

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

December 11, 2014

Timothy M. Formella Senior Product Registration Manager FMC Corporation 1735 Market Street Philadelphia, PA 19103

Subject: PRIA Label Amendment – Increased Application Rate on Alfalfa

Product Name: Mustang Insecticide EPA Registration Number: 279-3126 Application Date: October 21, 2013

Decision Number: 484396

Dear Mr. Formella

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Olga Odiott by phone at 703-308-9369, or via email at odiott.olga@epa.gov.

Sincerely,

Richard Gebken Product Manager 10

Invertebrate & Vertebrate Branch 2

Office of Pesticide Programs

Enclosure

### RESTRICTED USE PESTICIDE

Toxic to fish and aquatic organisms

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



EPA Reg. No. 279-3126

**EPA Est.** 

**Active Ingredient:** 

By Wt.

12/11/2014

Zeta-Cypermethrin\* S-Cyano (3-phenoxy-Phenyl)methyl (±) cis/trans 3-(2,2-dichloro-Ethenyl)-2,2 dimethylcyclopropane carboxylate..... 17.1% Inert Ingredients.....

100.0%

Contains 1.5 pounds active ingredient per gallon. Cis/trans ratio: Max. 55% (±) cis and min. 45% (±) trans



## **KEEP OUT OF REACH OF CHILDREN WARNING**

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 Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouthto-mouth, if possible. Call a poison control center or doctor for further treatment advice.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If in Eyes: 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 Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.



### **HOTLINE 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 1-800-331-3148 for emergency medical treatment information.

**Note to Physician:** Vomiting should be supervised by a physician or the professional staff because of the possible pulmonary damages by aspiration of the solvent.

For Emergency Assistance Call (800) 331-3148. See other panels for additional precautionary information.

# PRECAUTIONARY STATEMENTS Hazards to Humans (and Domestic Animals) Warning May be fatal if swallowed. Harmful if inhaled or absorbed through the

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

### **Personal Protective Equipment:**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

Handlers who may be exposed to the dilute through application or other tasks must wear: Long-sleeved shirt and long pants, Chemical-resistant gloves, such as Barrier Laminate or Viton, and Shoes plus socks.

Handlers who may be exposed to the concentrate through mixing, loading, application or other tasks must wear: Long-sleeved shirt and long pants, Chemical-resistant gloves, such as Barrier Laminate or Viton, Shoes plus socks, and Protective eyewear.

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

## User Safety Recommendations Users should:

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### **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 if bees are visiting the treatment area.

### Physical/Chemical Hazards

Do not use or store near heat or open flame.

## DIRECTIONS FOR USE RESTRICTED USE PESTICIDE

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

**Resistance.** Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

### SHAKE WELL BEFORE USING

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

### 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, such as Barrier Laminate or Viton, and Shoes plus socks.

### STORAGE AND DISPOSAL

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

### **Pesticide Storage**

Do not freeze. Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call CHEMTREC (Transportation and Spills): (800) 424-9300.

To confine spill: Dike surrounding area or absorb with sand, cat litter, or commercial clay. Place damaged package in a holding container.

Identify contents.

### **Pesticide Disposal**

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

### **Container Handling**

### Nonrefillable Container.

Do not reuse or refill this container.

Triple rinse container (or equivalent) promptly after emptying.

Triple rinse as follows:

For containers equal to 5 gallons or less: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

For containers greater than 5 gallons: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

### Refillable/Returnable Container.

Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

### **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.

Mustang® insecticide should be applied continuously for the duration of the water application. Mustang® should be diluted in sufficient volume to insure 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.

### **BUFFER ZONES**

### Vegetative Buffer Zones

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

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

For guidance, refer to the following publication for information on constructing and maintaining effective buffers: Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 21pp.

http://www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast) - Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

Buffer Zone for ULV Aerial Application - Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

Buffer Zone for Non-ULV Aerial Application – Do not apply within

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

## Spray Drift Requirements Wind Direction and Speed

Only apply this product if the wind direction favors on-target deposition. Do not apply when the wind velocity exceeds 15 mph.

### Temperature Inversion

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

### **Droplet Size**

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

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

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

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

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

The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor votices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter.

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

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

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

### GENERAL INSTRUCTIONS

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

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

### **Preventive Use**

For cutworm, armyworm, or stalk borer control, Mustang insecticide may be applied before, during, or after planting. For soil-incorporated applications, use higher rates for improved control. Do not exceed maximum allowable rate.

### **Rotational Crops**

With the exception of the crops listed below, rotational crops should not be planted within 30 days of last application.

### Tank-Mixture

Mustang Insecticide may be applied in tank mixtures with other products approved for use on Alfalfa and Nongrass Animal Feeds; Artichoke, globe; Avocado; Barley; Berries; Black Sapote; Brassica Vegetables; Buckwheat; Bulb Vegetables; Canistel; Canola (Rapeseed); Corn; Cotton; Cucurbit Vegetables; Fruiting Vegetables; Grapes; Grass Forage, Fodder and Hay and Grass Grown for Seed; Leafy Vegetables; Legume Vegetables; Mamey Sapote; Mango; Oats; Papaya; Peanut; Pistachios; Pome Fruits; Rice; Root and Tuber Vegetables; Rye; Sapodilla; Sorghum; Soybeans; Star Apple; Stone Fruits; Sugar Beet; Sunflower; Tree Nuts; and Wheat. Observe all restrictions 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 Season.

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

Сгор	Maximum Seasonal Total for Either Active Ingredient Used Alone (pounds active ingredient/acre)		Maximum Seasonal Total When Applying Both Active Ingredients to the Same Crop (pounds active ingredient/acre)
	Zeta- cypermethrin	Cypermethrin	Zeta-cypermethrin plus Cypermethrin
Cotton	0.3	0.6	0.6
Head and Stem Brassica	0.3	0.6	0.6
Leafy Brassica Greens	0.3	0.4	0.4
Head Lettuce	0.3	0.6	0.6
Bulb Vegetables	0.25	0.5	0.5
Pecans	0.3	0.6	0.6

Maximum Seasonal Usage and PHI (Pre-Harvest Interval) for Mustang Labeled Crops

0	Maximum		DIII/!	
Crop	Total/Acre for Mustang		PHI (days)	
	Lbs Al	Fl oz		
Alfalfa	0.1/cutting	8.6/cutting		
	with	with a	3 (cutting or grazing)	
	maximum of	maximum of	7 (harvesting seed)	
	3 cuttings per	25.8 per	, (narrooming cood)	
	season	season		
Alfalfa and	0.05/cutting	4.3/cutting		
Nongrass Animal	with a	with a	2 (autting or graning)	
Feeds (Forage, Fodder, Straw and	maximum of	maximum of	<ul><li>3 (cutting or grazing)</li><li>7 (harvesting seed)</li></ul>	
Hay) Group	3 cuttings per	12.9 per	(Harvesting Seed)	
riay) Group	season	season		
Avocado, Black				
Sapote, Canistel,				
Mamey Sapote,	0.0	25.0	1	
Mango; Papaya;	0.3	25.8	1	
Sapodilla; Star				
Apple				
Artichoke, globe	0.2	17.2	5	
Barley	0.25	21.5	14	
Berries	0.3	25.8	1	
Brassica Vegetables	0.3	25.8	1	
Buckwheat	0.25	21.5	14	
Bulb Vegetables	0.25	21.5	7	
Citrus	0.2	17.2	1	
Corn, sweet	0.3	25.8	3	
Corn, field, seed,	0.2	17.2	30 (grain & stover)	
рор		17.2	60 (forage)	
Cotton	0.3	25.8	14	
Cucurbit Vegetables	0.3	25.8	1	
Fruiting Vegetables	0.3	25.8	1	
Grapes	0.3	25.8	1	
Grass Forage,	0.05/cutting	4.3/cutting		
Fodder, and Hay		,		
Group and Grass Grown for Seed	Hay	17.2	0 //	
Grown for Seed	0.20/season Forage,		0 (forage and hay) 7 (straw and seed	
	Straw &		screenings)	
	Seed	21.5	50.001go)	
	Screenings	21.0		
	0.25/season			
Leafy Vegetables	0.3	25.8	1	
Legume Vegetables			1 (succulent shelled or	
	0.3	25.8	edible-podded)	
			21 (dried shelled)	
Oats	0.25	21.5	14	
Canola (Rapeseed)	0.3	25.8	7	
Pistachio	0.25	21.5	7	
Safflower	0.15	12.9	14	
Sunflower	0.25	21.5	30	
Peanut Peanut	0.3	25.8	7 14	
Pome Fruits Rice and Wild Rice	0.3	25.8 17.2	14	
	U.Z	11.2	14	
Root and Tuber	0.0	05.0	4	
Vegetables (except	0.3	25.8	1	
Sugar Beet)				
Rye	0.25	21.5	14	
Sod Farms	0.25	21.5	0	
0	0.05	04 =	14 (grain & fodder	
Sorghum	0.25	21.5	(stover))	
Soybeans	0.2	25.0	45 (forage (silage))	
	0.3	25.8	21	
Stone Fruits Sugar Beet	0.3	25.8	14	
Tree Nuts	0.15	12.9	50	
	0.25	21.5	7	
Wheat	0.25	21.5	14	

