

66222-255

4/3/2014

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

OFFICE OF CHEMICAL SAFETY AND  
POLLUTION PREVENTION

April 3, 2014

Ms. Laura Phelps  
Makhteshim Agan of North America, Inc.  
3120 Highwoods Blvd #100  
Raleigh, NC 27604

Subject: Notification – Adding Alternate Brand Name  
MANA 11415  
EPA Registration Number: 66222-255  
Date of Submission: February 21, 2014

Dear Ms. Phelps:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration (PRN)98-10 dated February 21, 2014, for the above mentioned product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the actions requested fall within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions regarding this letter, please contact BeWanda Alexander at (703) 305-7460 or e-mail [alexander.bewanda@epa.gov](mailto:alexander.bewanda@epa.gov).

Sincerely,

A handwritten signature in cursive script that reads "BeWanda Alexander for".

Richard Gebken  
Product Manager Team 10  
Insecticide Branch  
Registration Division (7505P)



United States  
**Environmental Protection Agency**  
 Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

**Application for Pesticide - Section I**

1. Company/Product Number 66222-255		2. EPA Product Manager Richard Gebken		3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted	
4. Company/Product (Name) MANA 11415		PM# 10			
5. Name and Address of Applicant (Include ZIP Code) Makhteshim Agan of North America, Inc. 3120 Highwoods Blvd#100 Raleigh, NC 27604  <input type="checkbox"/> Check if this is a new address			6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____		

**Section - II**

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input checked="" type="checkbox"/> Other - Explain below.

**Explanation: Use additional page(s) if necessary. (For section I and Section II.)**

Makhteshim Agan of North America, Inc. is submitting a Notification for an alternate brand name Revere®2.0 for MANA 11415 per PR notice 98-10. This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.  
 Please email me at lphelps@manainc.com or phone me at (919) 265-9329 if you have any questions.

**Section - III**

1. Material This Product Will Be Packaged In:					
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No		Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	
* Certification must be submitted		If "Yes" Unit Packaging wgt.		If "Yes" Package wgt	
		No. per container		No. per container	
2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____			3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		
4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product			
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			<input type="checkbox"/> Other _____		

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)					
Name Laura Phelps		Title Registration Manager		Telephone No. (Include Area Code) 919-256-9329	
<p align="center"><b>Certification</b></p> <p>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.</p>					6. Date Application Received (Stamped)  
2. Signature <i>Laura Phelps</i>		3. Title Registration Manager			
4. Typed Name Laura Phelps		5. Date 2014 Feb 21			

Registration Action: Notification  
Fee Category: NA  
Registration Fee: NA

February 20, 2014

Document Processing Desk (Notif)  
Office of Pesticide Programs (7504P)  
U.S. EPA, One Potomac Yard  
2777 S. Crystal Drive, Room S-4900  
Arlington, VA. 22202-4501

ATTN: Richard Gebken PM10  
RE: Notification of Alternate Brand Name Revere®2.0 per PR Notice 98-10. (EPA Reg. No. 66222-255)

Dear Mr. Gebken,  
Makhteshim Agan of North America would like submit a Notification of an alternate brand name for MANA 11415 as Revere®2.0.

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Please email me at [lphelps@manainc.com](mailto:lphelps@manainc.com) or phone me at (919) 256-9329 if you have any questions.

Sincerely,

**Laura Phelps**  
Product Registration Manager

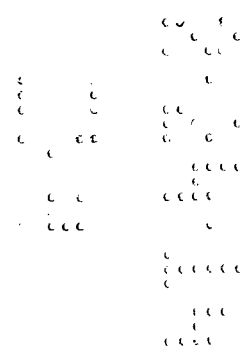
**MANA**  
manainc.com

[lphelps@manainc.com](mailto:lphelps@manainc.com)

www.manainc.com

P: (919) 256-9300  
F: (919) 256-9305

3120 Highwood's Blvd  
Suite 100  
Raleigh, NC 27604



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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 the uses covered by the certified applicator's certification.

**GROUP 3A INSECTICIDE**

**MANA 11415**

**NOTIFICATION**

04/03/2014

[alternate brand name: **Revere<sup>®</sup> 2.0<sub>1</sub>**]

Insecticide/(Miticide) for use on field corn, sweet corn, popcorn, and a number of other crops.

For mixing directly with liquid fertilizer, including phosphate-containing pop-up solutions or water to control soil and other insect pests

**ACTIVE INGREDIENT:**

**% BY WT.**

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

22.60%

**OTHER INGREDIENTS:**

77.40%

**TOTAL**

100.00%

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

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).

**Manufactured for:**

Makhteshim Agan of North America, Inc.  
3120 Highwoods Blvd., Suite 100  
Raleigh, NC 27604

**How can we help? 1-866-406-MANA (6262).**

EPA Reg. No. 66222-255

EPA Est. No. XXXXXXXXXX

**NET CONTENTS: \_\_\_\_\_**

**FIRST AID**

<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give any liquid to the person.</li> <li>• Do not give anything by mouth to an unconscious person</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact PROSAR at 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.

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

**WARNING:** May be fatal if swallowed. Harmful if absorbed through the skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Wear long-sleeved shirt and long pants, socks, shoes, and gloves. Remove and wash contaminated clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**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 thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE 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. Wash thoroughly with soap and water 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 cleaning equipment or disposing of equipment wash waters or rinsate.

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.

**PHYSICAL/CHEMICAL HAZARDS**

Do not use or store near heat or open flame.

