

# 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 certificate.



# HERO<sup>®</sup>

## INSECTICIDE

EPA Reg. No. 279-3315

EPA Est. 279-NY-1

Active Ingredients:	By Wt.
Zeta-Cypermethrin* .....	3.75%
Bifenthrin** .....	11.25%
Other Ingredients***: .....	85.00%
	100.0%

HERO<sup>™</sup> contains 1.24 pounds active ingredients per gallon.

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

\*\* Cis isomers 97% minimum; trans isomers 3% maximum.

\*\*\* Contains Petroleum Distillates.

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

See other panels for additional precautionary information.

### FIRST AID

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

Sold By



**FMC Corporation**  
2929 Walnut Street  
Philadelphia PA 19104

**NET CONTENTS: 1 Gallon**

### PRECAUTIONARY STATEMENTS

#### Hazards to Humans (and Domestic Animals)

##### Caution

Harmful if swallowed, inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing vapor or spray mist. Do not get on skin, in eyes or on clothing. 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:

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 Butyl, Nitrile, or Neoprene Rubber ≥ 14 mls; or Viton ≥ 14 mls, 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 Butyl, Nitrile, or Neoprene Rubber ≥ 14 mls; or Viton ≥ 14 mls, and shoes plus socks and protective eyewear.

## User Safety Requirements

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.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

## User Safety Recommendations

Wash thoroughly with soap and water after handling. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## Engineering Control Statements

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 (540CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

## 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 washwaters.

The use of HERO is prohibited in areas where its application may result in exposure to endangered species. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species

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 or Chemical Hazards

Combustible: 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.

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 non-uniform 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 that 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.

HERO Insecticide should be applied continuously for the duration of the water application. HERO Insecticide 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 and bifenthrin 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 vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter.

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

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

When applications are made with a cross-wind, the swath will be displaced 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.

In New York State this product may not be applied within 100 feet (using ground equipment) to 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.

## Rotational Crops

Crops for which bifenthrin and zeta-cypermethrin tolerances exist may be rotated at any time. All other crops may be rotated 30 days following the final application of HERO Insecticide.

## Tank-Mixture

HERO Insecticide may be applied in tank mixtures with other products approved for use on the crops listed for use on this label. Observe all restrictions and precautions that appear on the labels of these products. Test for compatibility of products before mixing.

## HERO Insecticide contains the pyrethroids zeta-cypermethrin and bifenthrin.

### Maximum Usage When Applying Zeta-Cypermethrin and Cypermethrin Products to the Same Crop Within the Same Season.

Do not apply more than the maximum seasonal total for either zeta-cypermethrin or cypermethrin products when used alone; do not apply more than the combined maximum seasonal total for both products as outlined in the table below.

Crop	Maximum Seasonal Total (lbs ai/acre)			Cypermethrin**	Maximum Seasonal Total (lbs ai/acre) When Applying Cypermethrin and Zeta-cypermethrin Products to the Same Crop	Maximum Seasonal Total (lbs ai/acre) When Applying Zeta-cypermethrin Products to the Same Crop
	Zeta-cypermethrin*				Zeta-cypermethrin* plus Cypermethrin**	Zeta-cypermethrin*
	Mustang	Mustang Max	HERO			
Canola	0.3	0.15	0.0265	NA	NA	0.3
Cotton	0.3	0.15	0.1125	0.6	0.6	0.3
Field Corn	0.2	0.10	0.10	NA	NA	0.2
Sweet Corn	0.3	0.15	0.067	NA	NA	0.3
Peanut	0.3	0.15	0.1	NA	NA	0.3
Polato	0.3	0.15	0.1125	NA	NA	0.3
Eggplant, okra, pepper	0.3	0.15	0.0675	NA	NA	0.3
Tomato	0.3	0.15	0.1	NA	NA	0.3
Head Lettuce	0.3	0.15	0.1125	0.6	0.6	0.3
Head and Stem Brassica	0.3	0.15	0.1125	0.6	0.6	0.3
Leafy Brassica	0.3	0.15	0.1125			0.3
Soybean	0.3	0.15	0.10	NA	NA	0.3
Cucurbits	0.3	0.15	0.1			0.3
Dried and Succulent Peas and Beans	0.3	0.15	0.067	NA	NA	0.3
Root and Tuber vegetables	0.3	0.15	0.1125	NA	NA	0.3
Blueberries	0.3	0.15	0.1125	NA	NA	0.15
Caneberries	0.3	0.15	0.067	NA	NA	0.15
Grape	0.3	0.15	0.025	NA	NA	0.15
Treenuts	0.25	0.125	0.1125	0.5	0.5	0.25

\*Mustang; Mustang Max; HERO; or any zeta-cypermethrin product approved for crop use.

\*\* Any cypermethrin product approved for crop use.

NA = Not Applicable.