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

Nongrass Animal Feeds (Forage, Fodder, Straw and Hay) Group – Except Alfalfa and Alfalfa grown for seed including: Velvet Bean; Clover; Kudzu; Lespedeza; Lupin; Sainfoin; Trefoil; Vetch; Crown Vetch; and Milk Vetch

Insects Controlled	Rate of Application	Method of Application
Alfalfa Caterpillar Alfalfa Looper Alfalfa Looper Alfalfa Weevil Cutworms Egyptian Alfalfa Weevil (larvae & adult) Flea Beetles Green Cloverworm Hornworms Meadow Spittlebug Potato Leafhopper Velvetbean Caterpillar Webworms Blue Alfalfa Aphid¹ Green Peach Aphid¹ Pea Aphid¹ Spotted Alfalfa Aphid¹ Threecornered Alfalfa	2.4 to 4.3 fl oz/A (0.028 to 0.05 lb ai/A)	Apply as insects appear in sufficient volume of water to ensure thorough coverage of foliage.  Use higher recommended dosage for increased pest pressure or for increased residual pest control. Do not exceed maximum allowable rate.  Apply in a minimum of 2 gallons of finished spray per acre by aerial equipment or 10 gallons per acre by ground equipment. ULV oil spray
Hopper		application is prohibited. Higher volumes of finished
Armyworms Grasshoppers Plant Bugs (including Lygus spp. & Stink Bugs)	3.0 to 4.3 fl oz/A (0.035 to 0.05 lb ai/A)	spray may improve insect control under high temperatures, when foliage is dense and/or when insect pressure is high.

Do not make applications less than 7 days apart.

A maximum of 4.3 ounces of product or 0.05 pound of active ingredient/acre may be applied per cutting and a maximum of 12.9 ounces of product or 0.15 pound of active ingredient per acre per season.

Applications may be made up to 3 days of cutting or grazing or up to 7 days of harvesting seed.

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

**Alfalfa; Alfalfa grown for seed**: includes 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	2.4 to 4.3 ounces (0.028 to 0.05 pound active)	Apply as insects appear in sufficient volume of water to ensure thorough coverage of foliage.
Egyptian Alfalfa Weevil (larvae & adult) Flea Beetles Green Cloverworm Hornworms Meadow Spittlebug Potato Leafhopper Velvetbean Caterpillar	per acre	Use higher recommended dosage for increased pest pressure or for increased residual pest control. Do not exceed maximum allowable rate.
Webworms Blue Alfalfa Aphid <sup>1</sup> Green Peach Aphid <sup>1</sup> Pea Aphid <sup>1</sup> Spotted Alfalfa Aphid <sup>1</sup> Threecornered Alfalfa Hopper		Apply in a minimum of 2 gallons of finished spray per acre by aerial equipment or 10 gallons per acre by ground equipment. ULV oil spray application is prohibited.
Armyworms Grasshoppers Plant Bugs (including Lygus spp. & Stink Bugs)	3.0 to 4.3 ounces (0.035 to 0.05 pound active) per acre	Higher volumes of finished spray may improve insect control under high temperatures, when foliage is dense and/or when insect pressure is high.

Do not make applications less than 7 days apart.

A maximum of 8.6 ounces of product or 0.1 pounds of active ingredient/acre may be applied per cutting and a maximum of 25.8 ounces of product per acre or 0.3 pounds of active ingredient per acre per season.

Applications may be made up to 3 days of cutting or grazing or up to 7 days of harvesting seed.

### Globe Artichoke (5 Day PHI)

Insects Controlled	Rate of Application	Method of Application
Aphids <sup>1</sup> Artichoke Plume Moth Lygus Bug <sup>2</sup> Proba Bug	4.3 fl oz/A (0.05 lb ai/A)	Apply as required by scouting. Timing and frequency of applications should be based upon 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 gallons by ground and 2 gallons by air).  Follow appropriate spray drift precautions on this label.

Do not apply more than 17.2 ounces of product or 0.20 pound of active ingredient per acre per season.

Do not make applications less than 14 days apart.

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

Aids in control.

See resistance statement under Directions For Use section.

# Tropical Fruits (1 Day PHI) including: (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	4.3 fl oz/A (0.05 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 gallons per acre.
Spanworm Thrips Twig Borers		Apply when insects first appear and repeat at 7 to 10 day intervals as needed to provide control.
Do not apply more than 25.8 ounces of product or 0.30 pound of active ingredient per acre per season.		

### Barley (including malt barley), Buckwheat, Oats, and Rye (14 Day PHI for grain, straw, and hay)

Insects Controlled	Rate of Application	Method of Application
Cutworm spp., including Army Cutworm Painted Lady (Thistle) Caterpillar	1.4 to 4.3 fl oz/A (0.016 to 0.05 lb ai/A)	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Do not exceed maximum allowable rate.
Armyworm, Southern Armyworm, True Armyworm, Yellow- Striped Cereal Leaf Beetle Flea Beetle spp. Pale Western Cutworm Plant Bug spp. Spittlebug Webworm spp.	1.9 to 4.3 fl oz/A (0.022 to 0.05 lb ai/A)	Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gallons by ground and 2 gallons by air).
Aphid spp. 1, 2 Armyworm, Beet <sup>2</sup> Armyworm, Fall Chinch Bug Grass Sawfly Grasshopper spp. Greenbug <sup>1, 2</sup> Stink Bug spp. Thrips spp. Wheat Stem Sawfly (adult) <sup>1</sup> Whitefly spp. 1, 2	3.4 to 4.3 fl oz/A (0.04 to 0.05 lb ai/A)	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.

Do not apply more than 21.5 ounces of product or 0.25 pound of active ingredient per acre per season.

Do not make applications less than 14 days apart.

<sup>&</sup>lt;sup>2</sup> See resistance statement under Directions For Use section.

Berries Crop Group (1 Day PHI) including: blackberry; loganberry, red and black raspberry; blueberry, highbush and lowbush; currant; elderberry; gooseberry; huckleberry; and cultivars and/or hybrids of these

Insects Controlled	Rate of Application	Method of Application
Leafrollers Orange Tortrix Root Weevils	4.3 fl oz/A (0.05 lb ai/A)	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold levels. Do not exceed maximum allowable rate.  Apply by ground and air equipment using sufficient water to obtain full coverage of foliage (minimum of 20 gallons by ground and 2 gallons by air).  Avoid applications when honey bees are actively foraging by applying during the early morning or evening hours.