**DIRECTIONS FOR USE**

**Restricted use pesticide**

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

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.

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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 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

### PRODUCT INFORMATION

MANA 11415 is a suspension concentrate formulation containing 2 pounds of bifenthrin and may be mixed using water or liquid fertilizer, including phosphate-containing pop-up solutions, as the carrier. Containers should be well-shaken before mixing and measuring.

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

### RESISTANCE MANAGEMENT

MANA 11415 contains a Group 3A Insecticide / (Miticide). Insect biotypes with acquired resistance to Group 3A may eventually dominate the insect/mite population if Group 3A insecticides /(miticide) are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by MANA 11415 or other Group 3A insecticides.

To delay development of insecticide resistance consider:

- Avoiding the consecutive use of MANA 11415 or other Group 3A insecticides that have a similar target site of action, on the same insect/mite species.
- Using tank-mixtures or premixes with insecticides from a different target site of action Group as long as the involved products are all registered for the same use and have different sites of action.
- Basing insecticide use on a comprehensive IPM program.
- Monitoring treated insect/mite populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors, and/or manufacturer for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.

### 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 MANA 11415.

### MIXING INSTRUCTIONS

The spray tank must be clean, thoroughly rinsed, and decontaminated before adding either MANA 11415 alone or with tank mix combinations (see **MANA 11415 in Tank Mixtures** section below). If water is used as the carrier, use clean water.

For aerial applications made on brassica species (see **CROPS** section of the label below for full list of approved brassicas), foliar applications on corn, cucurbits (see **CROPS** section of the label below for full list of approved cucurbits), eggplant, head lettuce, and succulent peas and beans (see **CROPS** section of the label below for full list of approved succulent peas and beans), 1 to 2 quarts of emulsified oil can be substituted for 1 to 2 quarts of water in the finished spray.

**MANA 11415 Used Alone:** When MANA 11415 is used alone, add the specified amount to the spray tank when the tank is half filled with water or other carrier, then add the rest of the water or other carrier (as permitted on this label). Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

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**MANA 11415 with Fertilizer:** Fill the spray tank approximately one half full with water and/or liquid fertilizer, add the proper amount of MANA 11415 ; then add the rest of the water and/or fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform spray mixture.

Perform a jar compatibility test with the appropriate ratio of MANA 11415 and fertilizer to ensure the mixture will stay in solution. Maintain constant agitation during mixing and application.

**MANA 11415 in Tank Mixtures:** If a tank mixture is used, perform a compatibility test before actual tank mixing. Use a jar test for physical compatibility of untried mixtures using proper ratios and mixing sequences of all ingredients to be included in the mixture. Once compatibility is confirmed for the tank mix, fill the tank half full with water or other carrier. Start and continue agitation throughout mixing following conventional mixing order practices. **MANA 11415** can 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.

**TANK-MIXTURES:** MANA 11415 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. To insure successful applications, product compatibility tests should be conducted.

### APPLICATION INSTRUCTIONS

The rate of **MANA 11415** applied will vary according to pest pressure and timing of application. Use lower rates under light to moderate infestations and higher rates under heavy insect pressure and for mite control. Arid climates require higher rates.

Unless otherwise specified for a specific crop, apply when pest population reaches economic (damaging) threshold and repeat as necessary to maintain control. Thorough coverage is essential to achieve control.

In the **COMMENTS** section of the label for each crop, the specified application rate when applied by ground and/or air is listed as an amount of spray per acre. In all cases, this refers to finished spray per acre.

### APPLICATION AND MIXING INSTRUCTIONS

MANA 11415 is an insecticide/(miticide) that contains 2 pounds of bifenthrin per gallon. **MANA 11415** can be mixed directly with liquid fertilizer or with water. The rate of application is variable according to pest pressure, timing of treatments and field scouting. Use lower rates under light to moderate pest infestations, and higher rates under heavier pest pressure. In arid climates, application rates are generally higher. Fill the tank one half full with liquid fertilizer or water and begin spray tank agitation. Add the proper amount of MANA 11415 , and then add the rest of the fertilizer or water. Maintain agitation until the mixture has been applied.

**Shake well before using.**

**MANA 11415** spray solutions in nurse tanks should be agitated prior to moving the solution to spray system.

Cultivation within 10 feet of a water body is prohibited to allow for the growth of a vegetated filter strip.

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

**MANA 11415** can be applied in-furrow with the seed, as a T-band (band over the open furrow), as a broadcast application, as a band over the row or as a transplant-water drench during setting. Refer to the tables below for pest control or suppression recommendations.

**MANA 11415** can be mixed with commonly used liquid starter or pop-up fertilizers. Follow liquid fertilizer recommendations regarding seed safety and use guidelines. It is recommended that a preliminary jar test be conducted using appropriate ratios of fertilizer and MANA 11415 . It is not recommended to allow a tank mixture to set overnight, but if this occurs agitate tank mixture prior to application.

### MAXIMUM ALLOWABLE MANA 11415 USE PER ACRE PER SEASON

Refer to the individual crop sections for maximum allowable **MANA 11415** usage per acre per season. The maximum allowable use must include all registered use patterns including at-plant, soil applied and/or foliar applications for the 12 months period. The 12 month period is to begin upon the initial application to the acre.

### SPRAY DRIFT MANAGEMENT

**Avoiding spray drift at the application site is the responsibility of the applicator and the grower.** The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions regarding spraying.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45°.