**Maximum Usage When Applying Bifenthrin Products to the Same Crop Within the Same Season.**

Crop	Maximum Seasonal Total (lbs ai/acre)		
	Bifenthrin		When Applying <b>Bifenthrin</b> * Products Plus <b>HERO</b> to the Same Crop
	<b>HERO</b>	<b>Bifenthrin</b> *	
Cotton	0.3375	0.50	0.50
Canola	0.8	0.08	0.8
Field Corn	0.30	0.30	0.30
Sweet Corn	0.20	0.20	0.20
Peanut	0.3	0.5	0.5
Potato	0.3375	0.5	0.5
Eggplant, okra, pepper	0.20	0.20	0.20
Tomato	0.315	0.32	0.32
Head Lettuce	0.3375	0.50	0.50
Head and Stem Brassica	0.3375	0.50	0.50
Leafy Brassica	0.3375	0.4	0.4
Soybean	0.30	0.30	0.30
Cucurbits	0.3	0.3	0.3
Dried and Succulent Peas and Beans	0.20	0.20	0.20
Root and Tuber vegetables	0.3375	0.50	0.50
Blueberries	0.3375	0.5	0.5
Caneberries	0.2	0.2	0.2
Grape	0.075	0.1	0.1
Treenuts	0.3375	0.50	0.50

\*Any bifenthrin product approved for crop use.

**FIELD CROPS**

**Canola, Crambe and Rapeseed (PHI 35 days)**

Pests Controlled	Rate of Application
Cutworm spp. Flea beetle	2.6 – 5.5 ounces (0.025 – 0.053 pounds active) per acre
Aphid spp. Armyworm, fall* Armyworm, southern Armyworm, true Armyworm, yellowstriped Diamondback moth** Fleahopper Grasshopper Looper spp. Seedpod weevil Stinkbug spp.	4.0 – 5.5 ounces (0.04 – 0.053 pounds active) per acre

**Restrictions**  
**PHI:** Do not apply within 35 days of harvest.  
**Application Interval:** Do not make applications less than 14 days apart.  
**Maximum Amount per Application:** Do not apply more than 5.5 ounces of product or 0.053 pounds active ingredient per application.  
**Maximum Amount of HERO Insecticide allowed per Season:** Do not apply more than 11 ounces of product or 0.106 pounds active ingredient per acre per season.  
**Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.**  
**Remarks**  
 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).  
 \*Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control.  
 \*\*Pyrethroid resistance is common for these pests. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the the resistance management statement in the DIRECTION FOR USE section of this label.

**Cotton (14 day PHI)**

Pests	Rate of Application
European Corn Borer Grasshoppers Soybean (Banded) Thrips Tobacco Thrips	3.6 – 10.3 ounces (0.035 – 0.10 pounds active) per acre
Armyworm, Fall* Armyworm, Yellowstriped Boll Weevil Bollworm Cabbage Looper Cotton Aphid Cotton Fleahopper Cotton Leafperforator Cutworms Saltmarsh Caterpillar Southern Garden Leafhopper Stink Bugs Tobacco Budworm*	5.2 – 10.3 ounces (0.05 – 0.10 pounds active) per acre
Carmine Spider Mite Lygus Species Pink Bollworm Twospotted Spider Mite Whitefly	10.3 ounces (0.10 pounds active) per acre

**RESTRICTIONS – Cotton**  
**Maximum Amount per Application:** Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application.

**Maximum Amount of HERO Insecticide allowed per Season:** Do not apply more than 46.35 ounces of product or 0.45 pounds active ingredient per acre per season.

**Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.**

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

**REMARKS - Cotton**

HERO Insecticide may be applied in water or refined vegetable oil (soybean/cottonseed).

**Application in Water:** Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray.

**ULV Application:** Apply the recommended rate of HERO Insecticide in refined vegetable oil in a minimum of 1 quart of finished spray per acre with aircraft calibrated to give adequate coverage.

**To Control Boll Weevil:** Apply HERO Insecticide at an interval of 3 to 4 days until pest numbers are reduced to acceptable levels. Do not exceed maximum allowable rate.

**To Control Mites and Aphids:** Apply when pests first appear. Repeat as necessary to maintain control. Do not exceed maximum allowable rate.

\*Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control.

**Field Corn (Grain and Silage), Popcorn, Field Corn Grown for Seed (At Plant Use)**

Pests	Rate of Application	
Armyworm spp. (including: true armyworm) Common Stalk Borer Cutworm spp. (including: Army cutworm) Seed cord maggot Root aphids White grub Wireworm spp.	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre	
<p><b>RESTRICTIONS</b>  <b>PHI:</b> Do not apply within 30 days of harvest for grain and stover and 60 days of harvest for forage.  <b>Maximum Amount per Application:</b> Do not apply more than 10.3 ounces of product or 0.10 pounds active ingredient per acre as an at-plant application.  <b>Maximum Amount of HERO Insecticide allowed per Season:</b> Do not apply more than 41.2 ounces of product or 0.40 pounds active ingredient per acre per season including at-plant plus foliar applications for this product.  <b>Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.</b></p> <p><b>REMARKS</b>  <b>For Seed cord maggot, Root aphids White grubs and Wireworms:</b> Apply in-furrow or in a 3 – 4 inch T-Band (band over the open furrow) at planting in a minimum of 3 – 7 gallons per acre.  <b>For Armyworm spp. and Cutworm spp:</b> Apply at planting on the soil surface in a 5 – 7 inch band in a minimum of 3 – 7 gallons per acre or broadcast in a minimum of 10 gallons per acre.                      Use higher recommended dosage for increased residual pest control.</p>		
Row spacing (inches)	Ounces/ 1000 linear feet	Pounds Active/1000 linear feet
30	0.23 – 0.59	0.0022 – 0.0057
20	0.15 – 0.39	0.0015 – 0.0038
15	0.115 – 0.30	0.0011 – 0.029