Do not apply more than 25.8 ounces of product or 0.3 pound of active ingredient per acre per season.

Do not make applications less than 7 days apart.

Head and Stem Brassica Vegetables (1 Day PHI) including: Broccoli; Chinese Broccoli (gai lon, white flowering broccoli); Brussels Sprouts; Cauliflower; Cavalo broccolo; Kohlrabi; Cabbage; Chinese Cabbage (napa); Chinese Mustard Cabbage (gai chov).

Leafy Brassica Greens (1 Day PHI) ncluding: Broccoli Raab (rapini); Chinese cabbage (bok choy); Collards; Kale; Mizuna; Mustard Greens; Mustard Spinach; Rape Greens; Turnip Greens

	Method of
Application	Application
2.4 to 4.3 fl oz/A (0.028 to 0.05 lb ai/A)	Apply in water as necessary for insect control using a minimum of 15 gallons of finished spray per acre with ground equipment and 5 gallons per acre by air.
	Lower rates of Mustang should be used under light to moderate insect
3.4 to 4.3 fl oz/A (0.04 to 0.05 lb ai/A)	pressure. Higher rates should be used to control heavy to extremely heavy insect populations.  In areas where arid climatic conditions persist, such as California and Arizona, higher than minimum recommended rates may be required.
	(0.028 to 0.05 lb ai/A)  3.4 to 4.3 fl oz/A (0.04 to 0.05 lb

Do not make applications less than 7 days apart.

A maximum of 25.8 ounces of product or 0.3 pound of active ingredient may be applied per acre per season.

<sup>&</sup>lt;sup>1</sup> See resistance statement under Directions For Use section.

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

<sup>&</sup>lt;sup>3</sup> Aids in control.

Bulb Vegetables (Allium spp.) (7 Day PHI) including: Garlic; Garlic, Great-Headed (elephant); Green Eschalots; Japanese Bunching Onions; Leeks; Onion, Dry Bulb and Green; Onion, Welch; Shallots, Dry Bulb and Green; Spring Onion or Scallions

Insects Controlled	Rate of Application	Method of Application
Armyworms Cutworms Leafminers (adults) Onion Maggot Adults Stink Bugs Aphids <sup>1</sup>	2.4 to 4.3 fl oz/A (0.028 to 0.05 lb ai/A)	Apply in a minimum of 20 gallons per acre with ground equipment or in a minimum of 3 gallons per acre by aircraft. Begin applications when pests
Onion Thrips	3.2 to 4.3 fl oz/A (0.0375 to 0.05 lb ai/A)	appear and repeat as necessary to maintain control.  To control Onion Thrips: Use higher rates as population increases and avoid rescue situations. Use of a crop oil concentrate at 16 fluid ounces per acre is recommended. Do not exceed maximum allowable rate.

Do not make applications less than 7 days apart.

Do not apply more than 21.5 ounces of product or 0.25 pound of active ingredient per acre per season.

Do not graze livestock in treated areas or cut treated crops for feed.

Citrus Fruits Crop Group (1 Day PHI) including:
Calamondin (Citrus mitis; Citrofortunella mitis); Citrus citron
(Citrus medica); Citrus hybrids (Citrus spp.) (includes chironja,
tangelo, tangor); Grapefruit (Citrus paradisi); Kumquat (Fortunella
spp.); Lemon (Citrus jambhiri, Citrus limon); Lime (Citrus
aurantiifolia); Mandarin (tangerine) (Citrus reticulata); Orange,
sour (Citrus aurantium); Orange, sweet (Citrus sinensis);
Pummelo (Citrus grandis, Citrus maxima); and Satsuma mandarin
(Citrus unshiu)

Insects	Rate of	Method of
Controlled	Application	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	4.3 fl oz/A ( 0.05 lb ai/A)	Apply by ground equipment using sufficient water to obtain full coverage of foliage in a minimum of 20 gallons for concentrate spray or a minimum of 100 gallons for dilute spray. Apply by air in a minimum of 10 gallons per acre.  Begin applications when pest activity is noted.

Do not apply more than 17.2 ounces of product or 0.20 pound of active ingredient per acre per season.

Do not make applications less than 14 days apart.

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

### Corn, Sweet (3 Day PHI)

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	2.4 to 4.3 fl oz/A (0.028 to 0.05 lb ai/A)	Apply with ground or air equipment using sufficient water and application methods to insure thorough coverage of foliage. Apply in water using a minimum of 20 gallons of finished spray per acre with ground
Armyworms Corn Borers Corn Earworm Grasshoppers Aphids <sup>1</sup>	3.0 to 4.3 fl oz/A (0.035 to 0.05 lb ai/A)	equipment and a minimum of 2 gallons per acre by air.

Apply at minimum 3 to 5 day intervals or as needed for control. A maximum of 25.8 ounces of product or 0.3 pound of active ingredient per acre per season may be applied.

Do not apply within 3 days of harvest of ears or forage or livestock grazing.

### Corn (Field), Field Corn Grown for Seed, Popcorn (At Plant Use)

Insects Controlled	Rate of Application		Method of Application	
Cutworms	0.16 fl oz per 1,000 linear feet of row (0.002 lb ai per 1,000 linear feet of row)	band treat 4" band. U	in in-furrow, b ment using a lse table belo the Mustang	minimum w to
Row Spacing (inches)		40	30	20
Mustang (pounds ai per acre)		0.024	0.036	0.048
Mustang (formulated ounces per acre)		2.05	3.08	4.10

Do not apply more than 17.2 ounces of product or 0.20 pound of active ingredient per acre per season including at-plant plus foliar applications of Mustang.

Do not apply within 30 days of harvest for grain and stover and 60 days for forage.

### Corn (Field), Field Corn Grown for Seed, Popcorn

Insects Controlled	Rate of Application	Method of Application
Cutworms	1.4 to 3.0 fl oz/A (0.016 to 0.035 lb ai/A)	Make applications when insect populations reach economic threshold levels. Refer to local Cooperative
Corn Earworm <sup>1</sup> Green Cloverworm Meadow Spittlebug Western Bean Cutworm <sup>1</sup>	1.9 to 4.3 fl oz/A (0.022 to 0.05 lb ai/A)	Extension Pest Management Guidelines and/or scouting results. Do not exceed maximum allowable rate.
Bean Leaf Beetle Cereal Leaf Beetle Corn Borer, European Corn Borer, Southwestern Corn Rootworm Beetle Flea Beetle Grasshoppers	2.9 to 4.3 fl oz/A (0.034 to 0.05 lb ai/A)	Apply by air or by ground equipment using sufficient water to obtain full coverage of foliage (minimum of 2 gallons per acre by air and 10 gallons per acre by ground).
Hop Vine Borer Hornworms Japanese Beetle (adult) Sap Beetle (adult) Southern Corn Leaf Beetle Stalk Borer Stink Bug Spp. Tobacco Budworm <sup>2</sup> Webworms Aphids <sup>3</sup>		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. Mustang may only suppress heavy infestations and/or

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

Armyworms (including Fall Armyworms)	3.4 to 4.3 fl oz/A	subsequent migrations.
Chinch Bug	(0.04 to 0.05 lb ai/A)	

Do not apply more than 17.2 ounces of product or 0.20 pound of active ingredient per acre per season including At-Planting plus foliar applications of Mustang Insecticide.

Do not apply within 30 days of harvest for grain and stover and 60 days for forage.

