

**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 the uses covered by the certified applicator's certification.

**BIFENTHRIN 2EC-CAL  
INSECTICIDE/MITICIDE**

**ACTIVE INGREDIENT:**

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

**OTHER INGREDIENTS:\*\***

% BY WT.

25.1%

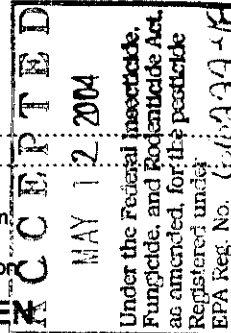
74.9%

**TOTAL 100.0%**

\*Cis isomers 97% minimum, trans isomers 3% maximum

\*\*Contains xylene range aromatic solvents.

This product contains 2 pounds active ingredient per gallon



**KEEP OUT OF REACH OF CHILDREN  
WARNING-AVISO**

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

**FIRST AID**

- IF SWALLOWED:**
  - 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.
- IF IN EYES:**
  - Do not give anything by mouth to an unconscious person.
  - 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.
- 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.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-877-250-9291 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 should be avoided. This product contains a petroleum distillate; vomiting may cause aspiration pneumonia.

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
WARNING**

May be fatal if swallowed. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses.) Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

**NET CONTENTS: \_\_\_ GALLON(S)**

EPA Reg. No. 66222-98  
EPA Est. No.

Makhteshim Agan of North America, Inc.  
551 Fifth Avenue, Suite 1100  
New York, NY 10176

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category *E* 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, nitrile rubber, neoprene rubber, or Viton
- 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, nitrile rubber, neoprene rubber, or Viton
- 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.

**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.

**PHYSICAL/CHEMICAL HAZARDS**

COMBUSTIBLE. 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.

**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, nitrile rubber, neoprene rubber, or Viton
- Shoes plus socks

**SPECIAL EQUIPMENT**

The registration of Bifenthrin 2EC-CAL in California requires that the product be used in closed systems that meet the criteria for closed systems as established by the California Department of Food and Agriculture. The criteria

and a list of the closed systems meeting the criteria are available through the California Department of Food and Agriculture.

### **RESISTANCE MANAGEMENT**

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.

### **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 2EC-CAL.

### **TANK MIXTURES**

Bifenthrin 2EC-CAL insecticide/miticide may be applied in tank mixtures with other products approved for use on cotton. Observe all restrictions and precautions which appear on the labels of these products.

### **APPLICATION INSTRUCTIONS**

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

Use of Bifenthrin 2EC-CAL is prohibited in all coastal counties.

### **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 an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

For LEPA irrigation a minimum of 0.75 inch of water per acre is recommended. Where non-emulsified oils are used as the diluent, 1 to 2 pints per acre is recommended.

Results from utilizing chemigation have been variable and depend upon the set up and calibration of equipment. Crop injury, lack of effectiveness, or illegal residues in the crop can result from non-uniform distribution of treated water. Contact your State Agricultural Extension Service specialists, equipment manufacturers, or other experts for consultation on the suitability of the equipment set up to obtain effective control of the target insect pests.

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. Failure to cease application during a mechanical stoppage may result in undesirable residues to adjacent areas.

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 contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

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

Bifenthrin 2EC-CAL should be applied continuously for the duration of the water application. Bifenthrin 2EC-CAL should be diluted in sufficient volume to ensure accurate application over the area to be treated. When using chemigation, a minimum of 0.5 inch per acre of irrigation water is recommended. Agitation generally is not required when a suitable diluent is used. A diluent test should be conducted to ensure that phase separation will not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable control.

**CROP USE INSTRUCTIONS**

**BRASSICAS**

**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)

PEST	DOSAGE		REMARKS
	LB/A/A	FL. OZ/A	
Cutworms, Corn Earworm, Saltmarsh Caterpillar, Flea Beetle, Imported Cabbage-worm, Whitefly, Armyworms, Loopers, Crickets, Diamondback Moth	0.033-0.10	2.1-6.4	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. Do not apply more than 0.5 lb. active ingredient (1 quart) 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.
Lygus spp.	0.08-0.10	5.12-6.4	

**CANEBERRIES**

**Caneberries including:** Blackberries, Bingleberries, Dewberries, Lowberries, Marionberries, Olallieberries Youngberries, Loganberries, Raspberries