**Field Corn (Grain and Silage), Popcorn, Field Corn Grown for Seed. (Foliar Use)**

Pests	Rate of Application
Army Cutworm Bean Leaf Beetle Common Stalk Borer Cutworm Species Flea Beetle Grasshoppers Green Cloverworm Hop Vine Borer Western Bean Cutworm	2.6 – 6.1 ounces (0.025 – 0.06 pounds active) per acre
Aphid Species Armyworm, Fall* Armyworm, Southern Armyworm, True Armyworm, Yellowstriped Cereal Leaf Beetle Chinch Bug Corn Blotch leafminer (adult) Corn Earworm Corn leaf hopper Corn Rootworm Adult Corn silk fly Cucumber Beetle Adult European Corn Borer False chinch bug Greenbug Hornworms Japanese Beetle Adult Meadow Spittlebug Sap Beetle Southern Corn Leaf Beetle Southwestern Corn Borer Stinkbugs Tobacco Budworm** Webworms	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre
Banks Grass Mite Carmine Mite Lygus Species Twospotted Spider Mite	10.3 ounces (0.10 pounds active) per acre

**RESTRICTIONS – Field Corn**

**Maximum Amount per Application:** Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application.

**Maximum Amount of HERO Insecticide allowed per Season:** Do not apply more than 41.2 ounces of product or 0.4 pound active per acre per season including at-plant plus foliar applications.

**Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.**

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

Do not graze livestock in treated areas or cut treated crops for feed within 30 days of the last application.

Use of ultra low volume (ULV) application on corn is prohibited.

Do not make aerial or ground applications to corn if heavy rainfall is imminent.

**REMARKS – Field Corn**

**General:** Apply in a minimum of 2-5 gallons of finished spray per acre by aircraft or in a minimum of 10 gallons per acre with ground equipment. To improve control by aircraft, use 5 gallons of finished spray per acre particularly when initial populations are heavier than normal. When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**To control ear-attacking pests:** Apply HERO Insecticide just before silking and repeat as necessary to maintain control. Do not exceed maximum allowable rate.

**Southwestern Corn Borer, European Corn Borer:** Make application for corn borer control with initial application at or shortly before egg hatch.

**For control of other insect pests:** Apply when pests first appear and repeat as necessary. Do not exceed maximum allowable rate.

**For Control of Mites:**

Apply for Banks Grass Mite control when colonies first form prior to leaf damage or discoloration and before dispersal above the bottom third of the plant.

For Twospotted Spider Mite and Carmine Mite control, apply when colonies first form prior to leaf damage or discoloration and before widespread mite dispersal throughout the canopy.

Higher rates will be necessary for heavier initial populations and corn under heat or drought stress. Field experience with dimethoate at 0.5 lb. active per acre in tank mixture has demonstrated good control under these conditions.

**For mite control in Texas, New Mexico, Oklahoma, and Arizona:** Apply in a minimum of 5 gallons of finished spray per acre by aircraft or in a minimum of 10 gallons per acre with ground equipment.

\*Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control.

\*\*Pyrethroid resistance is common for these pests. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the the resistance management statement in the DIRECTION FOR USE section of this label.

**Sweet Corn (Grain and Silage), Sweet Corn Grown For Seed. (3 day PHI)  
(Foliar Use Only)**

Pests	Rate of Application
Aphid spp. Army Cutworm Armyworm, Beet Armyworm, Fall* Armyworm, Southern Armyworm Species Armyworm, True Armyworm, Yellowstriped Cereal Leaf Beetle Chinch Bug Common Stalk Borer Corn blotch leafminer (adult) Corn Earworm Corn Rootworm Adult Corn Silk Fly Cucumber Beetle Adult Cutworm Species European Corn Borer False Chinch bug Flea Beetle Grasshoppers Greenbug Japanese Beetle Adult Leafhoppers Sap Beetle Southern Corn Leaf Beetle Southwestern Corn Borer Stinkbugs Webworms Western Bean Cutworm	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre
Banks Grass Mite Carmine Mite Lygus Species Twospotted Spider Mite	10.3 ounces (0.10 pounds active) per acre

**RESTRICTIONS – Sweet Corn**  
**Maximum Amount per Application:** Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application.  
**Maximum Amount of HERO Insecticide allowed per Season:** Do not apply more than 27.39 ounces of product or 0.266 pounds active per acre per season.  
**Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.**  
 Do not graze livestock in treated areas or cut treated crops for feed within 3 days of the last application.  
 Apply at a minimum 3 to 5 day intervals or as needed for control.  
 Use of ultra low volume (ULV) application on corn is prohibited.  
 Do not make aerial or ground applications to corn if heavy rainfall is imminent.

**REMARKS – Sweet Corn**  
**General:** Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 20 gallons per acre with ground equipment. When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.  
**To control ear-attacking pests:** Apply HERO Insecticide when silking begins and repeat as necessary to maintain control.  
**Southwestern Corn Borer, European Corn Borer:** Make 2 applications for corn borer control with the initial application at or shortly before egg hatch.  
**For control of other insect pests:** Apply when pests first appear and repeat as necessary.  
**For Control of Mites:**  
 Apply for Banks Grass Mite control when colonies first form prior to leaf damage or discoloration and before dispersal above the bottom third of the plant.  
 For Twospotted Spider Mite and Carmine Mite control, apply when colonies first form prior to leaf damage or discoloration and before widespread mite dispersal throughout the canopy.  
 Higher rates will be necessary for heavier initial populations and corn under heat or drought stress.  
 \*Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control.

