



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

EPA Reg. Number: 279-3315

Date of Issuance: FEB 15 2007

Term of Issuance: Conditional

Name of Pesticide Product: Hero Insecticide

NOTICE OF PESTICIDE:
[X] Registration
[ ] Reregistration

(Under FIFRA as amended)

Name and Address of Registrant (include ZIP Code):
FMC Corporation
1735 Market Street
Philadelphia, PA 19103

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A), provided that you:

- 1. You will submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

Signature of Approving Official:

Date:

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2. You agree that the subject registration is conditional under the same terms and conditions for data generation as stipulated in the Agency's November 15, 1993 and November 15, 2004 letters for use of these products on cotton.

3. You agree that the current synthetic pyrethroid mitigation measures are interim in nature and may be reconsidered or modified after review and evaluation of the Spray drift Task Force data.

4. FMC understands that it is the US EPA intent to complete the reviews of all relevant data and other information that are available to the agency, and to make FIFRA 3(c)(5) or other appropriate regulatory decisions for cotton- use synthetic pyrethroids and other crops conditionally registered based on the Agency's review of such data/information and considering statutory and regulatory criteria for such decisions.

5. You will make the following label changes before you release the product for shipment:

a. Revise the EPA Registration Number to read "EPA Registration Number 279-3315."

b. Under Ingredient Statement add "Contains Petroleum Distillates".

c. Under Physical or Chemical Hazards change "Do not use or store near heat or open flame." to "Combustible: Do not use or store near heat or open flame."

d. Revise section of the warranty statement as follows:

(1) Change "should" to "must" in the first sentence of the second paragraph.

e. On the front panel add, "See other panels for additional precautionary information."

f. Move the paragraph on page 2 beginning, "Do not apply this product in a way ... etc." directly above the Agricultural Use box.

g. Revise the Pesticide Disposal paragraph to read, "Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility."

h. On page 9 under Tomatoes the application interval is 10 days. Change 7 to 10 under restrictions.

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**ACUTE TOXICITY REVIEW**

STUDY	MRID	CATEGORY	CLASSIFICATION
Acute Oral	46894602	III	Acceptable
Acute Dermal	46894603	IV	Acceptable
Acute Inhalation	46894604	III	Acceptable
Eye Irritation	46894605	III	Acceptable
Dermal Irritation	46894606	IV	Acceptable
Dermal Sensitization	46894607	Positive	Acceptable

A copy of the review is enclosed for your records.

6. Please submit an updated certification with respect to citation of data form with the General Offer to Pay box checked also since you have made an offer to pay to certain task forces.

7. You must submit a one year storage stability (830.6317) and a corrosion characteristics (830.6320) study on the proposed product. A hard copy of the results must be submitted to the Agency along with an electronic copy. You have intended that these studies are ongoing.

8. Please submit two (2) copies of your final printed labeling before releasing the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing amended labeling constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

If you have any questions regarding this action, please contact Linda A. DeLuise of my team at (703) 305-5428.

4 815

**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.



EPA Reg. No. 279-GGRL

EPA Est. 279-

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

HERO™ 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.

U.S. Patent No. Pending

**KEEP OUT OF REACH OF CHILDREN**

### CAUTION

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

FEB 15 2007

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

279-335



FMC Corporation  
Agricultural Products Group  
Philadelphia PA 19103

FIRST AID	
<b>IF SWALLOWED</b>	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
<b>IF ON SKIN OR CLOTHING</b>	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.
<b>IF IN EYES</b>	Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center for treatment advice.
<b>IF INHALED</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth if possible. Call a poison control center or doctor for further treatment advice.
NOTE TO PHYSICIAN	
Contains petroleum distillates. Vomiting may cause aspiration pneumonia.	
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 Assistance.	

### 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, or using tobacco. 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.

### Environmental Hazards

is pesticide is extremely toxic to fish and aquatic invertebrates. 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

Do not use or store near heat or open flame.

### DIRECTIONS FOR USE

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

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

**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.

### 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.

### 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.

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

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call FMC: (800) 331-3148.