PEST	DOSAGE		REMARKS
	LB/A/A	FL. OZ/A	
Leafrollers, Orange Tortrix, Root Weevils	0.05-0.10	3.2-6.4	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. Do not apply within 3 days of harvest.
Spider Mites	0.10	6.4	

**CANOLA, CRAMBE, RAPESEED**

PEST	DOSAGE		REMARKS
	LB/A/A	FL. OZ/A	
Aphids, Armyworms, Cutworms, Diamondback Moth, Loopers, Other Lepidopterous Larvae, Flea Beetles, Flea Hoppers, Grasshoppers, Plant Bugs, Stink Bugs, Seedpod Weevil, Thrips, Whitefly	0.033-0.04	2.1-2.6	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. Do not apply more than 0.08 lb. active ingredient (5.12 ounces) per acre per season. Do not make applications less than 14 days apart. Do not apply within 35 days of harvest.

**COTTON**

PEST	DOSAGE		REMARKS
	LB. A/A	FL. OZ/A	
European Corn Borer, Soybean (Banded) Thrips, Tobacco Thrips	0.02-0.10	1.3-6.4	Bifenthrin 2EC-CAL 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. To Control Boll Weevil, apply Bifenthrin 2EC-CAL 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 but do not exceed maximum application rates and reapplication intervals listed elsewhere in this section. Higher rates will be required once a damaging threshold is established.
Boll Weevil, Bollworm, Cabbage Looper, Cotton Aphid, Cotton Fleahopper, Cotton Leafperforator, Cutworms, Fall Armyworm, Lygus spp., Plant Bugs, Saltmarsh Caterpillar, Southern Garden Leafhopper, Stink Bugs, Tobacco Budworm, Whitefly, Yellow Striped Armyworm	0.04-0.10	2.6-6.4	
Beet Armyworm, Carmine Spider Mite, Pink Bollworm, Twospotted Spider Mite	0.06-0.10	3.8-6.4	

**RESTRICTIONS-Cotton**

- Do not apply more than 0.3 pound active ingredient per acre per season.
- Do not make more than 3 applications per season.
- Do not apply within 14 days of harvest.
- 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®, Pounce®, and Scout X-TRA®.

**SPRAY DRIFT PRECAUTIONS-Cotton**

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 wing span 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 feet 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.

**FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED (AT PLANT USE)**

PEST	DOSAGE		REMARKS
	LB. AI	FL. OZ	
Corn Rootworm Larvae (Mexican, Northern, Southern, Western)	.0046 pound active per 1,000 linear feet of row	0.30 fluid ounces per 1,000 linear feet of row	Apply as a 5- to 7-inch T-band treatment over an open seed furrow. Position the spray nozzle behind the planter shoe, in front of the press wheel centered over the row. Use the table below to determine the Bifenthrin 2EC-CAL needs per acre. Apply in a minimum of 3 gallons of

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<p>Army Cutworm, Cutworm Species, Grubs, Seed Corn Beetle, Seed Corn Midge, True Armyworm or Armyworm Species, Wireworms</p>	<p>.0023 to .0046 pound active per 1,000 linear feet of row</p>	<p>0.15 to 0.30 fluid ounces per 1,000 linear feet of row</p>	<p>of finished spray per acre.          Mix Bifenthrin 2EC-CAL with water or fertilizer in the following manner. Fill the spray tank approximately one-half full with water or liquid fertilizer, add the proper amount of Bifenthrin 2EC-CAL, then add the rest of the water or fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform spray mixture.          Applications of Bifenthrin 2EC-CAL alone or in recommended tank mixtures, in conjunction with in furrow pop-up fertilizers may be used. A jar compatibility test should be performed with appropriate ratio of Bifenthrin 2EC-CAL and fertilizer to ensure mixture will stay in solution. Constant agitation should be maintained during mixing and application. Do not apply to soil where there is greater than 30% cover of crop residue remaining.          Do not apply within 30 days of harvest.          Do not graze livestock in treated area or cut treated crops for feed within 30 days of treatment.          Do not apply more than 0.1 pound active ingredient per acre per season as an at plant application.</p>
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<b>Row spacings (inches)</b>	<b>40</b>	<b>38</b>	<b>36</b>	<b>30</b>
Bifenthrin 2EC-CAL (pounds active ingredient per acre)	0.060	0.064	0.069	0.080
Bifenthrin 2EC-CAL (fluid ounces per acre)	3.9	4.1	4.4	5.12

**FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED (FOLIAR USE)**

PEST	DOSAGE	
	LB A/A	FL OZ/A
<p>Aphids, Army Cutworm, Beet Armyworm, Cereal Leaf Beetle, Chinch Bugs, Common Stalk Borer, Corn Earworm, Corn Rootworm Adults, Cucumber Beetle Adult, Cutworm Species, European Corn Borer, Fall Armyworm, Flea Beetles, Grasshoppers, Greenbugs, Japanese Beetle Adult, Leafhoppers, Sap Beetles, Southern Armyworm, Southern Corn Leaf Beetle, Southwestern Corn Borer, Stinkbugs, Tarnished Plant Bug, Thrips, True Armyworm or Armyworm Species, Webworms, Western Bean Cutworm, Yellowstriped Armyworm</p>	0.033-0.10	2.1-6.4
<p>Banks Grass Mite, Carmine Mite, Twospotted Spider Mite</p>	0.08-0.10	5.12-6.4

**RESTRICTIONS-Corn**

- Do not apply more than 0.2 pound active ingredient per acre per season. Do not apply within 30 days of harvest.
- 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-Corn**

**General:** Apply in a minimum of 2 to 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 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**To control ear-attacking pests:** Apply Bifenthrin 2EC-CAL just before silking and repeat as necessary to maintain control but do not exceed maximum application rates and reapplication intervals listed elsewhere in this section.

**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 but do not exceed maximum application rates and reapplication intervals listed elsewhere in this section.

**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 ingredient per acre in tank mixture has demonstrated good control under these conditions.

**SWEET CORN, SWEET CORN GROWN FOR SEED (AT PLANT USE)**

PEST	DOSAGE		REMARKS
	LB. AI	FL. OZ.	

Corn Rootworm Larvae (Mexican, Northern, Southern, Western)	.0046 pound active per 1,000 linear feet of row	0.30 fluid ounces per 1,000 linear feet of row	Apply as a 5- to 7-inch T-band treatment over an open seed furrow. Position the spray nozzle behind the planter shoe, in front of the press wheel centered over the row. Use the table below to determine the Bifenthrin 2EC-CAL needs per acre. Apply in a minimum of 3 gallons of finished spray per acre. Mix Bifenthrin 2EC-CAL with water or fertilizer in the following manner. Fill the spray tank approximately one half full with water or liquid fertilizer, add the proper amount of Bifenthrin 2EC-CAL, then add the rest of the water or fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform spray mixture. Applications of Bifenthrin 2EC-CAL alone or in recommended tank mixtures, in conjunction with in furrow pop-up fertilizers may be used. A jar compatibility test should be performed with appropriate ratio of Bifenthrin 2EC-CAL and fertilizer to ensure mixture will stay in solution. Constant agitation should be maintained during mixing and application. Do not apply to soil where there is greater than 30% cover of crop residue remaining. Do not apply within 30 days of harvest. Do not graze livestock in treated area or cut treated crops for feed within 30 days of treatment. Do not apply more than 0.1 pound active ingredient per acre per season as an at plant application.
Army Cutworm, Cutworm Species, Grubs, Seed Corn Beetle, Seed Corn Maggot, True Armyworm or Armyworm species, Wireworms	.0023 to .0046 pound active per 1,000 linear feet of row	0.15 to 0.30 fluid ounces per 1,000 linear feet of row	

Row spacings (inches)	40	38	36	30
Bifenthrin 2EC-CAL (pounds active ingredient per acre)	0.060	0.064	0.069	0.080
Bifenthrin 2EC-CAL (formulated ounces per acre)	3.9	4.1	4.4	5.12

**SWEET CORN, SWEET CORN GROWN FOR SEED**

PEST	DOSAGE	
	LB A/A	FL OZ/A
Aphids, Army Cutworm, Aster Leafhopper, Beet Armyworm, Cereal Leaf Beetle, Chinch Bugs, Common Stalk Borer, Corn Earworm, Corn Rootworm Adults, Corn Silkyfly, Cucumber Beetle Adult, Cutworm Species, European Corn Borer, Fall Armyworm, Flea Beetles, Grasshoppers, Greenbugs, Japanese Beetle Adult, Leafhoppers, Sap Beetles, Southern Armyworm, Southern Corn Leaf Beetle, Southwestern Corn Borer, Stinkbugs, Tarnished Plant Bug, Thrips, True Armyworm or Armyworm Species, Webworms, Western Bean Cutworm, Yellowstriped Armyworm	0.033-0.10	2.1-6.4
Banks Grass Mite, Carmine Mite, Pacific Spider Mite, Twospotted Spider Mite	0.08-0.10	5.12-6.4