### Cotton (14 Day PHI)

Insects Controlled	Rate of Application	Method of Application
Preemergent Use: Cutworms	1.4 to 2.0 fl oz/A (0.016 to 0.024 lb ai/A)	Use Mustang 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 Tband) or in-furrow spray using sufficient spray volume to achieve adequate coverage. Reduced volumes of water may be used with specialized equipment. Use the higher rates of Mustang when incorporating into the soil.
Cutworms Tobacco Thrips Soybean (banded) Thrips Armyworm, Fall Armyworm, Yellow Striped Boll Weevil Cabbage Looper Corn Borer, European Cotton Bollworm Cotton Fleahopper Cotton Leaf Perforator Pink Bollworm Saltmarsh Caterpillar Stink Bugs Tarnished Plant Bug Other Plant Bug	1.4 to 2.0 fl oz/A (0.016 to 0.024 lb ai/A) 2.8 to 3.8 fl oz/A (0.033 to 0.045 lb ai/A)	Mustang may be applied in water or refined vegetable oil. When water is used, apply a minimum of one gallon of finished spray per acre by air or five gallons 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. Control of lepidopteran eggs may be achieved with
Tobacco Budworm <sup>1</sup> Armyworm, Beet <sup>2</sup> Cotton Aphid <sup>3</sup> Lygus Bugs Whiteflies <sup>4</sup>	3.0 to 4.3 fl oz/A (0.035 to 0.05 lb ai/A)	proper timing of applications. For boll weevil control, apply Mustang at a 3 to 4 day

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

 $<sup>^{\</sup>rm 2}$  See resistance statement under Directions For Use section.

 $<sup>^{\</sup>rm 3}$  Control may be variable depending on species present and host-plant relationships.

interval until pest numbers 3.2 to 4.3 fl oz/A Grasshoppers (0.0375 to 0.05 are reduced to acceptable levels. lb ai/A) For control of grasshoppers, applications should be made based on careful field scouting. Treatment decisions should be made based on evidence of feeding damage and prescence of grasshoppers in cotton. Loss of cotyledon leaves in seedling cotton should be considered more important than leaf loss in older cotton. Applications should be made on a broadcast basis since grasshopper are highly mobile. Do not exceed maximum allowable rate. Adjust rates based on populations of grasshopper found in fields. Applications should be made on a three to five day schedule until grasshopper populations are under control or until foliage loss subsides. Increase application rates as grasshopper size and population density increases

A maximum of 25.8 ounces of product or 0.3 pound of active ingredient may be applied per acre per season.

Do not graze or feed cotton for forage.

<sup>&</sup>lt;sup>1</sup> See resistance statement under Directions For Use section.

 $<sup>^{2}\,\</sup>mathrm{For}$  control of beet armyworms only in the high plains of Texas, Arizona, and California.

 $<sup>^{\</sup>rm 3}$  Aphid control may be variable depending on species present and host-plant relationships.

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

Canola, Crambe, Rapeseed, Borage, Cuphea, Echium, Flax, Gold of Pleasure, Hare's-Ear Mustard, Lesquerella, Lunaria, Meadowfoam, Milkweed, Mustard, Oil Radish, Poppy Seed, Sesame, and Sweet Rocket (7 Day PHI)

Insects	Rate of	Method of
Controlled	Application	Application
Aphids Cutworms Diamondback Moth Loopers Lepidopterous Larvae Flea Beetle Fleahoppers Grasshopper Plant Bug Stink Bugs Seedpod Weevil Thrips Whitefly Armyworms	4.3 fl oz/A (0.05 lb ai/A)	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold levels. Do not exceed maximum allowable rate.  Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gallons by ground and 2 gallons by air).

Do not apply more than 25.8 ounces of product or 0.3 pound of active ingredient per acre per season.

Do not make applications less than seven days apart.

Cucurbit Vegetables Group (1 Day PHI) including:
Chayote (fruit); Chinese Waxgourd (Chinese Preserving Melon);
Citron Melon; Cucumber; Gherkin; Gourd (edible) (including hyotan, cucuzza, hechima, Chinese orkra); 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.	1.4 to 4.3 fl oz/A (0.016 to 0.05 lb ai/A)	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally
Cabbage Looper Cucumber Beetle spp. (adult) Leafhopper spp. Melonworm Pickleworm Rindworm Squash Bug Squash Vine Borer	3.0 to 4.3 fl oz/A (0.035 to 0.05 lb ai/A)	determined economic threshold levels. Do not exceed maximum allowable rate.  Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10
Aphid spp. <sup>1, 2</sup> Armyworm, Beet <sup>1, 2</sup> Corn Earworm Leafminer <sup>1</sup> Plant Bug spp. Stinkbug spp.	3.4 to 4.3 fl oz/A (0.04 to 0.05 lb ai/A)	gallons by ground and 2 gallons by air).  Do not make applications less than 7 days apart.

Do not apply more than 25.8 ounces of product or 0.3 pound of active ingredient per acre per season.

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

<sup>&</sup>lt;sup>2</sup> See resistance statement under Directions For Use section.

Fruiting Vegetables (except Cucurbits) (1 Day PHI) including: Eggplant; groundcherry (Physalis spp.); okra; pepino (Melon pear); pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper); tomatillo; tomato

Insects Controlled	Rate of Application	Method of Application
Armyworm, Southern Armyworm, True 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 Tomato Fruitworm	2.4 to 4.3 fl oz/A (0.028 to 0.05 lb ai/A)	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold levels. Do not exceed maximum allowable rate.  Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gallons by ground and 2 gallons by air).
Aphid spp <sup>2, 3</sup> Armyworm, Beet <sup>2</sup> Armyworm, Fall Cabbage Looper Grasshoppers Lygus Bugs Brown Stink Bug Tomato Psyllid Thrips spp. <sup>1, 2</sup> Whitefly spp. <sup>1, 2</sup>	3.4 to 4.3 fl oz/A (0.04 to 0.05 lb ai/A)	

Do not make applications less than 7 days apart.

Do not apply more than 25.8 ounces of product or 0.3 pound of active ingredient per acre per season.

### Grape (1 Day PHI)

Insects Controlled	Rate of Application	Method of Application
Asian Lady Bird Beetle Lady Bird Beetle Cutworm species	2.15 to 4.3 fl oz/A (0.025 to 0.05 lb ai/A)	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold levels. Do not exceed maximum allowable rate.
Eastern Grape Leafhopper Variegated Leafhopper Western Grape Leafhopper Grape Berry Moth Japanese Beetle (adult)	4.3 fl oz/A (0.05 lb ai/A)	Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gallons by ground and 2 gallons by air).

Do not apply more than 25.8 ounces of product or 0.30 pound of active ingredient per acre per season.

Do not make applications less than seven days apart.

Aids in control.
 See resistance statement under Directions For Use section.
 Aphid control may be variable depending on species present and host-plant relationships.

Grass Forage, Fodder, and Hay Group and Grass Grown for Seed and Pasture and Rangeland (0 Day PHI for forge and hay; 7 Day PHI for straw and seed screenings) including: bahiagrass, barnyardgrass, bentgrass, Bermudagrass, Kentucky bluegrass, big bluestem, smooth bromegrass, buffalograss, reed canarygrass, centipedegrass, crabgrass, cupgrass, dallisgrass, sand dropseed, Kentucky fescue, meadow foxtail, eastern gramagrass, side-oats grama, guinea grass, Indian grass, Johnsongrass, lovegrass, napiergrass, oatgrass, orchardgrass, pangolagrass, paspalum, redtop, Italian ryegrass, St. Augustine grass, sprangletop, squirreltailgrass, stargrass, switchgrass, timothy, crested wheatgrass, wildrye grass and zoysia grass. Also included are sudangrass and sorghum forages and their hybrids

Insects Controlled	Rate of Application	Method of Application
Alfalfa Caterpillar Alfalfa Looper Alfalfa Weevil Cutworms	2.4 to 4.3 fl oz/A (0.028 to 0.05 lb ai/A)	Apply as insects appear in sufficient volume of water to ensure thorough coverage of foliage.
Egyptian Alfalfa Weevil (larvae & adult) Flea Beetles Green Cloverworm Hornworms Meadow Spittlebug Potato Leafhopper Velvetbean Caterpillar		Use higher recommended dosage for increased pest pressure or for increased residual pest control. Do not exceed maximum allowable rate.
Webworms Blue Alfalfa Aphid <sup>1</sup> Green Peach Aphid <sup>1</sup> Pea Aphid <sup>1</sup> Spotted Alfalfa Aphid <sup>1</sup> Threecornered Alfalfa Hopper		Apply in a minimum of 2 gallons of finished spray per acre by aerial equipment or 10 gallons per acre by ground equipment.  ULV oil spray application is prohibited. Higher volumes
Armyworms Cereal Leaf Beetle Chinch Bug Grass Mealybug Grasshoppers Plant Bugs (including Lygus spp. & Stink Bugs)	3.0 to 4.3 fl oz/A (0.035 to 0.05 lb ai/A)	of finished spray may improve insect control under high temperatures, when foliage is dense and/or when insect pressure is high.