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**  
Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

**Container Disposal**  
**Metal Containers:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities. Do not cut or weld metal containers.

**Plastic Containers:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, 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.

**Returnable/Refillable Sealed Containers:** Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

## 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.

Do not apply when wind speed favors drift beyond the area intended for treatment

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.

## 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.

## 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, Cotton, Corn, Eggplant, Peppers, Tomatoes, Head Lettuce, Head & Stem Brassica, Succulent Peas & Beans, and Pecans. Observe all restrictions and precautions that appear on the labels of these products. Test for compatibility of products before mixing.

## Spray Drift Precautions

Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season. Synthetic pyrethroid products include (but are not limited to) Ambush<sup>®</sup>, Ammo<sup>®</sup>, Asana<sup>®</sup>XL, Baythroid<sup>®</sup>, Capture<sup>®</sup>, Danitol<sup>®</sup>, Fury<sup>®</sup>, Karate<sup>®</sup>, Mustang<sup>®</sup>, and Scout<sup>®</sup>X-TRA.

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers.

**OBSERVE THE FOLLOWING PRECAUTIONS WHEN SPRAYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS; RIVERS; PERMANENT STREAMS, MARSHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.**

Do not apply by ground equipment within 25 feet, or by air within 150 feet of lakes; reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries, and commercial fish farm ponds. Increase the buffer zone to 450 feet when ultra low volume (ULV) application is made. For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of wingspan or rotor diameter.

Use the largest droplet size consistent with good pest control. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.

Spray should be released at the lowest height consistent with pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided.

Make aerial or ground applications when the wind velocity favors on target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid applications when wind gusts approach 15 mph.

Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

Do not cultivate within 10' of the aquatic area so as to allow growth of a vegetative filter strip.

Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of increased spray drift to aquatic areas. Avoid spraying during conditions of low humidity and/or high temperature.

Do not make aerial or ground applications during 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.

**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			
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	0.0675	NA	NA	0.3
Eggplant	0.3	0.15	0.0675	NA	NA	0.3
Pepper (Bell & in-Bell)	0.3	0.15	0.0675	NA	NA	0.3
Tomato	0.3	0.15	0.105	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
Succulent Peas and Beans	0.3	0.15	0.0675	NA	NA	0.3
Pecans	0.3	0.15	0.1125	0.6	0.6	0.3

\* Mustang or Fury (1.5 EW or 1.5 EC); Mustang Max (0.8 EC or 0.8 EW); 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)		When Applying Bifenthrin * Products Plus HERO to the Same Crop
	Bifenthrin		
	HERO	Bifenthrin *	
Cotton	0.3375	0.50	.50
Field Corn	0.30	0.30	.30
Sweet Corn	0.20	0.20	.20
Eggplant	0.20	0.20	.20
Pepper (Bell & Non-Bell)	0.20	0.20	.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
Succulent Peas and Beans	0.20	0.20	0.20
Pecans	0.3375	0.50	0.50

\* Any bifenthrin product approved for crop use.

**FIELD CROPS****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 lbs ai) per acre
Amyworm, 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 lbs ai) per acre
Amyworm, Beet Carmine Spider Mite Lygus Species Pink Bollworm Twospotted Spider Mite Whitefly	10.3 ounces (0.10 lbs ai) per acre

**RESTRICTIONS – Cotton**

Do not apply more than 0.45 pounds active ingredient per acre per season.

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.

**To Control Mites and Aphids:** Apply when pests first appear. Repeat as necessary to maintain control.



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

Pests	Rate of Application
Amy 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 lbs ai) per acre
Aphid Species Armyworm, Beet Armyworm, Fall Armyworm, Southern Armyworm, True Armyworm Species Armyworm, Yellowstriped Cereal Leaf Beetle inch Bug Corn Earworm Corn Rootworm Adult Cucumber Beetle Adult European Corn Borer 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 lbs ai) per acre
Banks Grass Mite Carmine Mite Lygus Species Twospotted Spider Mite	10.3 ounces (0.10 lbs ai) per acre

**RESTRICTIONS – Field Corn**

HERO Insecticide is for use in **foliar applications only**. Soil applications of this product are prohibited.