Where states have more stringent regulations, they shall be observed.

The applicator must be familiar with and take into account the information covered in the **Spray Drift Management** section.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlaps as crop injury may result.

#### Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see **Wind, Temperature and Humidity, and Temperature Inversions**).

#### Controlling Droplet Size

- **Volume**-Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure**-Do not exceed the nozzle manufacturer's specified pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles**- Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation**- Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type**-Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift. Use only medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

#### Boom Length

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

#### Application Height

Applications should be made at the lowest height consistent with efficacy and flight safety. Do not make at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making application at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

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

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

#### Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance must increase with increasing drift potential (higher wind, smaller drops, etc.)

#### Wind

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.



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Do not apply when the wind velocity exceeds 15 mph.

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

**Temperature Inversions**

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

**Sensitive Areas**

The pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

**Additional Requirements for Aerial Applications**

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

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

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

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

**BUFFER ZONES**

**Vegetative Buffer Zones**

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

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

For guidance refer to the following publication for information on constructing and maintaining effective buffers *Conservation Buffers to Reduce Pesticide Losses, Natural Resources Conservation Services, USDA NRCS, 2000 Fort Worth, Texas, 21pp, <http://www.innrsc.usda.gov/technical/agronomy/newconbuf.pdf>.*

**Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast)** - Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).

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

**Buffer Zone for Non -ULV Aerial Application** - Do not apply within 150 feet of aquatic habitats (such as, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).

**CROPS**

**BRASSICAS\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB A/A	FL OZ/A	FL OZ/1000 LINEAR FT	

Brassica, Head and Stem. Includes: Broccoli, Broccoli, Chinese (gai lon), Brussels sprouts, Cabbage, Cabbage, Chinese (napa), Cabbage, Chinese mustard, Cauliflower, Cavalo broccoli, Kohlrabi	Rootworm larvae	0.08 – 0.10	5.12-6.4	0.30-0.37	When applied as directed, <b>MANA 11415</b> will provide control of the pests listed in this table.  Apply as a 5-7 inch band (T-band) over the open seed furrow, or in-furrow with the seed. Cutworm and armyworm treatments may be applied as broadcast treatments to the soil surface.
	Wireworm, Grubs	0.04 – 0.08	2.56-5.12	0.15-0.30	
	Seedcorn maggot Cabbage maggot Root maggots Root aphids				
	Army Cutworm Cutworm spp. Armyworm spp.	0.04 – 0.08	2.56-5.12	0.15-0.30	
<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 7 days</li> <li>• Do not apply more than 0.1 pound active ingredient per acre per season as an at-plant application.</li> <li>• Do not apply more than 0.5 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products (such as Fanfare ES)</li> </ul> <p>*This use is not permitted in California unless allowed by an approved supplemental label.</p>					

**BUSHBERRIES\* (FOLIAR)**

CROP(S)	PEST	DOSAGE		COMMENTS
		LB A/A	FL OZ/A	
Blueberry, Highbush and lowbush, Currant Elderberry Gooseberry Huckleberry	Blueberry Maggot Fruitworms Lecanium scale (crawlers) Plum Curculio Obliquebanded leafroller Red-banded leafroller Variegated leafroller Spanworm Leafhoppers Aphids	0.04 – 0.10	2.56 - 6.4	For foliar application to control the listed pests When applied as directed, <b>MANA 11415</b> will provide control of the pests listed in this table.
	Banks grass mite Twospotted Spider Mite Carmine Mite Pacific Spider Mite <i>Lygus</i> spp.	0.08 - 0.10	5.12-6.4	
<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 1 day</li> <li>• Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons finished spray per acre with ground equipment. Thorough coverage is essential to achieve control.</li> <li>• Do not apply more than 0.5 pound active ingredient per acre per season.</li> </ul>				

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• Do not make applications less than 7 days apart.

**CILANTRO\* AND CORIANDER\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB A/A	FL OZ/A	FL OZ/1000 LINEAR FT	
Cilantro Coriander	Wireworm <i>Armyworm</i> spp. <i>Cutworm</i> spp. Flea Beetle larvae	0.04 – 0.08	2.56-5.12	0.15-0.30	When applied as directed, <b>MANA 11415</b> will provide control of the following pests listed in this table. Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T band) in-furrow with the seed, or broadcast to the soil surface.
<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 3 days</li> <li>• Do not apply more than 0.1 pound active ingredient per acre per season as an at-plant application.</li> <li>• Do not apply more than 0.5 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products. *This use is not permitted in California unless allowed by an approved supplemental label.</li> </ul>					

**CITRUS (BARE SOIL SURFACE UNDER DRIP LINE)\***

CROP(S)	PEST	DOSAGE		COMMENTS
		LB A/A	FL OZ/A	
Citrus	Fire ants ( <i>Solenopsis</i> spp.) Asian cockroach ( <i>Blattella asahinae</i> )	0.10 – 0.25	6.4-16	When applied as directed, <b>MANA 11415</b> will provide control of the following pests listed in this table. Apply <b>MANA 11415</b> by ground equipment to bare soil beneath citrus trees. <b>MANA 11415</b> 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.  <b>MANA 11415</b> protects citrus tree roots from Diaprepes 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 <b>MANA 11415</b> as they attempt to burrow into the root zone. Disturbance of the soil beneath trees should be minimized.  Timing of <b>MANA 11415</b> applications is critical. Current information suggests that peak emergence of adult Diaprepes
	Diaprepes Root Weevil ( <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> )	0.25 – 0.50	16-32	

