



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

September 27, 2005

Christopher Davis
Registration Manager
FMC Corporation
Agricultural Products Group
1735 Market Street
Philadelphia, PA 19103

Subject: Label Amendment - Add new crops and pests
Brigade WSB Insecticide/Miticide
EPA Reg. No. 279-3108
Your Submission Dated June 28, 2005

Dear Mr. Davis:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable provided you make the following changes:

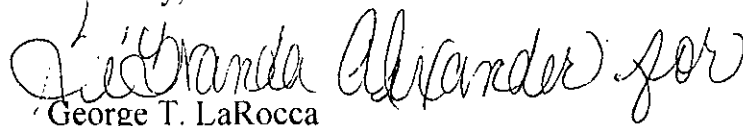
1. Delete the at plant use directions on page 16. This change in use pattern, "at plant" and "in furrow" for all labeled crops at reduced spray volumes, will need to be assessed by HED and EFED with respect to incremental risk and meets the requirements for a registration fee under PRIA. The appropriate category for this action R-35.
2. We note that the pest whitefly is listed under the higher application rate for the added new crops whereas it is listed under the lower application rate for EPA Reg No 279-3069. Please explain.
3. Under the Spinach section add the direction for use for whitefly as follows: For control of whiteflies apply foliar treatments of Brigade WSB by ground on air at rates up to 0.1 lb active (16 oz. formulated) per acre at minimum 7-day intervals up to a maximum of 4 applications."

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4. Move the statements beginning "Do not apply this product in a way that will ...etc." and ending ".....consult the Agency responsible for pesticide regulation" so that it appears directly above the Ag Use Requirement box.

A stamped copy of the label is enclosed for your records. Please submit two (2) copies of your final printed label before you release the product for shipment. If you have any questions regarding this action, please contact me at (703)305-6100.

Sincerely,



George T. LaRocca

Product Manager (13)

Insecticide Branch

Registration Division (7505C)

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RESTRICTED USE PESTICIDE
Toxic to fish and aquatic organisms. For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

BRIGADE[®] WSB

Insecticide/Miticide

EPA Reg. No. 279-3108

EPA Est. No. 279-NY-1

Active Ingredient:

Bifenthrin: (2 methyl[1,1'-biphenyl]-3-yl)
methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-
2,2-dimethyl-cyclopropanecarboxylate*

By Wt.

Inert Ingredients:** 10.0%
..... 90.0%
..... 100.0%

**Cis isomers 97% minimum, trans isomers 3% maximum.
U.S. Patent No. 4,238,505

KEEP OUT OF REACH OF CHILDREN
WARNING
AVISO

ACCEPTED
with COMMENTS
In EPA Letter Dated
SEP 27 2005
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.
279-3108

This label must be in the possession of the user at the time of application.
Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID

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

If Inhaled: 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.

If in Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-331-3148 for emergency medical treatment information.

Note to Physician: This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

For Emergency Assistance Call (800) 331-3148.

FMC Corporation
Agricultural Products Group
Philadelphia, PA 19103

Net Contents:

PRECAUTIONARY STATEMENTS

Hazards to Humans (and Domestic Animals)

May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Causes moderate eye irritation. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment: Applicators and other handlers (other than mixers and loaders) must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Mixers and Loaders must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

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

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. 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 make applications 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.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

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

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. Do not apply this product through any type of irrigation system.

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.

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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 intervals. 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; Waterproof gloves; and Shoes plus socks.

See supplemental label for directions for use in California.

STORAGE AND DISPOSAL

Pesticide Storage

Keep out of reach of children and animals. Store in original containers only. Store in a cool dry place and avoid excess heat. Do not store at temperatures below 32°F (0°C). Rough handling may cause breakage, especially at low temperatures. Allow to warm above 50°F (10°C) before use. Do not allow inner bags to become wet during storage. Do not handle inner bag with wet hands or wet gloves. Do not put concentrate or diluted 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: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. 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

When all water soluble bags are used, the outer package should be clean and may be disposed of in a sanitary landfill, by incineration or if allowed by state and local authorities, by burning. If burned, stay out of smoke. If the outer container contacts formulated product in any way, it must be triple rinsed with clean water. Add rinsate to the spray tank and dispose of the outer package as described above.