Do not apply more than 0.4 pound active per acre per season for foliar applications.

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.

Use of HERO Insecticide on corn is prohibited in all coastal counties.

**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.

**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.

**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.

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

Pests	Rate of Application
Army Cutworm Armyworm, Beet Armyworm, Fall Armyworm, Southern Armyworm Species Armyworm, True Armyworm, Yellowstriped Cereal Leaf Beetle Chinch Bug Common Stalk Borer Corn Earworm Corn Rootworm Adult Corn Silk Fly Cucumber Beetle Adult Cutworm Species European Corn Borer Grasshopper 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 lbs ai) per acre
Banks Grass Mite Carmine Mite Lygus Species Twospotted Spider Mite	10.3 ounces (0.10 lbs ai) per acre

**RESTRICTIONS – Sweet Corn**

Do not apply more than 0.266 pounds active per acre per season.

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.

Use of HERO Insecticide is prohibited in all coastal counties.

**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.

**VEGETABLES**

**Eggplant (7 day PHI)**

Pests	Rate of Application
Armyworm, Beet Armyworm, Fall Armyworm, Southern Armyworm, Yellowstriped 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 lbs ai) per acre
Banks Grass Mite Carmine Mite Lygus Species Pacific Spider Mite Thrips Species Tomato Psyllid Twospotted Spider Mite Whitefly	10.3 ounces (0.10 lbs ai) per acre
<p><b>RESTRICTIONS – Eggplant</b></p> <p>Do not apply more than 0.266 pounds active per acre per season.</p> <p>Do not make applications less than 7 days apart.</p> <p><b>REMARKS – Eggplant</b></p> <p>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.</p> <p>Thorough coverage is essential to achieve control.</p>	

**Peppers, bell and non-bell (7 day PHI)**

(including, but not limited to: bell pepper, chili pepper, cooking pepper, pimento, and sweet pepper).

Pests	Rate of Application
Armyworm, Beet Armyworm, Fall Armyworm, Southern Armyworm, Yellowstriped 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 lbs ai) per acre
Banks Grass Mite Carmine Mite Lygus Species Pacific Spider Mite Thrips Species Tomato Psyllid Twospotted Spider Mite Whitefly	10.3 ounces (0.10 lbs ai) per acre
<p><b>RESTRICTIONS – Peppers</b></p> <p>Do not apply more than 0.266 pounds active per acre per season.</p> <p>Do not make applications less than 7 days apart.</p> <p><b>REMARKS – Peppers</b></p> <p>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.</p> <p>Thorough coverage is essential to achieve control.</p>	

**Tomato (1 day PHI)**

(including, but not limited to: groundcherry and tomatillo).

Pests	Rate of Application
Armyworm, Beet Armyworm, Fall Armyworm, Southern Armyworm, Yellowstriped 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 lbs ai) per acre
Banks Grass Mite Carmine Mite Lygus Species Pacific Spider Mite Thrips Species Tomato Psyllid Twospotted Spider Mite Whitefly	10.3 ounces (0.10 lbs ai) per acre
<p><b>RESTRICTIONS – Tomato</b></p> <p>Do not apply more than 0.42 pounds active per acre per season.</p> <p>Do not make more than four applications per season.</p> <p>Do not make applications less than 7 days apart.</p> <p><b>REMARKS – Tomato</b></p> <p>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.</p> <p>Thorough coverage is essential to achieve control.</p>	

**Head Lettuce (7 day PHI)**

Pests	Rate of Application
Aphid Species Armyworms Corn Earworm Crickets Cucumber Beetle Cutworm Species Diamondback Moth Flea Beetle Imported Cabbageworm Leafhopper Species Loopers Saltmarsh Caterpillar Stink Bug Tobacco Budworm	4.0 – 10.3 ounces (0.04 – 0.10 lbs ai) per acre
Carmine Mite Lygus Species Onion Thrips Twospotted Spider Mite Whitefly	10.3 ounces (0.10 lbs ai) per acre
<p><b>RESTRICTIONS – Head Lettuce</b></p> <p>Do not apply more than 0.45 pounds active per acre per season.</p> <p>Do not make applications less than 7 days apart.</p> <p><b>REMARKS – Head Lettuce</b></p> <p>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.</p> <p>Thorough coverage is essential to achieve control.</p>	