**Peanut (PHI 14 days)**

Pests Controlled	Rate of Application
Lesser cornstalk borer** Thrips (adults) Spider mite spp.	10.3 ounces (0.10 pounds active) per acre
Aphid spp. Armyworm, fall* Armyworm, southern Armyworm, true Armyworm, yellowstriped Bean leaf beetle Corn earworm Cutworm spp. Grasshopper spp. Green cloverworm Leafhopper spp. Lesser cornstalk borer Looper spp. Red-necked peanut worm Southern corn rootworm (adult) Stinkbug spp. Threecornered alfalfa hopper Vegetable weevil Velvetbean caterpillar Whitefringed beetle (adult)	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre

**RESTRICTIONS**  
**PHI:** Do not apply within 14 days of harvest.  
**Application Interval:** Do not make applications less than 14 days apart.  
**Maximum Amount per Application:** Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application.  
**Maximum Amount of HERO Insecticide allowed per Season:** Do not apply more than 41.2 ounces of product or 0.40 pound active ingredient per acre per season.  
**Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.**  
 Do not graze livestock in treated area. Do not use treated vines or hay for animal feed.  
 Do not feed green immature plants and peanut hay to livestock.

**Remarks**  
 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.  
 \*Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control.  
 \*\* Aids in control.

**Potato (PHI 21 days)**

Pests Controlled	Rate of Application
Cutworm spp. Flea beetle spp. Grasshopper	2.6 – 6.1 ounces (0.025 – 0.06 pounds active) per acre
Aphid spp. Armyworm, fall* Armyworm, southern Armyworm, true Armyworm, yellowstriped Banded cucumber beetle Chinch bug Colorado potato beetle* Cucumber beetle (adult) European cornborer False chinch bug Grasshopper spp. Looper spp. Potato leafhopper Sugarcane beetle Sweetpotato flea beetle Sweetpotato weevil (adult) Potato tuberworm**	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre
Plant bug spp. Twospotted spider mite	10.3 ounces (0.10 pounds active) per acre
<b>RESTRICTIONS</b> <b>PHI:</b> Do not apply within 21 days of harvest. <b>Application Interval:</b> Do not make applications less than 21 days apart. <b>Maximum Amount per Application:</b> Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application. <b>Maximum Amount of HERO Insecticide allowed per Season:</b> Do not apply more than 46.35 ounces of product or 0.45 pound active ingredient per acre per season, including soil applications. Do not make more than two foliar applications per season. <b>Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.</b> Leaves of Root and Tuber vegetables (except sugar beet tops) cannot be used for food or feed. <b>Remarks</b> 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 3 gallons by air). Follow appropriate spray drift precautions on this label. *Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control. ** For Tuberworm control apply prior to harvest or senesce to adults and larvae tuberworms when economic thresholds are met.	

**Soybeans (21 day PHI).**

Pests	Rate of Application
Bean Leaf Beetle Cutworms Flea beetle Grasshoppers Green cloverworm Painted Lady (Thistle) Caterpillar Silverspotted Skipper	2.6 – 6.1 ounces (0.025 – 0.06 pounds active) per acre
Alfalfa Caterpillar Armyworm, fall* Armyworm, southern Armyworm, true Armyworm, yellowstriped Blister Beetle spp. Corn Earworm Corn Rootworm Adult Cowpea Curculio Cucumber Beetle Adult Dectes Stem Borer European Corn Borer False Chinch Bug Grape colapsis (adult) Hornworms Imported Cabbageworm Japanese beetle Adult Leaf Skeletonizer spp. Leafhoppers Leafminers Adults Lesser Cornstalk Borer Loopers Mexican Bean Beetle Pea Leaf Weevil Saltmarsh Caterpillar Seedcorn Maggot Adult Soybean Aphid Spittlebug Stink Bug Three-Cornered Alfalfa Hopper Thrips Tobacco Budworm** Velvetbean Caterpillar Webworm Woollybear Caterpillar	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre
Lygus Species Whitefly Thrips Two Spotted Spider Mite	10.3 ounces (0.10 pounds active) per acre
<b>RESTRICTIONS</b> <b>Maximum Amount per Application:</b> Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application. <b>Maximum Amount of HERO Insecticide allowed per Season:</b> Do not apply more than 41.2 ounces of product or 0.40 pounds active ingredient per acre per season. <b>Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.</b> Do not make applications less than 30 days apart. Do not graze or harvest treated soybean forage, straw, or hay for livestock feed. <b>REMARKS - Soybean</b> 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). Thorough coverage is essential to achieve control. Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold levels. *Coverage is essential for control of this pest. Under heavy outbreak conditions, tank mixing with another product that is labeled for this pest is recommended for control. **Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.	

## Soybeans (at-plant use)

Pests	Rate of Application	
Armyworm spp. (including : true armyworm) Cutworm spp. (including : Army cutworm) Grape colapsis Seed corn maggot Root aphids White grub Wireworm spp.	4.1 – 10.3 fl oz/A (0.04 – 0.10 lbs ai) per acre	
<b>RESTRICTIONS</b> <b>PHI:</b> Do not apply within 21. <b>Maximum Amount of HERO Insecticide allowed per Application:</b> Do not apply more than 0.10 lb ai/A per application. <b>Maximum Amount of HERO Insecticide allowed per Season:</b> Do not apply more than 41.2 ounces of product or 0.40 pounds of active ingredient per acre per season. <b>REMARKS</b> <b>For Seed corn maggot, Root aphids White grubs and Wireworms:</b> Apply in-furrow or in a 3 – 4 inch T-Band (band over the open furrow) at planting in a minimum of 2 – 7 gallons per acre. <b>For Armyworm spp. and Cutworm spp:</b> 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. Use higher recommended dosage for increased residual pest control.		
Row spacing (inches)	Fl oz/ 1000 linear feet	Lbs ai/ 1000 linear feet
30	0.59 – 0.23	0.0057 – 0.0023
20	0.39 – 0.16	0.0038 – 0.0015
15	0.29 – 0.12	0.0029 – 0.011