**RESTRICTIONS-Sweet Corn**

- Do not apply more than 0.2 pounds active ingredient (12.8 ounces formulated) per acre per season.
- Do not apply within one day of harvest.
- Do not graze livestock in treated areas or cut treated crops for feed within 1 day 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-Sweet Corn**

**General:** 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 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**To control ear-attacking pests:** Apply Bifenthrin 2EC-CAL when silking begins and repeat as necessary to maintain control but do not exceed maximum application rates and reapplication intervals listed elsewhere in this section.

**Southwestern Corn Borer, European Corn Borer:** Make two (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 but do not exceed maximum application rates and reapplication intervals listed elsewhere in this section.

**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.

**ARTICHOKE**

PEST	DOSAGE		REMARKS
	LB. A/A	FL. OZ/A	

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Cribrate Weevil, Artichoke Plume Moth	0.10	6.4	Apply when pest population reaches damaging threshold and repeat as necessary to maintain control, but not apply more often than 15 day intervals. Application by ground: Apply a full cover spray in a minimum of 75 gallons of finished spray per acre. Application by air: Apply specified dosage in a minimum of 10 gallons per acre. Do not apply within 5 days of harvest.
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**CITRUS**

PEST	DOSAGE		REMARKS
	LB./A/A	FL. OZ./A	
Diaprepes Root Weevil, ( <i>Diaprepes abbreviatus</i> ), Fire ants, Asian Cockroach	0.25 to 0.50	16 to 32	Apply to individual citrus resets, when not in solid planted rows, using hand-gun or shielded sprayer. Peak emergence of Diaprepes root weevil generally occurs in the spring. Depending on weather conditions, a minor emergence of Diaprepes root weevil may also occur in the fall. If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, 32 fluid ounces formulated product should be used to obtain the longest residual management of Diaprepes Root Weevil. If the citrus grove to be treated is in an area where weather conditions will promote more than one peak of pest emergence, 16 fluid ounces formulated product can be applied early season and 16 fluid ounces formulated product can be applied later in the season. If emergence extends beyond the residual protection of Bifenthrin 2EC-CAL, grower is advised to use additional management strategies (i.e. foliar adult control or soil larvae control such as nematodes). Contact your state agricultural Extension Specialist as to the recommendation suited for local conditions. Do not apply through irrigation systems. Do not allow any application of Bifenthrin 2EC-CAL to contact fruit or foliage. Do not apply more than a total of 32 fluid ounces of formulated product (0.5 lb a.i.) per acre per year. Apply the specified dosage in a minimum of 30 gallons of finished spray per acre. Make a ground application only. Do not apply by air. Do not apply within one day of harvest.

**CUCURBITS**

Chayote (fruit)-Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Gourd, edible (includes hyotan, cucuzza) (*Luffa* spp.) (includes hechima, Chinese okra) (*Momordica* spp.) (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of *Cucumis melo*) (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon), Pumpkin (*Cucurbita* spp.), Squash, summer (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), Squash, winter (includes butternut squash, calabaza, hubbard squash (*C. mixta*; *C. pepo*) includes acorn squash, spaghetti squash), Watermelon (includes hybrids and/or varieties of *Citrullus* spp.).

PEST	DOSAGE		REMARKS
	LB. A/A	FL. OZ./A	
Aphids, Cutworms, Cabbage Looper, Leafhoppers, Cucumber Beetles, Squash Bugs, Armyworms, Melonworms, Pickeworms, Plant Bugs, Stink Bugs, Rindworms, Squash Vine Borer, Corn Earworm, Tobacco Budworm, Grasshoppers	0.04-0.10	2.6-6.4	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 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control. Do not apply more than 0.3 lb. active ingredient (19.2 ounces formulated) per acre per season. Do not make more than two applications after bloom. Do not make applications less than 7 days apart. Do not apply within 3 days of harvest.
Banks Grass Mite, Twospotted Spider Mite, Carmine Mite, Lygus spp., Whitefly	0.08-0.10	5.12-6.4	