			<p>Weevil 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 Diaprepes, 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 <b>MANA 11415</b> applications 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 to 3 weeks following adult emergence. It is critical to have the <b>MANA 11415</b> soil barrier in place prior to drop of the neonates.</p> <p><b>MANA 11415</b> is one of several effective tools in an integrated pest management program for Citrus Root Weevils. Application of <b>MANA 11415</b> 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>Apply to individual citrus resets, when not in solid planted rows, using hand-gun or shielded sprayer.</p> <p>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.</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, 42.5 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, 21.25 fluid ounces formulated product can be applied early season and 21.25 fluid ounces formulated product can be applied later in the season.</p>
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<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 1 day</li> <li>• Do not apply through irrigation systems.</li> <li>• Do not allow any application of <b>MANA 11415</b> to contact fruit or foliage.</li> <li>• Do not apply more than a total of 42.5 fluid ounces of formulated product (0.5 pound active ingredient) per acre per year.</li> <li>• Apply the specified dosage in a minimum of 40 gallons of finished spray per acre.</li> <li>• Do not apply by air.</li> <li>• For use on bare soil under drip line only</li> </ul> <p>*This use is not permitted in California unless allowed by an approved supplemental label.</p>
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**CORN (AT PLANT)\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB AI/A	FL OZ/A	FL OZ/1000 LINEAR FT	
Corn, Field (Grain and Silage), Field corn grown for seed, Popcorn, Sweet corn Sweet corn grown for seed	Corn rootworm larvae (Northern, Southern, and Western) Seed Corn Beetle	0.08 – 0.10	5.12-6.4	0.30-0.37	When applied as directed, <b>MANA 11415</b> will provide control of the following pests listed in the table below. Apply as a 5 to 7 inch band (T-band) over an open furrow or in-furrow with the seed. For Army cutworm, Stalkborer, Cutworm spp., True armyworm or Armyworm spp., apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), in-furrow with the seed, or broadcast to the soil surface.
	Wireworm Grape colaspis Grubs Seedcorn maggot Root aphids	0.04 – 0.08	2.56-5.12	0.15-0.30	
	Army Cutworm Cutworm spp. True Armyworm Armyworm spp. Stalkborer Sugarcane Beetle	0.04 – 0.08	2.56-5.12	0.15-0.30	
<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 30 days</li> <li>• Do not apply more than 0.1 pound active per acre per season as an at-plant application.</li> <li>• Do not apply to soil where there is greater than 30% cover of crop residue remaining.</li> <li>• For field corn: Do not apply more than 0.3 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products</li> <li>• For sweet corn: Do not apply more than 0.2 pound active ingredient per acre total per season including PRE, PPI, at-plant, and foliar applications of other bifenthrin products (such as ).</li> </ul> <p>*This use is not permitted in California unless allowed by an approved supplemental label.</p>					

**CORN (PRE & PPI)\***

CROP(S)	PEST	DOSAGE		COMMENTS
		LB AI/A	FL OZ/A	

Corn, Field (Grain and Silage), Field corn grown for seed, Popcorn, Sweet corn Sweet corn grown for seed	Black Cutworm Grape colaspis White Grub Wireworm Seed Corn Beetle Seedcorn Maggot Armyworm spp.	0.047 - 0.062 Pre-Plant Incorporated (PPI)	3.0-4.0 Pre-Plant Incorporated (PPI)	When applied as directed, <b>MANA 11415</b> will provide control of the following pests listed in this table. For PPI treatments, the 4 – 5.3 fluid oz/A rate must be used. <b>MANA 11415</b> can be tank mixed and applied with PPI herbicides. Incorporation of <b>MANA 11415</b> should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth.  For PRE treatments, the 3.4 fluid oz/A rate may be applied and can be tank mixed and applied with PRE herbicides.
	Black Cutworm Armyworm spp. Stalkborer	0.04 Pre-Emergence (PRE)	2.56 Pre-Emergence (PRE)	
<ul style="list-style-type: none"> <li>• For field corn: Do not apply more than 0.3 pound active ingredient per acre total per season including PRE, PPI, at-plant, and foliar applications of other bifenthrin products</li> <li>• For sweet corn: Do not apply more than 0.2 pound active ingredient per acre total per season including PRE, PPI, at-plant, and foliar applications of other bifenthrin products (such as Fanfare ES).</li> </ul> <p>*This use is not permitted in California unless allowed by an approved supplemental label.</p>				

**CUCURBITS\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB AI/A	FL OZ/A	FL OZ/1000 LINEAR FT	
Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Edible Gourd [(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 <i>Cucumis melo</i> ) (includes true cantaloupe, cantaloupe, casaba,	Cucumber beetle larvae	0.08 – 0.10	5.1 – 6.4	0.29 – 0.37	When applied as directed <b>MANA 11415</b> will provide control of the pests listed in this table. To control rootworm larvae apply as a 5 to 7 inch band over an open furrow (T-band) or in-furrow with the seed.  To control wireworm, grubs, and flea beetle larvae, apply as a 5 to 7 inch band over an open furrow (T-band) or in-furrow with the seed or transplant.  To control army cutworm, cutworm spp., true armyworm, and armyworm spp., apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), in-furrow with the seed, broadcast to the soil surface or banded over the row.
	Wireworm Grubs Flea beetle larvae	0.04 – 0.08	2.56-5.12	0.15-0.30	
	Army cutworm Cutworm spp. True armyworm Armyworm spp.	0.04 – 0.08	2.56-5.12	0.15-0.30	
<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 3 days</li> <li>• Do not apply more than 0.1 pound active ingredient per acre per season as an at-plant application.</li> </ul> <p>Do not apply more than 0.3 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products *This use is not permitted in California unless allowed by an approved supplemental label.</p>					