## Soybeans (PPI and PRE)

Pests	Rate of Application
<b>Pre-Plant Incorporated (PPI)</b>	
Black Cutworm White Grub Wireworm Seedcorn Maggot Armyworm spp.	4.1 – 10.3 fl oz/A (0.04 – 0.10 lbs ai) per acre
<b>Pre-Emergence (PRE)</b>	
Black Cutworm Armyworm spp. Stalkborer	2.6 – 6.1 fl oz/A (0.025 – 0.06 lbs) ai/per acre
<b>RESTRICTIONS</b> <b>PHI:</b> Do not apply within 21. <b>Maximum Amount of HERO Insecticide allowed per Application:</b> Do not apply more than 0.10 lb ai/A per application. <b>Maximum Amount of HERO Insecticide allowed per Season:</b> Do not apply more than 41.2 ounces of product or 0.40 pounds of active ingredient per acre per season. <b>REMARKS</b> <b>For PPI treatments,</b> Hero Insecticide can be tank mixed and applied with PPI herbicides. Incorporation of Hero Insecticide should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth. <b>For PRE treatments,</b> Hero Insecticide may be applied and can be tank mixed and applied with PRE herbicides.	

## VEGETABLES

### Cucurbits (PHI 3 days)

Including: Cantaloupes, Citron melon; muskmelon; watermelon Chayote (fruit); Chinese waxgourd; Cucumber; gherkin; gourd, edible; Momordica spp.; pumpkin; squash, summer; squash, winter.

Pests	Rates of Application
Aphid spp. Armyworm, fall* Armyworm, southern Armyworm, true Armyworm, yellowstriped Cabbage looper Corn earworm Cucumber beetle Cutworm spp. Grasshopper Leafhopper spp. Melonworm Pickleworm Rindworm Squash bug Squash vine borer Stink bug spp. Tobacco budworm**	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre
Carmine mite Plant bug spp. Twospotted spider mite Whitefly	10.3 ounces (0.10 pounds active) per acre
<b>RESTRICTIONS</b> <b>PHI</b> Do not apply within 3 days of harvest <b>Application Interval:</b> Do not make applications less than 7 days apart. <b>Maximum Amount per Application:</b> Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application. <b>Maximum Amount of HERO Insecticide allowed per Season:</b> Do not apply more than 41.2 ounces of product or 0.4 pound active ingredient per acre per season. Do not make more than two applications after bloom. <b>Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.</b> <b>Remarks</b> Apply in a minimum of 5 gallons of finished spray per acre by air or in a minimum of 20 gallons per acre with ground equipment. When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray. Thorough coverage is essential to achieve control. *Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control. **Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.	



## Eggplant, Okra, Pepper (Bell & Non-Bell) and Pepino (7 day PHI)

Pests	Rate of Application
Armyworm, Fall* Armyworm, Southern Armyworm, true Armyworm, Yellowstriped Bagrada bug Cabbage Looper Celery Leaf Tier Colorado Potato Beetle** Corn Earworm Cucumber Beetle Cutworm Species European Corn Borer Flea Beetle Garden Webworm Grasshoppers Hornworms Leafhopper Species Meadow Spittlebug Pepper Maggot Adult Pepper Weevil Southwestern Corn Borer Stink Bug Tobacco Budworm** Tomato Fruitworm Tomato Hornworm Tomato Pinworm Vegetable Leafminer	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre

Banks Grass Mite Carmine Mite Lygus Species Pacific Spider Mite Thrips Species Psyllid Species Twospotted Spider Mite Whitefly	10.3 ounces (0.10 pounds active) per acre
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**RESTRICTIONS**  
**Maximum Amount per Application:** Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application.  
**Maximum Amount of HERO Insecticide allowed per Season:** Do not apply more than 27.39 ounces of product or 0.266 pounds active per acre per season.  
**Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.**  
 Do not make applications less than 7 days apart.

**REMARKS**  
 Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.  
 \*Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control.  
 \*\*Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.

## Tomato (1 day PHI)

Pests	Rate of Application
Armyworm, Fall* Armyworm, Southern Armyworm, Yellowstriped Armyworm, true Bagrada bug Cabbage Looper Celery Leaf Tier Colorado Potato Beetle** Corn Earworm Cucumber Beetle Cutworm Species European Corn Borer Flea Beetle Garden Webworm Grasshoppers Hornworms Leafhopper Species Meadow Spittlebug Pepper Maggot Adult Pepper Weevil Southwestern Corn Borer Stink Bug Tobacco Budworm** Tomato Fruitworm Tomato Hornworm Tomato Pinworm Vegetable Leafminer	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre
Banks Grass Mite Carmine Mite Lygus Species Pacific Spider Mite Psyllid species Thrips Species Twospotted Spider Mite Whitefly	10.3 ounces (0.10 pounds active) per acre

**RESTRICTIONS – Tomato**  
**Maximum Amount per Application:** Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application.  
**Maximum Amount of HERO Insecticide allowed per Season:** Do not apply more than 43.26 ounces of product or 0.42 pounds active per acre per season.  
 Do not make more than four applications per season.  
**Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.**  
 Do not make applications less than 10 days apart.