**LETTUCE, HEAD**

PEST	DOSAGE		REMARKS
	LB. A/A	FL. OZ./A	



Aphids, Armyworms, Cabbage Maggot, Corn Earworm, Cucumber Beetles, Cutworms, Diamondback Moth, Flea Beetles, Grasshoppers, Imported Cabbageworm, Leafhoppers, Loopers, Salt Marsh Caterpillar, Stink Bug spp., Thrips, Tobacco Budworm, Whitefly	0.033-0.10	2.1-6.4	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 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control. Do not make applications less than 7 days apart. A maximum of 0.5 lb. active ingredient may be applied per acre per season. Do not apply within 7 days of harvest.
Lygus spp., Carmine Mite, Twospotted Spider Mite	0.08-0.10	5.12-6.4	

**PEARS**

PEST	DOSAGE		REMARKS
	LB/A/A	FL OZ/A	
Aphids, Codling Moth, Cutworms, Green Fruitworm, Leafhopper, Leafminer, Leafroller, Lygus spp., Plant Bugs, Plum Curculio, San Jose Scale (Crawlers), Stink Bugs, Tarnished Plant Bug	0.04 to 0.2	2.6 to 12.8	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 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	0.06 to 0.2	3.8 to 12.8	
European Red Mite	0.08 to 0.2	5.12 to 12.8	

**PEPPERS, BELL AND NON-BELL**

PEST	DOSAGE		REMARKS
	LB. A/A	FL OZ/A	
Aphids, Armyworms, Corn Earworm, Cucumber Beetles, Cutworms, European Corn Borer, Flea Beetles, Leafhoppers, Leafminers, Loopers, Pepper Weevil, Stink bug spp., Tobacco Budworm, Thrips, Whitefly	0.033-0.1	2.1-6.4	Apply using sufficient water to obtain uniform coverage. Apply as needed. Apply with ground equipment using a minimum of 10 gallons of finished spray per acre or a minimum of 2 gallons per acre by aircraft. Do not make applications less than 7 days apart. Do not apply more than 0.20 pound active ingredient per acre per season. Do not apply within 7 days of harvest.
Lygus spp., Broad Mite, Carmine Mite, Twospotted Spider Mite	0.08-0.10	5.12-6.4	

**SUCCULENT PEAS AND BEANS**

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, Yardlong Bean, Jackbean, Soybean (immature seed), Sword Bean

PEST	DOSAGE		REMARKS
	LB. A/A	FL OZ/A	
Flea Beetles, Grasshoppers, Aster Leafhopper, Leafhoppers	0.025-0.10	1.6-6.4	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 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control. Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) per acre per season. Do not apply within 3 days of harvest.
Aphids, Beet Armyworm, Fall Armyworm, Southern Armyworm, Yellowstriped Armyworm, Bean Leaf Beetle, Cucumber Beetles, Japanese Beetle Adult, Sap Beetle, Plant Bugs, Stink Bugs, Tarnished Plant Bug, Alfalfa Caterpillar, Cloverworms, European Corn Borer, Cutworms, Western Bean Cutworm, Corn Earworm, Loopers, Corn Rootworm Adult, Thrips, Webworms, Pea Weevil, Pea Leaf Weevil, Whitefly	0.033-0.10	2.1-6.4	

Banks Grass Mite, Twospotted Spider Mite, Carmine Mite, Lygus spp.	0.08-0.10	5.12-6.4	
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**EGGPLANT**

PEST	DOSAGE		REMARKS
	LB. A/A	FL. OZ/A	
Colorado Potato Beetle, Corn Earworm, European Corn Borer, Flea Beetles, Cucumber Beetles, Cabbage Looper, Tomato Pinworm, Tomato Hornworm, Vegetable Leafminer, Whitefly, Armyworms, Plant Bugs, Stink Bugs, Thrips	0.033-0.10	2.1-6.4	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 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. 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 (12.8 ounces formulated) per acre per season. Do not apply within 9 days of harvest.
Banks Grass Mite, Twospotted Spider Mite, Carmine Mite, Pacific Spider Mite, Lygus spp.	0.08-0.10	5.12-6.4	

**HOPS**

PEST	DOSAGE		REMARKS
	LB. A/A	FL. OZ/A	
Aphids, Armyworms, Cutworms, Leafrollers, Loopers	0.05-0.1	3.8-6.4	Do not exceed 0.1 lb. active ingredient per acre per application. Do not exceed 0.3 lb. active ingredient per acre per season. A spray interval of 21 days between applications must be maintained. Do not apply within 14 days of harvest. 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 direct 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 6.4oz. (0.1 lb. active ingredient) per application in a minimum of 10 gallons per acre.
Root Weevils	0.05-0.1	3.2-6.4	
Twospotted Spider Mite	0.1	6.4	