<p>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.)</p>	
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**DRIED BEANS AND PEAS\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB A/A	FL OZ/A	FL OZ/1000 LINEAR FT	
<b>Dried cultivars of:</b> <b>Bean</b> ( <i>Lupinus</i> spp.); <b>Bean</b> ( <i>Phaseolus</i> spp.): Field bean, Kidney Bean, Lima	Corn rootworm larvae	0.08 - 0.10	5.1 - 6.4	0.29 - 0.37	When applied as directed, <b>MANA 11415</b> will provide control of the pests listed in this table. Apply as a 5 to 7 inch band over the row on the soil surface, 5 to 7 inch band (T-band) over an open furrow, or in-furrow with the seed. Apply broadcast to the
	Wireworm Grape Colaspis Grubs Root maggot	0.04 - 0.08	2.56-5.12	0.15-0.30	

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Bean (dry), Navy Bean, Pinto Bean, Tepary Bean; <b>Bean</b> ( <i>Vigna</i> spp.): Adzuki Bean, Blackeyed Pea, Catjang, Cowpea, Crowder Pea, Moth Bean, Mung Bean, Rice Bean, Southern Pea, Urd Bean; Broad Bean (dry); Chickpea; Guar; Lablab Bean; Lentil; Pea ( <i>Pisum</i> spp.), Field Pea; Pigeon Pea.	Army cutworm Cutworm spp. True armyworm Armyworm spp.	0.04 – 0.08	2.56-5.12	0.15-0.30	soil surface for control of Army cutworm, Cutworm spp., True armyworm, or Armyworm spp.
	<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 14 days</li> <li>• Do not apply more than 0.1 pound active ingredient per acre per season as an at-plant application.</li> </ul> <p>Do not apply more than 0.2 pound active ingredient (17.0 ounces formulated) to peas, or 0.3 active ingredient (25.5 ounces formulated) to beans per acre per season including at-plant plus foliar applications of other bifenthrin products.*This use is not permitted in California unless allowed by an approved supplemental label.</p>				

**EGGPLANT\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB A/A	FL OZ/A	FL OZ/1000 LINEAR FT	
Eggplant	Rootworm larvae	0.08 - 0.10	5.1 – 6.4	0.29 – 0.37	When applied as directed, <b>MANA 11415</b> will provide control of the pests listed in this table. Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), or in-furrow with the seed. Apply broadcast to the soil surface for control of Army cutworm, Cutworm spp., True armyworm, or Armyworm spp.
	Wireworm	0.04 – 0.08	2.56-5.12	0.15-0.30	
	Grubs				
	Root maggot				
	Army cutworm Cutworm spp. True armyworm Armyworm spp.	0.04 – 0.08	2.56-5.12	0.15-0.30	
<ul style="list-style-type: none"> <li>• Do not apply more than 0.1 pound active ingredient per acre per season as an at-plant application.</li> <li>• Do not apply more than 0.2 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products. *This use is not permitted in California unless allowed by an approved supplemental label.</li> </ul>					

**LEAFY BRASSICAS\*, TURNIP GREENS\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB A/A	FL OZ/A	FL OZ/1000 LINEAR FT	
Broccoli Raab,	Rootworm larvae	0.08 - 0.10	5.1 – 6.4	0.29 – 0.37	When applied as directed,



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Bok Choy, Collards, Kale, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens, Turnip Greens	Wireworm Grubs Root maggot Lettuce root aphid	0.04 – 0.08	2.56-5.12	0.15-0.30	<b>MANA 11415</b> will provide control of the pests listed in this table. Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), or in-furrow with the seed. Apply broadcast to the soil surface for control of Army cutworm, Cutworm spp., True armyworm, or Armyworm spp.
	Army cutworm Cutworm spp. True armyworm Armyworm spp.	0.04 – 0.08	2.56-5.12	0.15-0.30	
<ul style="list-style-type: none"> <li>Do not apply more than 0.1 pound active ingredient per acre per season as an at-plant application.</li> </ul> <p>Do not apply more than 0.4 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products. *This use is not permitted in California unless allowed by an approved supplemental label.</p>					

**LEAFY PETIOLE VEGETABLES (FOLIAR)**

CROP(S)	PEST	DOSAGE		COMMENTS
		LB AI/A	FL OZ/A	
Celery, Cardoon, Chinese Celery, Celtuce, Florence Fennel, Rhubarb, Swiss Chard	Cutworms Corn Earworm Tobacco Budworm Saltmarsh Caterpillar Leafhoppers Flea Beetles, Imported Cabbageworm Cucumber Beetles Aphids Whitefly Armyworms Loopers Stink Bugs Crickets Ground Beetles Thrips Wireworm, Adults Diamondback Moth	0.04 – 0.10	2.56-6.4	When applied as directed, <b>MANA 11415</b> will provide control of the pests listed in this table. Apply in a minimum of 2 gallons of finished spray per acre by air, or in a minimum of 10 gallons of finished spray 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.
	Banks Grass Mite Twospotted Spider Mite Carmine Mite Pacific Spider Mite <i>Lygus</i> spp.	0.08 – 0.10	5.1-6.4	