GENERAL INSTRUCTIONS

Unless otherwise directed by registered supplemental labeling, follow the Directions for Use in each crop group section.

The product in this outer package is a wettable powder formulation of the insecticide bifenthrin packaged in a translucent water soluble bag. Do not allow the inner bag to become wet before adding it to the spray or nurse tank. Do not handle the inner bag with wet hands or wet gloves. Rough handling may cause breakage. Do not store at temperatures below 32°F (0°C). Allow to warm above 50°F (10°C) before use. Cooler water temperatures increase the time needed for the inner bag to dissolve completely.

Brigade WSB insecticide needs to be diluted with water prior to spray application. Do not use nozzle screens (eg. strainers) greater than 50 mesh size. Determine the number of water soluble bag(s) to make up necessary spray suspension.

Calculate the number of bags needed for the recommended rate and number of acres to be treated by using the following equation:

Recommended		# Acres to be	
Rate for Pest	x	Treated with	
(Active/Acre)		Tankload #	= of Brigade Water Soluble Bags
0.05 (amt. ai in each bag)			to use for acres to be treated.

Do not break bags. When the equation equals less than a whole number of bags, use the next higher whole number of bags.

Fill the spray tank 1/2 full with water. Open the outer wrapper of this product and immediately dump required contents into the spray tank. Allow the water soluble bag(s) to dissolve completely. Start agitation in the tank. Air agitation is not recommended. Mix thoroughly to fully disperse and suspend the wettable powder. Fill the spray tank with the required amount of water. Maintain agitation during storage in nurse or supply tank and during application.

Mix as needed; do not store diluted material.

Rotational Crops

Crops for which bifenthrin tolerances exist may be rotated at any time. All other crops may be rotated 30 days following the final application of bifenthrin.

Tank-Mixture

Brigade WSB Insecticide/Miticide may be applied in tank mixtures with other products approved for use on registered crops. Observe all restrictions and precautions which appear on the labels of these products. Test for compatibility of products before mixing using a standard jar test or other similar method.

Application Instructions

Rate of application is variable according to pest pressure, timing of sprays, and field scouting. Use lower rates under light to moderate infestation; higher rates under heavy insect pressure and for mite control. Arid climates generally require higher rates.

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.

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

Artichoke

Pest	Dosage* oz/A (lb ai/A)	Directions
Cribrate Weevil Artichoke Plume Moth	16.0 (0.10)	<p>Apply when pest population reaches damaging threshold and repeat as necessary to maintain control, but not more often than 15-day intervals.</p> <p>Do not exceed 2 bags (0.10 lb ai/A) between bud formation and harvest of an individual fruit.</p> <p>Application by ground: Apply a full cover spray in a minimum of 75 gallons of finished spray per acre.</p> <p>Application by air: Apply specified dosage in a minimum of 10 gallons per acre.</p> <p>Do not exceed 10 bags (0.5 lb ai) per acre per season.</p> <p>A 5-day preharvest interval must be observed.</p>

*1 bag = 0.05 lb ai

Hops*

Pest	Dosage* oz/A (lb ai/A)	Directions
Aphids Armyworms Cutworms Leafrollers Loopers	9.6 to 16.0 (0.06 to 0.1)	Do not exceed 2 bags (0.1 lb ai) per acre per application. Do not exceed 6 bags (0.3 lb ai) per acre per season.
Root Weevils	8.0 to 16.0 (0.05 to 0.1)	A spray interval of 21 days between applications must be maintained. A 14 day pre-harvest interval must be observed.
Twospotted spider mite	16.0 (0.10)	Application by ground: For best results, full coverage is essential. Early season recommend 100-150 gallons of spray per acre. Late season recommend 200-250 gallons of spray per acre. For Root Weevil control, make a directed spray to the base of the plant. Spray up the vine 3 feet and the soil surface 1.5 to 2 feet on either side of the plant. Application by air for late season control of twospotted spider mites: Apply no less than 16 oz. (0.1 lb ai) per application in a minimum of 10 gallons per acre.