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.

A maximum of 4.3 ounces of product or 0.05 pound of active ingredient per acre may be applied per cutting.

For hay, a maximum of 17.2 ounces of product or 0.20 pound of active ingredient per acre per season may be applied.

For forage, straw, and seed screenings, a maximum of 21.5 ounces of product or 0.25 pound of active ingredient per acre per season may be applied.

Applications may be made up to 0 days for forage and hay; 7 days for straw and seed screenings.

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

Leafy Vegetables (except Brassica) (1 Day PHI) including: Amaranth (leafy amaranth, Chinese spinach, tampala); Arugula (Roquette); Cardoon; Celery; Celery, Chinese; Celtuce; Chervil; Chrysanthemum, edible-leaved and garland; Cilantro (not for use on cilantro grown for seed or coriander); Corn salad; Cress, garden; Cress, upland (yellow rocket, winter cress); Dandelion; Dock (sorrel); Endive (escarole); Fennel, Florence (finochio); Lettuce, head and leaf; Orach; Parsley; Purslane, garden; Purslane, winter; Radicchio (red chicory); Rhubarb; Spinach (including New Zealand and vine, Malabar spinach, Indian spinach); Swiss chard

Insects Controlled	Rate of Application	Method of Application
Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Imported Cabbageworm Leafhoppers Saltmarsh Caterpillar Tobacco Budworm <sup>2</sup> Aphid spp. <sup>2,3</sup> Whitefly spp. <sup>1,2</sup>	2.4 to 4.3 fl oz/A (0.028 to 0.05 lb ai/A)	Apply in water as necessary for insect control using a minimum of 10 gallons of finished spray per acre with ground equipment and 5 gallons per acre by air.  Lower rates of Mustang should be used under light to moderate insect pressure. Higher rates should be used
Armyworms Ground Beetles Crickets Loopers Lygus Bugs Onion Thrips Stink Bugs Wireworm (adults)	3.4 to 4.3 fl oz/A (0.04 to 0.05 lb ai/A)	to control heavy to extremely heavy insect populations. In areas where arid climatic conditions persist, such as California and Arizona, higher than minimum recommended rates may be required.

Do not make applications less than 7 days apart.
Do not apply more than 25.8 ounces of product or 0.3 pound of active ingredient per acre per season.

Aids in control.
 See resistance statement under Directions For Use section.
 Aphid control may be variable depending on species present and host-plant relationships.

### Legume Vegetables

## Legume Vegetables, Dried (Except Soybeans) - At-Plant Application

Dried Shelled Pea and Bean (except Soybean) including:

Dried cultivars of bean (*Lupinus* spp.) includes Grain Lupin, Sweet Lupin, White Lupin, and White Sweet Lupin; *Phaseolus* spp. Includes Field Bean, Kidney Bean, Lima Bean (dry), Navy Bean, Pinto Bean, Tepary Bean; Bean (*Vigna* spp.) includes Adzuki Bean, Blackeyed Pea, Catjang, Cowpea, Crowder Pea, Moth Bean, Mung Bean, Rice Bean, Southern Pea, Urd Bean; Broad Bean (dry); Chickpea; Guar; Lablab Bean; Lentil; Pea (*Pisum* spp.) includes Field Pea; Pigeon Pea

Rate of Application	Method of Application
4.3 fl oz/A (0.05 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 gallons per acre or broadcast in a minimum of 10 gallons per acre.  For White grubs and Wireworms: Apply infurrow or in a 3 – 4 inch T-Band (band over the open furrow) at planting in a minimum of 2 – 7 gallons per acre.
	Application 4.3 fl oz/A

PHI: Do not apply within 21 days of harvest for dried shelled peas or beans.

**Maximum Amount per Application:** Do not apply more than 4.3 ounces of product or 0.05 pound of active ingredient per acre.

**Maximum Amount per Season**: Do not apply more than 25.8 ounces of product or 0.3 pound of active ingredient per acre per season including atplant plus foliar applications.

Row spacing (inches)	FI oz/ 1000 linear	Lbs ai/ 1000 linear feet
	feet	
30	0.247	0.00287
20	0.164	0.0019
15	0.123	0.0014

### Legume Vegetables - Foliar Use

### Succulent and Dried (except Soybeans)

1 Day PHI for succulent shelled or edible-podded peas or beans 21 Day PHI for dried shelled peas or beans

## Succulent Edible-Podded Peas, Succulent Shelled Peas and Dried Shelled Peas (Pisum spp.) including:

Dwarf Pea; Edible-pod Pea; Snow Pea; Sugar Snap Pea; Pigeon pea; English Pea; Garden Pea; Green Pea; Lentil

## Succulent Edible-Podded Beans, Succulent Shelled Beans, and Dried Shelled Beans including:

Runner Bean; Snap Bean; Wax Bean; Asparagus Bean; Chinese Longbean; Moth Bean; Yardlong Bean; Jackbean; Soybean (immature seed); Swordbean; Lima Bean; Broad Bean (Fava Bean); Blackeyed Pea; Southern Pea; Grain Lupin; Sweet Lupin; White Lupin; White Sweet Lupin; Field Bean; Kidney Bean; Navy Bean; Pinto Bean; Tepary Bean; Adzuki Bean; Catjang; Cowpea; Crowder Pea; Moth Bean; Mung Bean; Rice Bean; Urd Bean; Chickpea (Garbanzo Bean); Guar; Lablab bean

Inqueto	Poto of	Mathad of
Insects Controlled	Rate of	Method of
	Application	Application
Cutworm spp.	1.4 to 4.3 fl	Apply as required by
Thistle Caterpillar (Painted	oz/A	scouting, usually at
Lady)	(0.016 to 0.05	intervals of 5 or more days.
Saltmarsh Caterpillar	lb ai/A)	Timing and frequency of
Silverspotted Skipper		applications should be
Alfalfa Caterpillar	3.0 to 4.3 fl	based upon insect
Armyworm, Southern	oz/A	populations reaching locally determined
Armyworm, True	(0.035 to 0.05	economic threshold levels.
Armyworm, Yellow-Striped	lb ai/A)	Do not exceed maximum
Bean Leaf Beetle		allowable rate.
Blister Beetle spp.		allowable rate.
Colorado Potato Beetle		
Corn Borer, European		Apply by ground or air
Corn Borer, Southwestern		equipment using sufficient
Corn Earworm		water to obtain full
Corn Rootworm Beetle		coverage of foliage
(adult) Cowpea Curculio		(minimum of 10 gallons by
Cucumber Beetle		ground and 2 gallons by
Flea Beetle		air).
Green Cloverworm		
Ground Beetles		
Imported Cabbageworm		
Japanese Beetle		
Leaf Skeletonizer spp.		
Leafhopper spp.		
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 <sup>2</sup>		
Velvetbean Caterpillar		
Webworm spp.		
Woolly Bear Caterpillar		
Aphid spp. 2,3	3.4 to 4.3 fl	
Armyworm, Beet <sup>2</sup>	oz/A	
Armyworm, Fall	(0.04 to 0.05 lb	
Grasshoppers	ai/A)	
Lesser Cornstalk Borer 1		
Looper spp. 2		
Stink Bug spp.		
Thrips spp. 1, 2		
Whitefly spp. 1, 2		

Do not make applications less than 5 days apart.