**Head & Stem Brassica (7 day PHI)**

(including, but not limited to: Broccoli; Chinese Broccoli (gai lan, white flowering broccoli); Brussels Sprouts; Cauliflower; Cavalo broccolo; Kohlrabi; Cabbage; Chinese Cabbage (napa)).

Pests	Rate of Application
Aphid Species Armyworms Click Beetle 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 Wireworm Adults	4.0 – 10.3 ounces (0.04 – 0.10 lbs ai) 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 lbs ai) per acre

**RESTRICTIONS – Head & Stem Brassica**

Do not apply more than 0.45 lb. active ingredient per acre per season.

Do not make more than 5 applications after bloom.

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.

**Succulent Peas and Beans (3 day PHI)**

(including, but not limited to: Pea (Pisum spp.); Dwarf pea; Edible-pod pea; English pea; Garden pea; Green pea; Snow pea; Sugar snap pea; Pigeon pea; Bean (Phaseolus spp.); Broadbean (succulent); Lima bean (green); Runner bean; Snap bean; Wax bean; Bean (Vigna spp.); Asparagus bean; Blackeyed pea; Chinese longbean; Cowpea; Moth bean; Southern pea; Grain lupin; Sweet lupin; White lupin; White sweet lupin; Field bean; Kidney bean; Navy bean; Pinto bean; Tepary bean; Adzuki bean; Catjang; Crowder pea; Mung bean; Rice bean; Urd bean; Chickpea; Guar; Lablab bean, Yardlong bean, Jackbean, Soybean (immature seed), Sword bean).

**RESTRICTIONS – Succulent Peas & Beans**

Do not apply more than 0.266 pounds active per acre per season.

Do not make applications less than 5 days apart.

**REMARKS – Succulent Peas & Beans**

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.

Pests	Rate of Application
Alfalfa Caterpillar	4.0 – 10.3 ounces (0.04 – 0.10 lbs ai) per acre
Aphid Species	
Amyworms, including:	
Bean Leaf Beetle	
Beet, Fall, Southern, True, and	
Blister Beetle Species	
Corn Earworm	
Corn Rootworm Adult	
wpea Curculio	
Cucumber Beetles	
Cutworms	
European Corn Borer	
Flea Beetle	
Grasshoppers	
Green Cloverworm	
Ground Beetles	
Imported Cabbageworm	
Japanese beetle Adult	
Leaf Skeletonizer	
Leafhopper Species	
Leafminers	
Lesser Cornstalk Borer	
Loopers	
Mexican Bean Beetle	
Painted Lady	
Pea Leaf Weevil	
Pea Weevil	
Saltmarsh Caterpillar	
Sap Beetle	
Seedcorn Beetle	
Seedcorn Maggot	
Silverspotted Skipper	
Southwest Corn Borer	
Spittlebug	
Stink Bugs	
Threecornered alfalfa nopper	
Tobacco Budworm	
Velvetbean Caterpillar	
Webworm Species	
Western Bean Cutworm	
Woolly Bear Caterpillar	
Yellowstriped	
Banks Grass Mite	10.3 ounces (0.10 lbs ai) per acre
Carmine Mite	
Lygus Species	
Thrips Species	
Twospotted Spider Mite	
Whitefly	

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# TREE NUTS

## 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
<p><b>RESTRICTIONS – Pecans</b></p> <p>Do not apply more than 0.45 lb. active ingredient per acre per season.</p> <p>Do not make applications less than 15 days apart.</p> <p>Do not graze livestock in treated orchards or cut treated ver crops for feed.</p> <p><b>REMARKS – Pecans</b></p> <p><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.</p> <p><b>Application by air:</b> Apply the specified dosage in a minimum of 10 gallons of finished spray per acre.</p>	

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