* Not for use in California

** 1 bag = 0.05 lb ai = 8 oz formulated product

Strawberries

Pest	Dosage* oz/A (lb ai/A)	Directions
Aphids Armyworms Flea beetles Heliothis spp. Leafrollers Lygus spp. Plant Bugs Spittlebugs Stink Bugs Strawberry Clipper Strawberry Sap Beetle	6.4 to 32.0 (0.04 to 0.2)	Apply when pest populations reach damaging thresholds and repeat as necessary at 7-14 day intervals. Do not apply more than 0.5 lb ai (80 oz formulated) per acre per season. No preharvest interval is required. Application by ground: Apply a full cover spray in a minimum of 50 gallons of finished spray per acre.
Strawberry Root Weevil Black Vine Weevil	8.0 to 32.0 (0.05 to 0.2)	Application by air (Aerial application is prohibited in Florida): Apply specified dosage in a minimum of 5 gallons per acre.
Spider mites	16 to 32.0 (0.1 to 0.2)	

*1 bag = 0.05 lb ai = 8 oz formulated product

CALIFORNIA SPECIFIC REQUIREMENTS FOR STRAWBERRY HARVESTERS: Harvesters and other personnel performing tasks with all-day foliage contact in treated fields within five (5) days of application must wear a long-sleeved shirt, long pants, and shoes plus socks.

Following treatment of strawberry fields at rates of Brigade® WSB greater than 0.1 lb ai/acre, harvesters must wear gloves for five (5) days following application.

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Caneberries

Crop	Pest	Dosage oz./A (lb. ai/A)	Directions
Caneberries Including: Blackberries Bingleberries Dewberries Lowberries Marionberries Olallieberries Youngberries Loganberries Raspberries	Leafrollers Orange Tortrix Root Weevils Black Vine Weevil	8.0 – 16.0 (0.05 - 0.1)	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).
	Twospotted Spider Mite Carmine Mite Raspberry Crown Borer	16.0 (0.1)	One application may be made pre-bloom and a second application may be made post bloom. For Crown Borer, apply 0.1 lb ai / a, 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. Do not exceed 0.2 lb ai (32 oz formulated) per acre per season. Do not apply within 3 days of harvest.

Pears

Pest	Dosage oz/A (lb./ai/A)	Directions
Aphids Codling Moth Cutworms Green Fruitworm Leafhoppers Leafminers Leafrollers Lygus spp. Plant Bugs Plum Curculio San Jose Scale (Crawlers) Stink Bugs Tarnished Plant Bugs	6.4 to 32.0 (0.04 to 0.2)	Application by ground: 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. Application by air: Apply the specified dosage in a minimum of 10 gallons per acre by air. Do not apply more than 0.5 pound active (80 oz formulated) per acre per season with no more than 0.45 pound active per acre applied after petal fall. Apply as necessary to maintain control using a minimum of 30 day spray interval. Apply up to 14 days prior to harvest. Do not graze livestock in treated orchards or cut treated cover crops for feed.
Twospotted Spider Mite Yellow Mite	9.6 to 32.0 (0.06 to 0.2)	
European Red Mite	12.8 to 32.0 (0.08 to 0.2)	

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Tree Nut Crops: Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, Walnut (black and English)