**REMARKS – Tomato**  
 Apply in water as necessary for insect control using a minimum of 15 gallons of finished spray per acre with ground equipment and 2 gallons per acre by air.  
 \*Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control.  
 \*\*Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.

## Head Lettuce (7 day PHI)

Pests	Rate of Application
Aphid Species Armyworm, fall* Armyworm, southern Armyworm, true Armyworm, yellowstriped Bagrada bug Chinch bug Corn Earworm Crickets Cucumber Beetle Cutworm Species Diamondback Moth** Flea Beetle Imported Cabbageworm Leafhopper Species Leafminer (adults) Loopers Saltmarsh Caterpillar Stink Bug Tobacco Budworm**	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre
Carmine Mite Lygus Species Onion Thrips Twospotted Spider Mite Whitefly	10.3 ounces (0.10 pounds active) per acre

**RESTRICTIONS – Head Lettuce**  
**Maximum Amount per Application:** Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application.  
**Maximum Amount of HERO Insecticide allowed per Season:** Do not apply more than 46.35 ounces of product or 0.45 pounds active per acre per season.  
**Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.**  
 Do not make applications less than 7 days apart.  
**REMARKS – Head Lettuce**  
 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. When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray.  
 Thorough coverage is essential to achieve control.  
 \*Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control.  
 \*\*Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.

## Head & Stem Brassica (7 day PHI)

(including: Broccoli; Chinese Broccoli (gai lan, white flowering broccoli); Brussels Sprouts; Cauliflower; Cavalo broccolo; Kohlrabi; Cabbage; Chinese Cabbage (napa)).

Pests	Rate of Application
Aphid Species Armyworm, fall* Armyworm, southern Armyworm, true Armyworm, Yellowstriped Bagrada bug Click Beetle (wireworm adult) Corn Earworm Crickets Cucumber Beetle Cutworm Species Diamondback Moth** Flea Beetle Grasshoppers Imported Cabbageworm Leafhopper Species Leafminer Species Loopers Saltmarsh Caterpillar Southern Cabbageworm Stink Bug Tobacco Budworm**	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre
Banks Grass Mite Cabbage Webworm Carmine Mite Lygus Species Pacific Spider Mite Thrips Species Twospotted Spider Mite Whitefly	10.3 ounces (0.10 pounds active) per acre

**RESTRICTIONS – Head & Stem Brassica**  
**Maximum Amount per Application:** Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application.  
**Maximum Amount of HERO Insecticide allowed per Season:** Do not apply more than 46.35 ounces of product or 0.45 lb. active ingredient per acre per season.  
 Do not make more than 5 applications after bloom.  
**Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.**  
 Do not make applications less than 7 days apart.  
 Do not apply within 7 days of harvest.  
**REMARKS – Head & Stem Brassica**  
 Apply in a minimum of 5 gallons of finished spray per acre by air or in a minimum of 15 gallons per acre with ground equipment. When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray.  
 Thorough coverage is essential to achieve control.  
 \*Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control.  
 \*\*Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.

**Leafy Brassica (PHI 7 days)**

Including: Broccoli raab; cabbage, Chinese (bokchoy); collards; kale; mizuna; mustard greens; mustard spinach; rape greens

Pest Controlled	Rate of Application
Aphid spp. Armyworm, fall* Armyworm, southern Armyworm, true Armyworm, yellowstriped Bagrada bug Cabbageworm Click beetle (wireworm adult) Corn earworm Crickets Cucumber beetle (adult) Cutworm spp. Diamondback moth** Flea beetle spp. Grasshopper spp. Imported cabbageworm Japanese beetle (adult) Leafhopper spp. Leafminer (adult) Looper spp. Saltmarsh caterpillar Stinkbug spp. Thrips Tobacco budworm** Wireworm (adult)	4.0 – 10.3 ounces per acre (0.04 – 0.10 pounds active) per acre
Carmine mite Plant bug spp. Pacific spider mite Thrips Twospotted spider mite	10.3 ounces (0.10 pounds active) per acre

**RESTRICTIONS**  
**PHI:** Do not apply within 7 days of harvest.  
**Application Interval:** Do not make applications less than 7 days apart.  
**Maximum Amount per Application:** Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application.  
**Maximum Amount of HERO Insecticide allowed per Season:** Do not apply more than 46.35 ounces of product or 0.45 pound active ingredient per acre per season.  
**Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.**  
**Remarks**  
 Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.  
 Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 15 gallons by ground and 5 gallons by air).  
 Follow appropriate spray drift precautions on this label.  
 \*Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control.  
 \*\*Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.

**Dried and Succulent Peas and Beans (except Soybeans) (PHI 3 days for Succulent Shelled or Edible-Podded Peas or Beans and 21 days for Dried Shelled Peas or Beans)**

**Succulent Edible-Podded Pea and Bean or Succulent Shelled Pea and Bean including** Dwarf Pea; Edible-pod Pea; Snow Pea; Sugar Snap Pea; Pigeon pea; Soybean (immature seed); Swordbean; English Pea; Garden Pea; Green Pea; Runner Bean; Snap Bean; Wax Bean; Asparagus Bean; Chinese Longbean; Moth Bean; Yardlong Bean; Jackbean; Lima Bean (Green); Broad Bean (Succulent); Blackeyed Pea; Southern Pea; Cowpea.