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<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 7 days</li> <li>• Do not apply more than 0.5 pound active ingredient per acre per season.</li> <li>• Do not make applications less than 7 days apart.</li> </ul>
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**LETTUCE, HEAD\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB A/A	FL OZ/A	FL OZ/1000 LINEAR FT	
Lettuce, head	Rootworm larvae	0.08 - 0.10	5.1 - 6.4	0.29 - 0.37	When applied as directed, <b>MANA 11415</b> will provide control of the pests listed in this table. Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), or in-furrow with the seed. Apply broadcast to the soil surface for control of Army cutworm, Cutworm spp., True armyworm, Armyworm spp., or bulb mites.
	Wireworm Grubs Root maggot Lettuce root aphid	0.04 - 0.08	2.56 - 5.1	0.15 - 0.29	
Army cutworm Cutworm spp. True armyworm Armyworm spp. Bulb mites	0.04 - 0.08	2.56 - 5.1	0.15 - 0.29		
<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 7 days</li> <li>• Do not apply more than 0.1 pound active ingredient per acre per season as an at-plant application.</li> </ul> <p>Do not apply more than 0.5 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products. *This use is not permitted in California unless allowed by an approved supplemental label.</p>					

**OKRA\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB A/A	FL OZ/A	FL OZ/1000 LINEAR FT	
Okra	Wireworm Armyworm Cutworm Flea beetle larvae	0.04 - 0.08	2.56 - 5.1	0.15 - 0.29	When applied as directed, <b>MANA 11415</b> will provide control of the pests listed in this table. Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), in-furrow with the seed, or broadcast to the soil surface.
<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 7 days</li> <li>• Do not apply more than 0.1 pound active ingredient per acre per season as an at-plant application.</li> </ul> <p>Do not apply more than 0.20 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products. *This use is not permitted in California unless allowed by an approved supplemental label.</p>					

**PEPPERS (BELL AND NON-BELL)\***

CROP(S)	PEST	DOSAGE	COMMENTS
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		LB A/A	FL OZ/A	FL OZ/1000 LINEAR FT	
Peppers, Bell and non-bell	Rootworm larvae	0.08 - 0.10	5.1 - 6.4	0.29 - 0.37	When applied as directed, <b>MANA 11415</b> will provide control of the pests listed in this table. Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), or in-furrow with the seed. Apply broadcast to the soil surface for control of Army cutworm, Cutworm spp., True armyworm, Armyworm spp., or Stalkborer.
	Wireworm Grubs Root maggot Flea beetle larvae Pepper maggot Root aphid	0.04 - 0.08	2.56 - 5.1	0.15 - 0.29	
	Army cutworm Cutworm spp. True armyworm Armyworm spp. Stalkborer	0.04 - 0.08	2.56 - 5.1	0.15 - 0.29	
<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 7 days</li> <li>• Do not apply more than 0.1 pound active ingredient per acre per season as an at-plant application.</li> </ul> <p>Do not apply more than 0.2 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products. *This use is not permitted in California unless allowed by an approved supplemental label.</p>					

**SOYBEAN\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB A/A	FL OZ/A	FL OZ/1000 LINEAR FT	
Soybean	Rootworm larvae	0.08 - 0.10	5.1 - 6.4	0.29 - 0.37	When applied as directed <b>MANA 11415</b> will provide control of the pests listed in this table. Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T band), or in-furrow with the seed. Apply broadcast over the soil surface for control of Army cutworm, Cutworm spp., True armyworm, or Armyworm spp.
	Wireworm Grape colaspis Grubs Root maggot Seedcorn maggot Seed Corn Beetle	0.04 - 0.08	2.56 - 5.1	0.15 - 0.29	
	Army cutworm Cutworm spp. True armyworm Armyworm spp.	0.04 - 0.08	2.56 - 5.1	0.15 - 0.29	
<ul style="list-style-type: none"> <li>• Do not apply more than 0.1 pound active ingredient per acre per season as an at-plant application.</li> <li>• Do not apply more than 0.2 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products</li> </ul> <p>*This use is not permitted in California unless allowed by an approved supplemental label.</p>					

**SOYBEAN (PPI & PRE)\***

CROP(S)	PEST	DOSAGE		COMMENTS
		LB A/A	FL OZ/A	
				For PPI treatments, the 4.0 to 5.3 fl oz/A

Soybean	Black Cutworm White Grub Wireworm Seedcorn Maggot Armyworm spp.	0.047 – 0.062 (PPI)	3.0 – 3.9 (PPI)	rate must be used. <b>MANA 11415</b> can be tank mixed and applied with PPI herbicides. Incorporation of <b>MANA 11415</b> should not be any deeper than the intended planting depth and no deeper than 3 inches. Incorporation depth should be close to the intended seed planting depth.  For PRE treatments the 3.4 fl oz/A rate may be applied and can be tank mixed and applied w1th PRE herbicides.
	Black Cutworm Armyworm spp. Stalkborer Seed Corn Beetle	0.04 (PRE)	2.5 (PRE)	
<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 18 days</li> <li>• Do not apply more than 0.1 pound active ingredient per acre per season as a PPI or PRE application.</li> <li>• Do not apply more than 0.2 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products (such as Fanfare ES)</li> </ul> <p>*This use is not permitted in California unless allowed by an approved supplemental label.</p>				