Pest	Dosage oz/A (lb./ai/A)	Directions
Black Pecan Aphid Codling Moth Filbert Worm Hickory Shuckworm Leaffooted Bugs Navel Orangeworm Oblique banded Leafroller Peach Twig Borer Pecan Leaf Casebearer Pecan Nut Casebearer Pecan Phylloxera Plant Bugs Stink Bugs Walnut Aphid Yellow Pecan Aphid	8.0 to 32.0 (0.05 to 0.20)	<p>Application by ground: 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>Application by air: Apply the specified doseage in a minimum of 10 gallons of finished spray per acre.</p> <p>Minimum Spray Intervals: Apply Brigade WSB as needed to maintain control, but do not apply at intervals sooner than 15 days.</p> <p>Observe a 21 day Pre Harvest Interval (phi) for Pecans and a 7 day Pre Harvest Interval (phi) for all other registered tree nut crops.</p>
European Red Mite Spider Mites	12.8 to 32.0 (0.08 to 0.20)	
Fire Ants Walnut Husk Fly	16.0 to 32.0 (0.1 to 0.2)	<p>Do not exceed 0.2 lb ai per acre per application; do not exceed 0.50 lb ai (80 oz formulated) per acre per season.</p> <p>Do not graze livestock in treated orchards or cut treated cover crops for feed.</p>

Citrus (1 day phi)

Pest	Dosage oz/A (lb./ai/A)	Directions
<p><i>Diaprepes Root Weevil</i> (<i>Diaprepes abbreviatus</i>) Southern Blue Green Citrus Root Weevil (<i>Pachnaeus litus</i>) Blue Green Citrus Root Weevil (<i>Pachnaeus opalus</i>) Brown Leaf Notcher (<i>Epicaerus mexicanus</i>) Little Leaf Notcher (<i>Artipus floridanus</i>)</p>	<p>40.0 to 80.0 (0.25 - 0.50)</p>	<p>Apply Brigade WSB by ground equipment to bare soil beneath citrus trees. Brigade WSB must be uniformly applied from the trunk to the drip line of tree; apply in a minimum of 40 gallons of dilute spray per acre. Greater spray volume should insure greater uniformity of coverage. A pre- and post-application irrigation may aid in the uniformity of coverage as well.</p> <p>Brigade WSB protects citrus tree roots from <i>Diaprepes</i> and other citrus root weevil feeding by forming a barrier which provides contact activity on newly hatched larvae (neonates). As citrus root weevil eggs hatch in new foliage, neonates fall to the soil surface beneath the tree and come in contact with Brigade WSB as they attempt to burrow into the root zone. Disturbance of the soil beneath trees should be minimized.</p> <p>Timing of Brigade WSB applications is critical. Current information suggests that peak emergence of adult <i>Diaprepes Weevil</i> varies by citrus growing region and these emergence peaks can be dramatically affected by environmental factors, such as soil moisture. Typically, two peaks are observed for <i>Diaprepes</i>, first in spring then late summer or early fall. Southern Blue-Green and Blue-Green Citrus Weevils and Fuller Rose Beetle typically exhibit a single emergence peak in the spring. Brown and Little Leaf Notchers typically exhibit three emergence peaks, spring, summer and fall. Since emergence varies seasonally and by location, timing of Brigade WSB application can be accurately forecast by observing adults. Adults are most active early morning and late afternoon; numbers can be estimated by trapping throughout spring and summer (emergence periods). Egg laying will occur for 8 to 10 weeks following adult emergence from the soil; larval invasion of the soil will begin 2-3 weeks following adult emergence. It is critical to have the Brigade WSB soil barrier in place prior to drop of the neonates.</p>
<p>Fireant (<i>Solenopsis spp.</i>) Asian Cockroach (<i>Blattella asahinae</i>)</p>	<p>16.0 to 40.0 (0.1 to 0.25)</p>	<p>Brigade WSB is one of several effective tools in an integrated pest management program for Citrus Root Weevils. Application of Brigade WSB should be used in conjunction with good cultural practices, biological control of larvae and foliar control of adults. Consult local university extension personnel for current information to protect citrus trees from Citrus Root Weevils and other pests.</p> <p>Additional Instructions: Apply to individual citrus resets, when not in solid planted rows, using handgun or shielded sprayer.</p> <p>Peak emergence of <i>Diaprepes</i> root weevil generally occurs in the spring. Depending on weather conditions, a minor emergence of <i>Diaprepes</i> root weevil may also occur in the fall.</p> <p>If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, 0.50 pound active (80 oz formulated) should be used to obtain the longest residual management of <i>Diaprepes</i> root weevil.</p> <p>If the citrus grove to be treated is in an area where weather conditions will promote more than one peak of pest emergence, 0.25 pound active (40 oz formulated) can be applied early season and 0.25 pound active can be applied later in the season.</p>