**TOMATOES**

PEST	DOSAGE		REMARKS
	LB/A/A	FL. OZ/A	
Aphids, Armyworms including: Beet Armyworm, Fall Armyworm, Southern Yellowstriped Armyworm, Bean Leaf Beetle, Cabbageworm, Carmine Mite, Cloverworm, Corn Earworm, Corn Rootworm, Cucumber Beetle, Cutworms, Diamondback Moth, European Corn Borer, Flea Beetles, Flea Hopper, Grasshopper, Japanese Beetle (Adult), Leafhoppers, Loopers, Lygus spp., Melonworm, Pea Weevil, Pea Leaf Weevil, Pickworm, Plant Bugs, Rindworm, Salt Marsh Caterpillar, Sap Beetle, Seedpod Weevil, Squash Bugs, Stink Bug spp., Tobacco Budworm, Tarnished Plant Bug, Thrips, Two Spotted Spider Mite, Whitefly	0.033 to 0.08	2.1 to 5.2	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. Do not apply within one day of harvest.

**SPINACH**

PEST	DOSAGE		REMARKS
	LB/A/A	FL. OZ/A	
Colorado Potato Beetle, Tomato Pinworm, Tomato Hornworm, Armyworms, Corn Earworm, Cucumber Beetles, Cutworms, European Corn Borer, Flea Beetles, Leafminers, Loopers, Pepper Weevil, Thrips, Whitefly	0.033 to 0.10	2.1 to 6.4	For control of whiteflies, apply foliar treatments of Bifenthrin 2EC-CAL insecticide by ground or air at rates of up to 0.4 pt. (0.1 lb active) 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 of finished spray by ground.

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Broadmite, Banks Grass Mite, Twospotted Spider Mite, Carmine Mite, Pacific Spider Mite, Lygus spp., Fire Ants	0.08 to 0.10	5.12 to 6.4	For control of fire ants, apply Bifenthrin 2EC-CAL insecticide to the soil (at planting) or as a foliar treatment by ground or air at rates up to 0.4 pt. (0.1 lb active) per acre at minimum 7-day intervals up to a maximum of 4 applications. Do not apply within 40 days of harvest. Do not make applications less than 7 days apart. Do not apply more than 0.4 pound active ingredient per acre per season.
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**GRAPES**

PEST	DOSAGE		REMARKS
	LB/A/A	FL. OZ/A	
Eastern Grape Leafhopper, Variegated Leafhopper, Western Grape Leafhopper	0.05 to 0.10	3.2 to 6.4	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. When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control. When pest pressure is moderate to severe, use higher rate. Do not apply more than 0.10 lb. a.i. per acre per season. Do not apply within 30 days of harvest.
Black Vine Weevil, Glasswinged Sharpshooter, Twospotted Spider Mite	0.10	6.4	

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Do not freeze. Do not store below 40° F. If crystals are observed, warm material to above 60° F by placing container in warm location. Shake or roll container periodically to redissolve solids. 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 INFOTRAC: 1-800-535-5093.

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:** Metal or Plastic Container: 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.

**WARRANTY STATEMENT**

MAKHTESHIM AGAN OF NORTH AMERICA warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of MAKHTESHIM AGAN OF NORTH AMERICA. To the fullest extent permitted by law, MAKHTESHIM AGAN OF NORTH AMERICA shall not be liable for consequential, special, or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. In addition to the foregoing, no purchaser of this product (other than an end user) shall be entitled to any reimbursement for any loss suffered as a result of any suspension or cancellation of the registration for this product by the U.S. Environmental Protection Agency. Except as expressly provided herein, MAKHTESHIM AGAN OF NORTH AMERICA makes no warranties, guarantees, or representations of any kind, either expressed or implied, or by usage of trade, statutory or otherwise, with regard to the product sold, including, but not limited to merchantability, fitness for a particular purpose, use or eligibility of the product for any particular trade usage. The exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling, or application of this product, whether in contract, warranty, tort, negligence, strict liability, or otherwise, shall be damages not exceeding the purchase price paid for this product or, at MAKHTESHIM AGAN OF NORTH AMERICA's election, the replacement of this product.

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