**SPINACH\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB A/A	FL OZ/A	FL OZ/1000 LINEAR FT	
Spinach	Rootworm larvae	0.08 - 0.10	5.1 – 6.4	0.29 – 0.37	When applied as directed <b>MANA 11415</b> will provide control of the pests listed in this table. Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T band), or in-furrow with the seed. Apply broadcast over the soil surface for control of Army cutworm, Cutworm spp., True armyworm, or Armyworm spp.
	Wireworm Grubs Root maggot Seedcorn maggot	0.04 – 0.08	2.56 – 5.1	0.15 – 0.29	
	Army cutworm Cutworm spp. True armyworm Armyworm spp.	0.04 – 0.08	2.56 – 5.1	0.15 – 0.29	
<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 40 days</li> <li>• Do not apply more than 0.1 pound active ingredient per acre per season as an at-plant application.</li> <li>• Do not apply more than 0.4 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products.</li> </ul> <p>*This use is not permitted in California unless allowed by an approved supplemental label.</p>					

**SUCCULENT PEAS AND BEANS\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB A/A	FL OZ/A	FL OZ/1000 LINEAR FT	
Pea ( <i>Pisum</i> )	Rootworm larvae	0.08 - 0.10	5.1 – 6.4	0.29 – 0.37	When applied as directed

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<b>spp.): Dwarf Pea, Edible-pod Pea, English Pea, Garden Pea, Green Pea, Snow Pea, Sugar Snap Pea, Pigeon Pea</b> <b>Bean (Phaseolus spp.): Broadbean (succulent), Lima Bean (green), Runner Bean, Snap Bean, Wax Bean</b> <b>Bean (Vigna spp.): Asparagus Bean, Black-eyed Pea, Chinese Longbean, Cowpea, Moth Bean, Southern Pea, Yardlong Bean, Jackbean, Soybean (immature seed), Sword Bean</b>	Wireworm Grape colaspis Grubs Root maggot Seedcorn maggot	0.04 – 0.08	2.56 – 5.1	0.15 – 0.29	<b>MANA 11415</b> will provide control of the pests listed in this table. Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T band), or in-furrow with the seed. Apply broadcast over the soil surface for control of Army cutworm, Cutworm spp., True armyworm, or Armyworm spp.
	Army cutworm Cutworm spp. True armyworm Armyworm spp.	0.04 – 0.08	2.56 – 5.1	0.15 – 0.29	
<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 3 da7s</li> <li>• Do not apply more than 0.1 pound active ingredient per acre per season as an at-plant application.</li> </ul> <p>Do not apply more than 0.2 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products. *This use is not permitted in California unless allowed by an approved supplemental label.</p>					

**TOBACCO (PRE-TRANSPLANT AND AT-TRANSPLANT)\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB AI/A	FL OZ/A	FL OZ/1000 LINEAR FT	
Tobacco	Cutworm spp. Flea beetle larvae White grubs Wireworm Mole cricket Armyworm spp. Stalkborer	0.04 – 0.10	2.56-6.4	0.15--0.37	When applied as directed <b>MANA 11415</b> will provide control of the pests listed in this table.  Pre-transplant soil applications: Use of suitable equipment to incorporate into top 4" of the soil is required to control below-ground pests.  At-transplant water treatment application: Apply 0.0625 – 0.1 lb ai/A in a water treatment application volume of 10 – 200 gal/A.
<ul style="list-style-type: none"> <li>• Do not apply more than 0.2 pound active ingredient per acre per season.</li> <li>• Do not apply later than lay-by.</li> <li>• May be tank mixed with Command, Spartan and other herbicides approved for tobacco</li> </ul>					

use.  
 \*This use is not permitted in California unless allowed by an approved supplemental label.

**TOBACCO (FOLIAR)\*\***

CROP(S)	PEST	DOSAGE		COMMENTS
		LB A/A	FL OZ/A	
Tobacco	Aphid spp. Armyworm spp. Chinch Bugs Cutworm spp. Flea Beetle (Adults) Grasshoppers Green Bugs Japanese Beetles Stink Bugs Thrips Whiteflies Tarnished plant bugs	0.04 – 0.10	2.56 -6.4	When applied as directed <b>MANA 11415</b> will provide control of the pests listed in this table. Apply 0.04 to 0.10 lb ai/A per foliar application up to, and including, lay-by in a minimum of 10 gal/A. Do not make more than 2 foliar applications per season.
	Hornworm Tobacco Budworm	0.08 – 0.10	5.1-6.4	
	Spider mites <i>Lygus</i> spp.	0.10	6.4	
<ul style="list-style-type: none"> <li>• For foliar applications, do not make more than 2 applications per season.</li> <li>• For all applications, do not apply more than 0.2 lb active ingredient per acre per season.</li> <li>• Do not apply later than lay-by.</li> <li>• May be tank mixed with Command, Spartan and other herbicides approved for tobacco use.</li> </ul> <p>*See resistance statement under Directions for Use section.                      *This use is not permitted in California unless allowed by an approved supplemental label.</p>				