Do not apply through irrigation systems.

Do not allow any application of Brigade WSB to contact fruit or foliage.

Do not apply more than a total of 0.5 lb. a.i. (80 oz formulated) per acre per year.

Apply the specified dosage in a minimum of 40 gallons of finished spray per acre.

Ground application only. Do not apply by air.

* 1 bag = 0.05 lb ai = 8 oz formulated product

Cotton

Pest	Dosage oz./A (lb. ai/A)	Directions
European Corn Borer Soybean (Banded) Thrips Tobacco Thrips	3.2 to 16.0 (0.02-0.10)	Brigade WSB may be applied in water.
Boll Weevil Bollworm Cabbage Looper Cotton Aphid Cotton Fleahopper Cotton Leafperforator Cutworms Fall Armyworm Plant Bugs Saltmarsh Caterpillar Southern Garden Leafhopper Stink Bugs Tobacco Budworm Yellow Striped Armyworm	6.4 to 16.0 (0.04-0.10)	Apply in a minimum of 10 gallons per acre with ground equipment or 2 gallons per acre by aircraft. To Control Boll Weevil: Apply Brigade WSB 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. Higher rates will be required once a damaging threshold is established. Do not apply more than 0.5 pound active (80 oz formulated) per acre per season.
Beet Armyworm Carmine Spider Mite Lygus Spp. Pink Bollworm Twospotted Spider Mite Whitefly	9.6 to 16.0 (0.06-0.10)	Do not apply within 14 days of harvest. Do not graze livestock in treated areas or cut treated crops for feed. 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 Ambush®, Ammo®, Asana® XL, Baythroid®, Capture®, Danitol®, Karate®, Mustang®, and Scout X-TRA®.

SUCCULENT PEAS AND BEANS

Crop	Pest	Dosage oz./A (lb. ai/A)	Directions
Pea (<i>Pisum</i> spp.): Dwarf pea, Edible-pod pea, English pea, Garden pea, Green pea, Snow pea, Sugar snap pea Pigeon pea Bean (<i>Phaseolus</i> spp.): Broadbean (succulent) Lima bean (green) Runner bean, Snap bean, Wax bean Bean (<i>Vigna</i> spp.): Asparagus bean, Blackeyed pea Chinese longbean, Cowpea, Moth bean, Southern pea Yardlong bean Jackbean Soybean (immature seed) Sword bean	Flea Beetle Grasshoppers Aster Leafhopper Leafhoppers	4.0 to 16.0 (0.025 - 0.10)	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.
	Aphids Beet Armyworm Fall Armyworm Southern Armyworm Yellowstriped Armyworm Bean Leaf Beetle Cucumber Beetles Japanese beetle Adult Sap Beetle Plant Bug Stink Bugs Tarnished Plant Bug Alfalfa Caterpillar Cloverworm European Corn Borer Cutworms Western Bean Cutworm Corn Earworm Loopers Corn Rootworm Adult Thrips Webworms Pea Weevil Pea Leaf Weevil	5.3 to 16.0 (0.033 - 0.10)	Thorough coverage is essential to achieve control. Do not apply more than 0.2 lb. active ingredient (32.0 oz formulated) per acre per season. Do not apply within 3 days of harvest. For Wireworm, maggot or grubs, apply in-furrow with the seed or transplant.
	Wireworm Maggot Grubs	8.0 to 16.0 (0.05 - 0.10)	
	Banks Grass Mite Twospotted Spider Mite Carmine Mite Lygus Spp Whitefly	12.8 to 16.0 (0.08 - 0.10)	