Maximum Amount per Season: Do not apply more than 25.8 ounces of product or 0.3 pound of active ingredient per acre per season including atplant plus foliar applications.

### Peanut (7 Day PHI)

Insects Controlled	Rate of Application	Method of Application
Cutworm spp. Green Cloverworm Velvetbean Caterpillar Red-necked Peanut Worm	1.4 to 4.3 fl oz/A (0.016 to 0.05 lb ai/A)	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally
Bean Leaf Beetle Leafhopper spp. Southern Corn Rootworm (adult) Vegetable Weevil Whitefringed Beetle (adult)	1.9 to 4.3 fl oz/A (0.022 to 0.05 lb ai/A)	determined economic threshold levels. Do not exceed maximum allowable rate.  Apply by ground or air
Aphid spp. <sup>1,2</sup> Armyworm, Beet <sup>1,2</sup> Armyworm, Fall <sup>1,2</sup> Corn Earworm Grasshopper spp. Lesser Cornstalk Borer <sup>1,2</sup> Soybean Looper <sup>1,2</sup> Stink Bug spp. <sup>1,2</sup> Tobacco Thrips <sup>2</sup>	3.4 to 4.3 fl oz/A (0.04 to 0.05 lb ai/A)	equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gallons by ground and 2 gallons by air).  Do not make applications less than 14 days apart.

Do not apply more than 25.8 ounces of product or 0.3 pound of active ingredient per acre per season.

Do not graze livestock in treated areas. Do not use treated vines or hay for animal feed.

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

 $<sup>^{\</sup>rm 2}\,{\rm See}$  resistance statement under Directions For Use section

 $<sup>^{\</sup>rm 3}\,{\rm Aphid}$  control may be variable depending on species present and host-plant relationships.

<sup>&</sup>lt;sup>1</sup> Aids in control. <sup>2</sup> See resistance statement under Directions For Use section.

# Pome Fruit Group (14 Day PHI) including: Apple; Crabapple; Loquat; Mayhaw; Pear; Oriental Pear; and Quince.

Insects Controlled	Rate of Application	Method of Application
Controlled  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	1.4-4.3 fl oz/A (0.016-0.05 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. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold levels. Do not exceed maximum allowable
Stink Bugs Tarnished Plant Bug Tufted Apple Bud Moth Variegated Leafroller White Apple Leafhopper		Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (for ground application use a minimum of 20 gallons for concentrate spray or a minimum of 100 gallons for dilute spray; for air application use a minimum of 10 gallons).
		Do not make applications less than 7 days apart.  Avoid applications when
Do not apply more than 25 °C	coupose of production	honey bees are actively foraging by applying during the early morning or evening hours.  or 0.3 pound active ingredient

Do not apply more than 25.8 ounces of product or 0.3 pound active ingredient per acre per season.

Do not apply as a ULV spray.

Do not feed or allow livestock to graze on cover crops from treated orchards.

### Rice and Wild Rice (14 Day PHI)

Insects	Rate of	Method of
Controlled	Application	Application
Armyworm, Fall Armyworm, True Armyworm, Yellow Striped Grasshoppers Green Bug Leafhopper Spp. Mexican Rice Borer Rice Stalk Borer Rice Water Weevil (adult) Sugarcane Borer Oat Birdcherry Aphid Wild Rice Worm	3.4 to 4.3 fl oz/A (0.04 to 0.05 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 allowable rate. Chinch Bug 2.8 to 4.3 fl Rice Stink Bug 07/A (0.033 to 0.05 Mustang can be safely lb ai/A) 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 gallons of water per acre. For increased control, crop oil concentrate at 16 fluid ounces per acre may be used. 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. Adults may also be treated at later stages of rice development to reduce overwintering populations. For control of rice water weevil in water seeded rice, make the first application after flooding when scouting indicates the presence of adults and/or feeding scars. Application should usually begin when rice has emerged 0.5 inch above the waterline. Under conditions of prolonged migration into the field, start field scouting for rice water weevil adults and/or feeding scars 3-5 days after the initial treatment and, if needed, apply a second application within 7-10 days of the first application. Adults may also be treated at later stages of rice development to reduce overwintering populations. Green bug is known to have many biotypes. Mustang may only provide suppression. If satisfactory control is not achieved with the first application of Mustang, 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.

A maximum of 17.2 ounces of product or 0.20 pound of active ingredient (1.1 pints) may be applied per acre per season.

Do not use treated rice field for the aquaculture of edible fish and crustacea. Do not apply as an ultra-low volume (ULV) spray.

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

Root and Tuber Vegetables Group 1 (except Sugar Beet) (1 Day

Root and Tuber Vegetables Group 1 (except Sugar Beet) (1 Day PHI) including:
Arracacha; Arrowroot; Artichoke (Chinese and Jerusalem);
Garden Beet; Edible Burdock; Edible Canna; Carrot; Cassava (Bitter and Sweet); Celeriac (Celery Root); Chayote (Root); Turnip-Rooted Chervil; Chicory; Chufa; Dasheen (Taro); Ginger; Ginseng; Horseradish; Leren; Turnip-Rooted Parsley; Parsnip; Potato; Oriental Radish (Daikon); Radish; Rutabaga; Salsify (Oyster Plant); Black Salsify; Spanish Salsify; Skirret; Sweet Potato; Tanier (Cocoyam); Turmeric; Turnip; Yam Bean; and Yam (True)

Insects Controlled	Rate of Application	Method of Application
Cutworm spp.	1.4 to 4.3 fl oz/A (0.016 to 0.05 lb ai/A)	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds levels.
Cabbage Looper Cucumber Beetle European Corn Borer Fleabeetle spp. Leafhopper spp. Southern Corn Rootworm (adult) Vegetable Weevil Whitefringed Beetle (adult)	1.9 to 4.3 fl oz/A (0.022 to 0.05 lb ai/A)	Do not exceed maximum allowable rate.  Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gallons by ground and 2
Aphid spp. <sup>1, 2</sup> Armyworm, Beet <sup>1, 2</sup> Armyworm Colorado Potato Beetle <sup>2</sup> Grasshopper spp. Imported Cabbageworm Potato Leafhopper Tarnished Plant Bug	3.4 to 4.3 fl oz/A (0.04 to 0.05 lb ai/A)	gallons by air).  Do not make applications less than 4 days apart.

Do not apply more than 25.8 ounces of product or 0.3 pound of active ingredient per acre per season.

Leaves of Root and Tuber Vegetables (except Sugar Beet tops) cannot be used for food or feed.

### Safflower (14 Day PHI)

Insects Controlled	Rate of Application	Method of Application
Cutworms	4.3 fl oz/A (0.05 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 allowable rate.
		Apply with ground or air equipment using sufficient water and application methods to insure thorough coverage of foliage. Apply in water using a minimum of 15 gallons of finished spray per acre.

Do not apply more than 12.9 ounces of product or 0.15 pound of active ingredient per acre per season.

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

<sup>&</sup>lt;sup>2</sup> See resistance statement under Directions For Use section.

Sod Farms (0 Day PHI) including: bahiagrass, barnyardgrass, bentgrass, Bermudagrass, Kentucky bluegrass, big bluestem, smooth bromegrass, buffalograss, reed canarygrass, centipedegrass, crabgrass, cupgrass, dallisgrass, sand dropseed, Kentucky fescue, meadow foxtail, eastern gramagrass, side-oats grama, guinea grass, Indian grass, Johnsongrass, lovegrass, napiergrass, oatgrass, orchardgrass, pangolagrass, paspalum, redtop, Italian ryegrass, St. Augustine grass, sprangletop, squirreltailgrass, stargrass, switchgrass, timothy, crested wheatgrass, wildrye grass and zoysia grass. Also included are sudangrass and sorghum forages and their hybrids.