**Dried Shelled Pea and Bean (except Soybean) including** Broad Bean (Fava Bean); Blackeyed Pea; Southern Pea; Grain Lupin; Sweet Lupin; White Lupin; White Sweet Lupin; Field Bean; Kidney Bean; Lima Bean (Dry); 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; Lentil; Field pea; Pigeon Pea.

Pests	Rate of Application
Alfalfa Caterpillar Aphid Spp. Armyworm, Fall* Armyworm, Southern Armyworm, True Armyworm, Yellowstriped Bagrada bug Bean Leaf Beetle Blister Beetle Spp. Chinch bug Corn Earworm Corn Rootworm (adult) Cowpea Curculio Cucumber beetle (adult)** Cutworm spp. Dectes stem borer (adult)** European Corn Borer False Chinch Bug Flea Beetle spp. Grasshopper spp. Green Cloverworm Hornworm spp. Imported Cabbageworm Japanese beetle (Adult) Leaf Skeletonizer spp. Leafhopper spp. Leafminer spp. (adult) Lesser Cornstalk Borer Looper spp. Mexican Bean Beetle Painted Lady (Thistle Caterpillar) Pea Leaf Weevil Pea seed weevil Saltmarsh Caterpillar Sap Beetle Seedcorn Beetle Seedcorn Maggot Silverspotted Skipper Southwest Corn Borer Spittlebug Stinkbug spp. Threecornered alfalfa hopper Tobacco Budworm* Velvetbean Caterpillar Webworm Spp. Western Bean Cutworm	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre
Banks Grass Mite Carmine Mite Lygus Species Thrips Species Twospotted Spider Mite Whitefly	10.3 ounces (0.10 pounds active) per acre

**RESTRICTIONS**  
**Succulent Edible-Podded Pea and Bean or Succulent Shelled Pea and Bean:**  
**PHI:** Do not apply within 3 days of harvest.  
**Application Interval:** Do not make applications less than 5 days apart.  
**Dried Shelled Pea and Bean (except Soybean):**  
**PHI:** Do not apply within 21 days of harvest.  
**Application Interval:** Do not make applications less than 7 days apart.  
**Maximum Amount per Application:** Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application.  
**Maximum Amount of HERO Insecticide allowed per Season:** Do not apply more than 27.39 ounces of product or 0.266 pounds active per acre per season.  
**Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.**

**REMARKS**  
 Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray.  
 \*Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control.  
 \*\*Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.

**Root and Tuber Vegetables Group 1 (except Sugar Beet, Garden Beet and Potato) (21 day PHI)**

Including: Arracacha; Arrowroot; Artichoke (Chinese and Jerusalem); 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; Oriental Radish (Daikon); Rutabaga; Salsify (Oyster Plant); Black Salsify; Spanish Salsify; Skirret; Sweet Potato; Tanier (Cocoyam); Turmeric; Turnip; Yam Bean; and Yam (True) (see Potato section for Potato use directions.).

Pest	Rate of Application
Cutworms Flea Beetle Grasshoppers	2.6 – 6.1 ounces (0.025 – 0.06 pounds active) per acre
Aphids Armyworm, fall* Armyworm, southern Armyworm, true Armyworm, yellowstriped Banded Cucumber beetle Bagrada Bug Black flea beetle Chinch bug Colorado Potato Beetle Cucumber beetle Adult European cornborer False chinch bug Grasshopper spp. Japanese beetle June beetle Loopers Potato leafhopper Sugarcane beetle Sweetpotato flea beetle Sweetpotato weevil Adult Potato Tuberworm** Rootworm spp. (adults)	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre
Lygus species Two Spotted Spider Mite	10.3 ounces (0.10 pounds active) per acre

**RESTRICTIONS – Root and Tuber Vegetables**  
Do not make applications less than 21 days apart.  
**Maximum Amount per Application:** Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application.  
**Maximum Amount of HERO Insecticide allowed per Season:** Do not apply more than 46.35 ounces of product or 0.45 pounds of active ingredient per acre per season, including soil application.  
Do not make more than two foliar applications per season  
**Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.**  
Leaves of Root and Tuber Vegetables (except sugar beet tops) cannot be used for food or feed.  
**REMARKS – Root and Tuber Vegetables**  
Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 25 gallons by ground and 3 gallons by air).  
Thorough coverage is essential to achieve control.  
Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold levels.  
\* Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. Refer to the resistance management statement in the DIRECTIONS FOR USE section of this label.  
\*Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control.  
\*\*Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.  
\*\* For Tuberworm control (adults and larvae) apply prior to harvest or senesce when economic thresholds are met.

**Garden Beet (1 day PHI)**

Pest	Rate of Application
Cutworms Flea Beetle Grasshoppers	2.6 – 6.1 ounces (0.025 – 0.06 pounds active) per acre
Aphids Armyworm, fall* Armyworm, southern Armyworm, true Armyworm, yellowstriped Banded Cucumber beetle Bagrada Bug Black flea beetle Chinch bug Colorado Potato Beetle Cucumber beetle Adult European cornborer False chinch bug Grasshopper spp. Japanese beetle June beetle Loopers Potato leafhopper Sugarcane beetle Sweetpotato flea beetle Sweetpotato weevil Adult Potato Tuberworm** Rootworm spp. (adults)	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre
Lygus species Two Spotted Spider Mite	10.3 ounces (0.10 pounds active) per acre