BRASSICAS

Crop	Pest	Dosage oz./A (lb. ai/A)	Directions
Head and Stem Brassica Vegetables including: Broccoli Chinese Broccoli (gailon, white flowering broccoli) Brussels Sprouts Cauliflower Cavalo broccolo Kohlrabi Cabbage Chinese Cabbage (napa) Chinese Mustard Cabbage (gai choy)	Cutworms Corn Earworm Tobacco Budworm Saltmarsh Caterpillar Leafhoppers Flea Beetles Imported Cabbageworm Cucumber Beetles Aphids Armyworms Loopers Stink Bugs Crickets Ground Beetles Thrips Wireworm (adults) Diamondback Moth	5.3 to 16.0 (0.033 - 0.10)	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. Thorough coverage is essential to achieve control. Do not apply more than 0.5 lb. active ingredient (80 oz formulated) per acre per season. Do not make more than 5 applications after bloom. Do not make applications less than 7 days apart.
	Wireworm Maggot Grubs	8.0 to 16.0 (0.05 - 0.10)	Do not apply within 7 days of harvest.
	Banks Grass Mite Twospotted Spider Mite Carmine Mite Pacific Spider Mite Lygus Spp. Whitefly	12.8 to 16.0 (0.08 - 0.10)	For Wireworm, maggot or grubs, apply in-furrow with the seed or transplant.

CANOLA, CRAMBE, RAPESEED

Crop	Pest	Dosage oz./A (lb. ai/A)	Directions
Canola Crambe Rapeseed	Aphids Cutworms Diamondback Moth Loopers Other Lepidopterous Larvae Flea Beetle Flea Hopper Grasshopper Plant Bug Stink Bugs Seedpod Weevil Thrips Armyworms	5.3 to 6.4 (0.033 - 0.04)	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. Thorough coverage is essential to achieve control. Do not apply more than 0.08 lb active ingredient (12.8 oz formulated) per acre per season. Do not make applications less than 14 days apart. Do not apply within 35 days of harvest.

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CUCURBITS

Crop	Pest	Dosage oz./A (lb. ai/A)	Directions
Chayote (fruit) Chinese waxgourd (Chinese preserving melon) Citron melon Cucumber Gherkin Gourd, edible (includes hyotan, cucuzza) (<i>Luffa</i> spp.) (includes hechima, Chinese okra) (<i>Momordica</i> spp.) (includes balsam apple, balsam pear, bitter melon, Chinese cucumber) Muskmelon (hybrids and/or cultivars of <i>Cucumis melo</i>) (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon) Pumpkin (<i>Cucurbita</i> spp.) Squash, summer (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini) Squash, winter (includes butternut squash, calabaza, hubbard squash (<i>C. mixta</i> ; <i>C. pepo</i>) includes acorn squash, spaghetti squash) Watermelon (includes hybrids and/or varieties of <i>Citrullus</i> spp.).	Aphids Cutworms Cabbage Looper Leafhoppers Cucumber Beetles Squash Bugs Melonworm Pickleworm Plant Bug Stink Bugs Rindworm Squash Vine Borer Armyworms Corn Earworm Tobacco Budworm Grasshopper	8.0 to 16.0	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. Thorough coverage is essential to achieve control. Do not apply more than 0.3 lb active ingredient (48.0 oz formulated) per acre per season. Do not make more than two applications after bloom. Do not make applications less than 7 days apart.
	Wireworm Maggot Grubs	8.0 to 16.0 (0.05 - 0.10)	Do not apply within 3 days of harvest.
	Whitefly Banks Grass Mite Twospotted Spider Mite Carmine Mite Lygus Spp.	12.8 to 16.0 (0.08 - 0.10)	For Wireworm, maggot or grubs, apply in-furrow with the seed or transplant.