	D	
Insects	Rate of	Method of
Controlled	Application	Application
Alfalfa caterpillar Alfalfa looper Alfalfa weevil Ant spp.	2.4 to 4.3 fl oz/A (0.028 to 0.05 lb ai/A)	Apply as insects appear in sufficient volume of water to ensure thorough coverage of foliage.
Blue alfalfa aphid <sup>1</sup> Cutworm spp. Egyptian alfalfa weevil Flea beetle spp. Green cloverworm Green peach aphid <sup>1</sup> Hornworm spp.		Use higher recommended dosage for increased pest pressure or for increased residual pest control. Do not exceed maximum allowable rate.
Meadow spittlebug Pea aphid <sup>1</sup> Potato leafhopper Spotted alfalfa aphid <sup>1</sup> Threecornered alfalfa hopper Velvetbean caterpillar Webworm spp		Apply in a minimum of 2 gallons of finished spray per acre by aerial equipment or 10 gallons per acre by ground equipment.  ULV oil spray application is
Armyworm, southern Armyworm, true Armyworm, yellowstriped Cereal leaf beetle Chinch bug Grass mealybug Grasshopper spp. Plant bug spp. Stinkbug spp.	3.0 to 4.3 fl oz/A (0.035 to 0.05 lb ai/A)	prohibited. Higher volumes of finished spray may improve insect control under high temperatures, when foliage is dense and/or when insect pressure is high.
Armyworm, fall	3.4 to 4.3 fl oz/A (0.04 to 0.05 lb ai/A)	

A maximum of 4.3 ounces of product or 0.05 pound of active ingredient per acre may be applied per application.

Do not apply more than 21.5 ounces of product or 0.25 pound active ingredient per acre per season.

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

## Sorghum (Grain) and Millet (14 Day PHI for grain and stover; 45 Day PHI for forage):

Insects	Rate of	Method of
Controlled	Application	Application
Cutworm spp. Sorghum Midge	1.4 to 4.3 fl oz/A (0.016 to 0.05 lb ai/A)	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations
Armyworm, Fall Armyworm, Southern Armyworm, True Armyworm, Yellow-Striped	1.9 to 4.3 fl oz/A (0.022 to 0.05 lb ai/A)	reaching locally determined economic threshold levels. Do not exceed maximum allowable rate.
Corn Borer, European <sup>1</sup> Corn Borer, Southwestern <sup>1</sup> Corn Earworm Flea Beetle spp. Hornworms Stink Bug spp. Webworm spp. Aphid spp. <sup>2,3</sup>	3.4 to 4.3 fl	Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gallons by ground and 2 gallons by air). The addition of one to two quarts of emulsified oil per acre to the spray solution may improve
Armyworm, Beet <sup>3</sup> Chinch Bug False Chinch Bug	oz/A (0.04 to 0.05 lb ai/A)	spray deposition and insect control.
Grasshopper spp. Lesser Cornstalk Borer <sup>1</sup> Thrips spp. <sup>3, 4</sup> Whitefly spp. <sup>3, 4</sup>	,	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 21.5 ounces of product or 0.25 pound of active ingredient per acre per season.

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

Aphid control may be variable depending on species present and host-plant relationships.
 See resistance statement under Directions For Use section.

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

### Soybeans (21 Day PHI):

Controlled		
Insects Controlled  Cutworm spp. Painted Lady (Thistle) Caterpillar Saltmarsh Caterpillar Saltmarsh Caterpillar Silverspotted Skipper  Alfalfa Caterpillar Armyworm, Southern Armyworm, True Armyworm, Yellowstriped Bean Leaf Beetle¹ Blister Beetle spp. Colorado Potato Beetle Corn Borer, European Corn Earworm Corn Rarworm Corn Rootworm Beetle (adult) Cowpea Curculio Cucumber Beetle European Corn Borer Flea Beetle	Rate of Application  1.4 to 4.3 fl oz/A  (0.016 to 0.05 lb ai/A)  3.0 to 4.3 fl oz/A  (0.035 to 0.05 lb ai/A)	Method of Application  Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold levels. Do not exceed maximum allowable rate.  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 gallons of finished spray per acre by air or 10 gallons of finished spray per acre by ground. The addition of one to two quarts of emulsified oil per acre to the spray solution may
Armyworm, Beet Armyworm, Fall Grasshopper spp. Lesser Cornstalk Borer <sup>3</sup> Looper spp. <sup>2</sup> Stink Bug spp. Thrips spp. <sup>2,3</sup>	3.4 to 4.3 fl oz/A (0.04 to 0.05 lb ai/A)	
Whitefly spp. <sup>2, 3</sup>		
Do not make applications le	on than 7 days on	ort

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 25.8 ounces of active ingredient or 0.3 pound of active ingredient per acre per season.

<sup>&</sup>lt;sup>1</sup> Use higher recommended dosage for increased pest pressure, increased residual pest control, or later-season applications. Do not exceed maximum allowable rate.

<sup>&</sup>lt;sup>2</sup> See resistance statement under Directions For Use section.

<sup>&</sup>lt;sup>3</sup> Aids in control.

Stone Fruit Group (14 Day PHI) including: Apricot; Cherry (Sweet and Tart); Nectarine; Peach; Plum (including Chickasaw Plum, Damson Plum, and Japanese Plum); Plumcot; and Prune (fresh).

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	1.4 to 4.3 fl oz/A (0.016-0.05 lb ai/A)	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold levels. Do not exceed maximum allowable rate.
Plum Curculio Oriental Fruit Moth Rose Chafer Stink Bugs Tarnished Plant Bug Tufted Apple Budmoth Western Cherry Fruit Fly		Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (for ground application use a minimum of 20 gallons for concentrate spray or a minimum of 100 gallons for dilute spray; for air application use a minimum of 10 gallons).
		Do not make applications less than 7 days apart.
		Avoid applications when honey bees are actively foraging by applying during the early morning or evening hours.

Do not apply more than 25.8 ounces of product or 0.3 pound of active ingredient per acre per season.

Do not apply as a ULV spray.

Do not feed or allow livestock to graze on cover crops from treated orchards.

### Sugar Beet (50 Day PHI for tops or roots)

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 <sup>1</sup>	2.4 to 4.3 fl oz/A (0.028 to 0.05 lb ai/A)	Make applications when insect populations reach economic threshold levels. Refer to local Cooperative Extension Pest Management Guidelines and/or scouting results. Do not exceed maximum allowable rate. Apply by air or by ground equipment using sufficient water to obtain full coverage of foliage (minimum of 2 gallons per acre by ground).
At Plant Application: Sugar Beet Root Maggot (larvae) <sup>2</sup>	4.3 fl oz/A (0.05 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 gallons per acre.
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 gallons per acre.
Cutworm species		Apply at planting on the soil surface in a 5-7inch band or broadcast in a minimum of 3-5 gallons per acre.

Do not apply more than 12.9 ounces of product or 0.15 pound of active ingredient per acre per season including at plant plus foliar applications of Mustang.

Sunflower, Castor Oil Plant, Chinese Tallowtree, Euphorbia, Evening Primrose, Jojoba, Niger Seed, Rose Hip, Stokes Aster, Tallowwood, Tea Oil Plant, and Vernonia (30 Day PHI) (At-Plant Application)

Insects Controlled	Rate of Application	Method of Application
Cutworm spp. White Grub Wireworm	4.3 fl oz/A (0.05 lb ai/A)	For White grubs and Wireworms: Apply infurrow or in a 3 – 4 inch T-Band (band over the open furrow) at planting in a minimum of 3 – 5 gallons per acre.  For Cutworm spp: Apply at planting on the soil surface in a 5 – 7 inch band or broadcast in a minimum of 3 – 5 gallons per acre.

