered trademark of FMC Corporation.

{LANGUAGE ON LABEL AFFIXED TO CONTAINER}

RESTRICTED USE PESTICIDE

Due to toxicity to fish and aquatic organisms

For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

ZETA-CYPERMETHRIN GROUP 3A INSECTICIDE

A198.01™

[Alternate Brand Name: Cortes Maxx Insecticide]

Contains zeta-cypermethrin, the active ingredient used in Mustang® Maxx.

ACTIVE INGREDIENT:	(% by weight)
Zeta-cypermethrin*	9.15%
OTHER INGREDIENTS**:	90.85%
TOTAL	100.0%

Contains 0.8 lb ai/gal

*Cis/trans ratio: Max. 75% (±) cis and min. 25% (±) trans

**Contains Petroleum Distillates

KEEP OUT OF REACH OF CHILDREN

WARNING/AVISO

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

FIRST AID	
If swallowed:	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor for treatment advice. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
If in eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at 1-844-685-9173 for emergency medical treatment information.

NOTE TO PHYSICIAN

Contains petroleum distillate. Induced vomiting as first aid for this substance may result in increased risk of chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent. Vomiting should be induced only under professional supervision. Skin exposure may also result in a sensation described as a tingling, itching, burning, or prickly feeling. Onset may occur immediately to 4 hours after exposure and may last 2 to 30 hours, without damage.

For Chemical Emergency:

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

accepted)

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

Contains Petroleum Distillate. May be fatal if swallowed. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Avoid contact with skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash 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.

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 high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash waters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. **Protect pollinating insects by following label directions intended to minimize drift and to reduce risk to these organisms.**

PHYSICAL OR CHEMICAL HAZARDS: Do not use or store near heat or open flame. Do not mix or allow to come in contact with any oxidizing agent. Hazardous chemical reaction may occur.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

PESTICIDE DISPOSAL: Pesticide spray mixture or rinsate that cannot be used should be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING: [For plastic containers ≤ 5 gallons: Nonrefillable Container: Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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 puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.] **[For plastic containers > 5 gallons: Nonrefillable container:** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

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

A198.01 is not manufactured, or distributed by FMC Corporation, seller of Mustang® Maxx.

{Note to reviewer: If used on the final product packaging, the contains statement and disclaimer will appear in close proximity on the front panel of the label.}

Manufacturer for:

EPA Reg. No.: 91234-273

Atticus, LLC

EPA Est. No.: _____

940 NW Cary Parkway, Suite 200

NET CONTENTS: _____

Cary, NC 27513

{Optional Marketing graphics}