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EGGPLANT

Crop	Pest	Dosage oz./A (lb. ai/A)	Directions
Eggplant	Colorado Potato Beetle Corn Earworm European Corn Borer Flea Beetle Cucumber Beetle Cabbage Looper Tomato Pinworm Tomato Hornworm Vegetable Leafminer Armyworms Plant Bug Stink Bug Thrips	5.3 to 16.0 (0.033 - 0.10)	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. Thorough coverage is essential to achieve control. Do not make applications less than 7 days apart. Do not apply more than 0.2 lb active ingredient (32.0 oz formulated) per acre per season.
	Banks Grass Mite Twospotted Spider Mite Carmine Mite Pacific Spider Mite Lygus Spp. Whitefly	12.8 to 16.0 (0.08 - 0.10)	Do not apply within 7 days of harvest.

LETTUCE, HEAD

Pest	Dosage oz./A (lb. ai/A)	Directions
Aphids Armyworms Corn earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Imported Cabbageworm Leafhoppers Loopers Salt Marsh Caterpillar Stink bug Spp. Tobacco Budworm	5.3 to 16.0 (0.033 - 0.10)	Apply in water as necessary for insect control using a minimum of 20 gallons of finished spray per acre with ground equipment and 5 gallons per acre by air. Thorough coverage is essential to achieve control. Do not make applications less than 7 days apart. A maximum of 0.5 lb. active ingredient (80 oz formulated) may be applied per acre per season. Do not apply within 7 days of harvest.
Lygus Spp. Carmine Mite Two Spotted Spider Mite Whitefly	12.8 to 16.0 (0.08 - 0.10)	

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PEPPERS, BELL AND NON-BELL

Pest	Dosage oz./A (lb. ai/A)	Directions
Amyworms Corn earworm Cucumber Beetles Cutworms European Corn Borer Flea Beetles Leafminers Loopers Pepper Weevil Thrips	5.3 to 16.0 (0.033 - 0.10)	Apply using sufficient water to obtain uniform coverage. Apply as needed. Apply with ground equipment using a minimum of 20 gallons of finished spray per acre or a minimum of 5 gallons per acre by aircraft. Do not make applications less than 7 days apart. Do not apply more than 0.20 lb active ingredient (32 oz formulated) per acre per season. Do not apply within 7 days of harvest.
Lygus Spp. Broad Mite Carmin Mite Two Spotted Spider Mite Whitefly	12.8 to 16.0 (0.08 - 0.10)	

TOMATOES (1 day phi)

Pest	Dosage oz./A (lb. ai/A)	Directions
Aphids Armyworms Including: Beet Armyworm, Fall Armyworm, Southern Yellowstriped Armyworm Bean Leaf Beetle Cabbageworm Carmin Mite Cloverworm Corn earworm Corn Rootworm (adults) Cucumber Beetles Cutworms Diamondback Moth European Corn Borer Flea Beetles Flea Hopper Grasshopper Hornworm Japanese Beetle (Adult) Leafhoppers Loopers Lygus Spp. Melonworm Pea Weevil Pea Leaf Weevil Pickleworm Pinworm Plant Bug Rindworm Salt Marsh Caterpillar Sap Beetle Seedpod Weevil Squash Bugs Stink bug Spp. Tobacco Budworm Tarnished Plant Bug Thrips Two Spotted Spider Mite Whitefly	5.3 to 12.8 (0.033 - 0.08)	Apply in water as necessary for insect control using a minimum of 15 gallons of finished spray per acre with ground equipment. Thorough coverage is essential to achieve control. Do not make applications less than 10 days apart. A maximum of 4 applications may be applied per season. For Wireworm, maggot or grubs, apply in-furrow with the seed or transplant.
Wireworm Maggot Grubs	8.0 to 12.8 (0.05 - 0.08)	