PHI: Do not apply within 30 days of harvest.

Maximum Amount per Application: Do not apply more than 0.05 pound of active ingredient per acre per application.

Maximum Amount per Season: Do not apply more than 21.5 ounces of product or 0.25 pound of active ingredient per acre per season including atplant plus foliar applications.

Do not make more than five applications at the maximum rate per season.

Grazing: Do not graze livestock in treated areas or cut treated crops for feed.

**Sunflower,** Castor Oil Plant, Chinese Tallowtree, Euphorbia, Evening Primrose, Jojoba, Niger Seed, Rose Hip, Stokes Aster, Tallowwood, Tea Oil Plant, and Vernonia **(30 Day PHI) (Foliar Use)** 

Insects Controlled	Rate of Application	Method of Application
Thistle Caterpillar (Painted Lady) Cutworm species	1.4 to 4.3 fl oz/A (0.016 to 0.05 lb ai/A)	Apply with ground or air equipment using sufficient water and application methods to insure thorough coverage of
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 Wooly Bear Caterpillar Japanese Beetle Webworm species	2.72 to 4.3 fl oz/A (0.032 to 0.05 lb ai/A)	
Long-Horned Beetle (Dectes Stem Borer adult) Beet Armyworm Fall Armyworm Stink Bug Species Pale striped Flea Beetle	3.4 to 4.3 fl oz/A (0.04 to 0.05 lb ai/A)	

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

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

PHI: Do not apply within 30 days of harvest.

Maximum Amount per Season: Do not apply more than 21.5 ounces of product or 0.25 pound of active ingredient per acre per season including atplant plus foliar applications.

Do not make more than five applications at the maximum application rate per

Grazing: Do not graze livestock in treated areas or cut treated crops for feed. Avoid applications when honey bees are actively foraging by applying during the early morning or evening hours.

Tree Nuts Group (7 Day PHI) including: almond; beech nut; Brazil nut; butternut; cashew; chestnut; chinquapin; filbert (hazelnut); hickory nut; macadamia nut; pecan; pistachio; and walnut (black and English).

Insects	Rate of	Method of
Controlled	Application	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	4.3 fl oz/A (0.05 lb ai/A)	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold levels. Do not exceed maximum allowable rate.  Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gallons by ground and 2 gallons by air).  Avoid applications when honey bees are actively foraging by applying during the early morning or evening hours.

Do not apply more than 21.5 ounces of product or 0.25 pounds of active ingredient per acre per season.

Do not make applications less than seven days apart

### Wheat and Triticale (14 Day PHI for grain, forage, and hay):

Insects Controlled	Rate of Application	Method of Application
Cutworm spp., including Army Cutworm Painted Lady (Thistle) Caterpillar	1.4 to 4.3 fl oz/A (0.016 to 0.05 lb ai/A)	Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold levels. Do not exceed maximum allowable rate.
Armyworm, Southern Armyworm, True Armyworm, Yellowstriped Cereal Leaf Beetle Flea Beetle spp. Pale Wastern Cutworm	1.9 to 4.3 fl oz/A (0.022 to 0.05 lb ai/A)	
Plant Bug spp. Spittlebug Webworm spp.		Apply by ground or air equipment using sufficient water to obtain full
Aphid spp. <sup>1, 2</sup> Armyworm, Beet <sup>2</sup> Armyworm, Fall Chinch Bug	3.4 to 4.3 fl oz/A (0.04 to 0.05 lb ai/A)	coverage of foliage (minimum of 10 gallons by ground and 2 gallons by air).
Grass Sawfly Grasshopper spp. Greenbug <sup>2, 3</sup> Stink Bug spp. Thrips spp <sup>2, 3</sup> Wheat Stem Sawfly (adult) <sup>3</sup> Whitefly spp <sup>2, 3</sup>		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.

Do not make applications less than 14 days apart.

Do not apply more than 21.5 ounces of product or 0.25 pound of active ingredient per acre per season.

## Dealers Must Sell in Original Packages Only. Conditions of Sale and Limitation of Warranty and Liability:

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control or FMC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. EXCEPT AS WARRANTED BY THIS LABEL, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or FMC, and buyer assumes the risk of any such use.

To the extent consistent with applicable law FMC or seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF FMC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.

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Rev: 2013-10-21

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

<sup>&</sup>lt;sup>2</sup> See resistance statement under Directions For Use section.

<sup>&</sup>lt;sup>3</sup> Aids in Control.

## **Supplemental Labeling for Alfalfa**

This supplemental label expires on December 9, 2017 and must not be used or distributed after this date.

### RESTRICTED USE PESTICIDE

Toxic to fish and aquatic organisms.

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



## ACCEPTED

12/11/2014

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 279-3126

EPA Est. No.

EPA Reg. No. 279-3126 **Active Ingredient:** 

Zeta-Cypermethrin\* S-Cyano (3-phenoxy-phenyl)methyl (±) cis/trans 3-(2,2-dichloro-ethenyl)-2,2 

100.0%

Contains 1.5 pounds active ingredient per gallon. \*Cis/trans ratio: Max. 55% (±) cis and min. 45% (±) trans

## 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.)

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

ALL APPLICABLE DIRECTIONS. RESTRICTIONS AND PRECAUTIONS ON THE EPA REGISTERED LABEL ARE TO BE FOLLOWED.

This Supplemental labeling and the complete Mustang Insecticide label must be in possession of the user at the time of pesticide application. Read the label affixed to the container for Mustang Insecticide before applying. Carefully follow all precautionary statements and application use directions. Use of Mustang Insecticide according to this supplemental labeling is subject to all use precautions and limitations imposed by the labeling affixed to the container for Mustang Insecticide.



**FMC** Corporation Agricultural Products Group 1735 Market Street Philadelphia, PA 19103

## **Alfalfa; Alfalfa grown for seed**: includes lucerne, sainfoin, holy clover, esparcet, birdsfoot trefoil and varieties and/or hybrids of these

Insects Controlled	Rate of Application	Method of Application
Alfalfa Caterpillar	2.4 to 4.3 ounces	Apply as insects appear in
Alfalfa Looper	(0.028 to 0.05 pound active) per	sufficient volume of water to
Alfalfa Weevil	acre	ensure thorough coverage of
Cutworms		foliage.
Egyptian Alfalfa Weevil (larve &		
adult)		Use higher recommended
Flea Beetles		dosage for increased pest
Green Colverworm		pressure or for increased
Hornworms		residual pest control. Do not
Meadow Spittlebug		exceed maximum allowable rate.
Potato Leafhopper		
Velvetbean Caterpillar		Apply in a minimum of 2 gallons
Webworms		of finished spray per acre by
Blue Alfalfa Aphid <sup>1</sup>		aerial equipment or 10 gallons
Green Peach Aphid <sup>1</sup>		per acre by ground equipment.
Pea Aphid <sup>1</sup>		ULV oil spray application is
Spotted Alfalfa Aphid <sup>1</sup>		prohibited. Higher volumes of
Threecornered Alfalfa Hopper		finished spray may improve
Armyworms	3.0 to 4.3 ounces	insect control under high
Grasshoppers	(0.035 to 0.05 pound active) per	temperatures, when foliage is
Plant Bugs (including Lygus spp.	acre	dense and/or when insect
& Stink Bugs)		pressure is high
Do not make applications less than		

Do not make applications less than 7 days apart.

A maximum of 8.6 ounces of product or 0.1 pounds of active ingredient/acre may be applied per cutting and a maximum of 25.8 ounces of product per acre or 0.3 pounds of active ingredient per acre per season.

Applications may be made up to 3 days of cutting or grazing or up to 7 days of harvesting seed. 

Applications may be variable depending on species present and host-plant relationships.