**RESTRICTIONS – Garden Beets**  
Do not make applications less than 7 days apart.  
**Maximum Amount per Application:** Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application.  
**Maximum Amount of HERO Insecticide allowed per Season:** Do not apply more than 46.35 ounces of product or 0.45 pounds of active ingredient per acre per season, including soil application.  
Do not make more than two foliar applications per season  
**Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.**  
Leaves cannot be used for food or feed.  
**REMARKS – Garden Beets**  
Apply by ground or air equipment using sufficient water to obtain full coverage of foliage (minimum of 25 gallons by ground and 3 gallons by air).  
Thorough coverage is essential to achieve control.  
Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold levels.  
\* Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. Refer to the resistance management statement in the DIRECTIONS FOR USE section of this label.  
\*Coverage is essential for control of this pest. Under heavy outbreaks tank mixing with another product that is labeled for this pest is recommended for control.  
\*\*Pyrethroid resistance is common for this pest. Please consult your local or state agricultural authority to determine if resistance pest populations are in your area. If so refer the resistance management statement in the DIRECTION FOR USE section of this label.  
\*\* For Tuberworm control (adults and larvae) apply prior to harvest or senesce when economic thresholds are met.

## BUSHES, VINES and TREES

### Blueberries (PHI 1 day)

Pests Controlled	Rate of Application
Aphid spp. Blueberry maggot Fruitworms Leaf hopper spp. Lecanium scale (crawlers) Plum curculio Oblique leafroller Red banded leafroller Spanworm Variegated leafroller	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre
Twospotted mite Carmine mite Pacific mite Lygus sp.	10.3 ounces (0.10 pounds active) per acre
<b>RESTRICTIONS</b> <b>PHI:</b> Do not apply within 1 day of harvest. <b>Application Interval:</b> Do not make applications less than 7 days apart. <b>Maximum Amount per Application:</b> Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application. <b>Maximum Amount of HERO Insecticide allowed per Season:</b> Do not apply more than 46.35 ounces of product or 0.45 pound active ingredient per acre per season. <b>Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.</b> <b>Remarks</b> 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). Follow appropriate spray drift precautions on this label.	

### Caneberries (PHI 3 day)

Including: Blackberries, Bingleberries, Dewberries, Lowberries, Marionberries, Olallieberries, Youngberries, Loganberries, Raspberries.

Pests Controlled	Rate of Application
Leafroller spp. Orange tortrix Root weevil spp. Blackvine weevil	4.0 – 10.3 ounces (0.04 – 0.10 pounds active) per acre
Twospotted mite Carmine mite Raspberry crown borer	10.3 fl ounces (0.10 pounds active) per acre
<b>RESTRICTIONS</b> <b>PHI:</b> Do not apply within 3 day of harvest. <b>Application Interval:</b> Do not make applications less than 7 days apart. <b>Maximum Amount per Application:</b> Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application. <b>Maximum Amount of HERO Insecticide allowed per Season:</b> Do not apply more than 27.4 ounces of product or 0.266 pound active ingredient per acre per season. <b>Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.</b> <b>Remarks</b> Apply by air or ground equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gallons per acre by air and 50 gallons per acre by ground). One application may be made pre-bloom and a second application may be made post bloom For Crown Borer, apply 0.10 pound active per acre post-harvest (fall) or pre-bloom (spring), as a drench application directed at the crown of plants in a minimum of 200 gallons water/acre. Greater efficacy is observed at higher water gallonages (up to 400 gallons/a) or in an application prior to a significant rainfall event. Do not make both pre-bloom foliar and pre-bloom drench applications. Follow appropriate spray drift precautions on this label.	

### Grape (PHI 30 days)

Pests Controlled	Rate of Application
Asian lady bird beetle Cutworm spp. Eastern grape leafhopper Grape berry moth Grape vine root borer (adult) Japanese beetle (adult) Lady bird beetle Variegated leafhopper Western grape leafhopper	4.0 – 10.3 fl ounces per acre (0.04 – 0.10 pounds active) per acre
Black vine weevil Glasswinged sharpshooter Twospotted spider mite	10.3 ounces (0.10 pounds active) per acre
<b>RESTRICTIONS</b> <b>PHI:</b> Do not apply within 30 days of harvest. <b>Application Interval:</b> Do not make applications less than 7 days apart. <b>Maximum Amount per Application:</b> Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application. <b>Maximum Amount of HERO Insecticide allowed per Season:</b> Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per acre per season. <b>Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.</b> <b>Remarks</b> 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 25 gallons by ground and 10 gallons by air). Follow appropriate spray drift precautions on this label.	

### Pecans (21 day PHI)

Pests	Rate of Application
Black Pecan Aphid Hickory Shuckworm Pecan Nut Casebearer Pecan Weevil Yellow Pecan Aphid	10.3 ounces (0.10 lbs ai) per acre
<b>RESTRICTIONS – Pecans</b> <b>Maximum Amount per Application:</b> Do not apply more than 10.3 ounces of product or 0.10 pound active ingredient per application. <b>Maximum Amount of HERO Insecticide allowed per Season:</b> Do not apply more than 0.45 lb. active ingredient per acre per season. <b>Refer to the maximum usage tables when applying more than one product containing either zeta-cypermethrin or bifenthrin to this crop.</b> Do not make applications less than 15 days apart. Do not graze livestock in treated orchards or cut treated cover crops for feed. <b>REMARKS – Pecans</b> <b>Application by ground:</b> Apply as a dilute (minimum of 200 gallons of finished spray per acre) or concentrate (minimum of 50 gallons of finished spray per acre) spray in sufficient water to provide thorough coverage. <b>Application by air:</b> Apply the specified dosage in a minimum of 10 gallons of finished spray per acre.	

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