**TOMATILLOS and TOMATOES\***

CROP(S)	PEST	DOSAGE			COMMENTS
		LB A/A	FL OZ/A	FL OZ/1000 LINEAR FT	
Tomatillo	Rootworm larvae	0.08 - 0.10	5.1 – 6.4	0.29 – 0.37	When applied as directed <b>MANA 11415</b> will provide control of the pests listed in this table. Apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T band), or in-furrow with the seed. Apply broadcast over the soil surface for control of Army cutworm, Cutworm spp., True armyworm, Armyworm spp., or Stalkborer.
Tomato	Wireworm Grubs Root maggot Flea beetle larvae	0.04 – 0.08	2.56 – 5.1	0.15 – 0.29	
	Army cutworm Cutworm spp. True armyworm Armyworm spp. Stalkborer	0.04 – 0.08	2.56 – 5.1	0.15 – 0.29	
	<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 1 day</li> <li>• Do not apply more than 0.1 pound active ingredient per acre per season as an at-plant</li> </ul>				

	<p>application.</p> <p>Do not apply more than 0.32 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products. *This use is not permitted in California unless allowed by an approved supplemental label.</p>
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**TUBEROUS AND CORM VEGETABLES (AT-PLANT)\***

CROP(S)	PEST	DOSAGE		COMMENTS
		LB A/I/A	FL OZ/A	
Tuberos and Corn Vegetables: Arracacha; Arrowroot; Chinese Artichoke; Jerusalem Artichoke; Edible Canna; Cassava (bitter and sweet); Chayote (root); Chufa; Dasheen (taro); Ginger; Leren; Potato; Sweet Potato; Tanier; Turmeric, Yam Bean; True Yam	Wireworms Grape Colaspis White grub Sweet potato flea beetle Rootworms	0.15 – 0.30	9.6-19.2	When applied as directed <b>MANA 11415</b> will provide control of the pests listed in this table. <b>MANA 11415</b> may be applied as a soil incorporated broadcast, directed bed spray, or a T-band spray into the planting furrow for the control of wireworms, rootworms, sweet potato flea beetle, and white grubs. Apply <b>MANA 11415</b> at the rate of 0.15 to 0.30 pounds active ingredient (12.75 to 25.50 fluid ounces formulated) per acre in a minimum of 10 gallons per acre of spray.
	<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 21 days</li> <li>• Do not apply more than 0.3 pound active ingredient per acre per season as an at-plant application.</li> </ul> <p>Do not apply more than 0.5 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products. *This use is not permitted in California unless allowed by an approved supplemental label.</p>			

**TUBEROUS AND CORM VEGETABLES (LAY-BY)\***

CROP(S)	PEST	DOSAGE		COMMENTS
		LB A/I/A	FL OZ/A	
Tuberos and Corn Vegetables: Arracacha; Arrowroot; Chinese Artichoke; Jerusalem Artichoke; Edible Canna; Cassava (bitter and sweet); Chayote (root); Chufa; Dasheen (taro); Ginger; Leren; Potato; Sweet Potato; Tanier;	Wireworms Grape Colaspis White grub Rootworms	0.15 – 0.30	9.6-19.2	When applied as directed <b>MANA 11415</b> will provide control of the pests listed in this table. <b>MANA 11415</b> may be applied as one or more soil directed and incorporated treatments at cultivation or lay-by for the control of wireworms, rootworms, and white grubs. Apply <b>MANA 11415</b> to the drill area and incorporate by cultivation equipment set to throw soil towards the drill area. Apply <b>MANA 11415</b> at the rate of 0.15 to 0.30 pounds active ingredient (12.75 to 25.50 fluid ounces formulated) per acre in a minimum of 10 gallons per acre of spray.
	<ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 21 days</li> </ul> <p>Do not apply more than 0.5 pound active ingredient per acre per season including at-plant plus foliar applications of other bifenthrin products. *This use is not permitted in California unless allowed by an approved supplemental label.</p>			

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Turmeric, Yam Bean; True Yam	
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### STORAGE AND DISPOSAL

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

#### PESTICIDE STORAGE:

Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food and feed. Store in original container and out of reach of children, preferably in a locked storage area.

Do not store above 100°F for extended periods of time. Do not store below freezing.

If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

#### PESTICIDE DISPOSAL:

Open dumping is prohibited. Pesticide wastes are toxic. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. 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 at the nearest EPA Regional Office for guidance.

#### CONTAINER HANDLING:

##### **Rigid, Nonrefillable containers small enough to shake (i.e. with capacities equal to less than five gallons).**

Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Once container is rinsed, offer for recycling if available, or puncture and dispose of in a sanitary landfill.

##### **Rigid, Nonrefillable containers that are too large to shake (i.e. with capacities greater than 5 gallons or 50 lbs).**

Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling or reconditioning if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Once container is rinsed, offer for recycling if available, or puncture and dispose of in a sanitary landfill.

#### Refillable Container

Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

#### Refilling or Returning Containers

If refilling or returning container is planned, end users are not authorized to remove tamper evident cables, one way valves or clean container.



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### **Recycle or Disposal of Containers**

End users are authorized to remove tamper evident cable as required to remove the product from the container unless the container is equipped with one way valves and refilling or returning is planned. Instructions for container rinsing and either recycling or disposal are as follows:

#### **Bottom Discharge IBC (e.g. Schuetz Caged IBC or Snyder Square Stackable).**

Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal. Completely pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

#### **Top Discharge IBC, Drums, Kegs (e.g. Snyder 120 Next Gen, Bonar B120, Drums and Kegs).**

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

### **LIMITATION OF WARRANTY AND LIABILITY**

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES and LIMITATIONS OF LIABILITY.**

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the 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, Inc. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Makhteshim Agan of North America, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Makhteshim Agan of North America, Inc.'s election, the replacement of product.

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**MANA 11415** (66222-255) (Notif EPA 02-20-14)