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Spinach (40 day phi)

Pest	Dosage oz./A (lb. ai/A)	Directions
Colorado Potato Beetle Tomato Pinworm Tomato Hornworm Armyworms Corn earworm Cucumber Beetles Cutworms European Corn Borer Flea Beetles Leafminers Loopers Pepper Weevil Thrips	5.3 to 16.0 (0.033 to 0.10)	For control of fire ants apply Brigade WSB to the soil (at planting) or as a foliar treatment by ground or air at rates of up to 0.1 lb active (16 oz. formulated) per acre at minimum 7-day intervals up to a maximum of 4 applications. Do not apply within 40 days of harvest. Apply the specified dosage in 5-50 gallons of finished spray per acre by air or 10-50 gallons finished spray per acre by ground. Do not make applications less than 7 days apart. Do not apply more than 0.4 pounds active ingredient per acre per season.
Broad Mite Banks Grass Mite Twospotted Spider Mite Camine Mite Pacific Spider Mite Lygus Spp. Fire Ants Whitefly	12.8 to 16.0 (0.08 to 0.10)	

GRAPES

Pest	Dosage oz./A (lb. ai/A)	Directions
Cutworms Eastern grape leafhopper Grape berry moth Japanese beetles adults Variegated leafhopper Western grape leafhopper	8.0 to 16.0 (0.05 - 0.10)	Apply in a minimum of 10 gallons of finished spray by air or in a minimum of 25 gallons of finished spray with ground equipment. Thorough coverage is essential to achieve control. When pest pressure is moderate to severe, use higher rate.
Black vine weevil Glassywinged sharpshooter Twospotted spider mite	16.0 (0.10)	Do not apply more than 0.10 lb ai per acre per season. Do not apply within 30 days of harvest.

BRIGADE AT-PLANT USE DIRECTIONS- All Labeled Crops

Pest	Dosage oz./A (lb. ai/A)	Directions
Army Cutworm Cutworm Species True Armyworm or Armyworm Species	8.0-16.0 (0.05 – 0.1)	Apply as a broadcast application in water at a minimum of 10 gallon of finished spray per acre by ground or 2 gallons of finished spray per acre by air. Follow all label directions for maximum use rates per season, crop rotational intervals, and harvest restrictions as stated in the specific crop sections of this label.
Army Cutworm Cutworm Species Grubs Seed Corn Beetle Seed Corn Maggot True Armyworm or Armyworm Species Wireworm	8.0-16.0 (0.05 – 0.1)	Apply in-furrow or as a 5 to 7 inch T-band treatment over an open seed furrow. Apply in a minimum of 3 gallons of finished spray per acre. Water is the preferred carrier but starter fertilizers may be used. For wireworm, maggot or grubs, apply in-furrow with the seed or transplant. When mixing with fertilizer preslurry the water dissolvable bag in water first with a sufficient volume to totally dissolve the product. Then fill the spray tank approximately one-half full liquid fertilizer, add the proper amount of Brigade solution, then add the rest of the water or fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform spray mixture. A jar compatibility test should be performed with appropriate ratio of Brigade and fertilizer to ensure mixture will stay in solution. Constant agitation should be maintained during mixing and application. Follow all label directions for maximum use rates per season, crop rotational intervals, and harvest restrictions as stated in the specific crop sections of this label. Maximum of 0.1 lb ai per acre is allowed for at plant use.

Spray Drift Precautions

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.

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

Do not make aerial or ground applications during temperature inversions or if heavy rainfall is imminent. 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.

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. Inclusion of a compatible drift reducing agent is encouraged.

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 wing span or rotor diameter.

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

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.

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.

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

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

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