

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

May 11, 2017

Carrie M. Tackema Nufarm Americas Inc. 4020 Aerial Center Parkway, Suite 101 Morrisville, NC 27560

Subject: Label Amendment – Adding tropical fruit group and crop sub-groups Product Name: NUP-13026 Abamectin 0.15 Miticide/Insecticide EPA Registration Number: 228-734 Application Date: October 4, 2016 Decision Number: 523292

Dear Ms. Tackema,

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Page 2 of 2 EPA Reg. No. 228-734 Decision No. 523292

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Jessica Rogala by phone at 703-347-0263, or via email at <u>rogala.jessica@epa.gov</u>

Sincerely,

Mark Suarez Product Manager 07 Invertebrate & Vertebrate Branch 3 Registration Division (7505P) Office of Pesticide Programs

Enclosure

### **RESTRICTED USE PESTICIDE**

#### TOXIC TO FISH, MAMMALS, AND AQUATIC ORGANISMS FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

GROUP 6 INSECTICIDE

# NUP-13026 Abamectin 0.15 Miticide/Insecticide [ABN: Abamex Miticide/Insecticide]

#### **ACTIVE INGREDIENT:**

Abamectin (CAS No.71751-41-2):	
OTHER INGREDIENTS:	
	<b>TOTAL:</b> 100.0%

\*Contains 0.15 pounds Abamectin per gallon.

### KEEP OUT OF REACH OF CHILDREN CAUTION

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.)

SEE [NEXT PAGE] [BELOW] FOR ADDITIONAL FIRST AID AND PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300 For Medical Emergencies Only, Call (877) 325-1840

EPA REG. NO. 228-734 EPA EST. NO.:

MANUFACTURED FOR NUFARM AMERICAS INC. 11901 South Austin Avenue Alsip, IL 60803

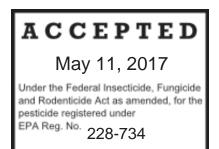


[Nufarm Grow a better tomorrow] [Grow a better tomorrow]

NET CONTENTS \_\_\_\_\_GALS.

( Liters)

000228.00734.20170419.draft



#### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made out of barrier laminate or butyl rubber > 14 mils
- Socks plus shoes

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 exist, 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/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. As soon as possible, wash thoroughly and change into clean clothing.

	FIRST AID
	Call a poison control center or doctor immediately for treatment advice.
If swallowed:	Have person sip a glass of water if able to swallow.
ii swalloweu.	<ul> <li>DO NOT induce vomiting unless told to do so by the poison control center or doctor.</li> </ul>
	DO NOT give anything by mouth to an unconscious person.
	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> </ul>
If in eyes:	Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
	Call a poison control center or doctor for treatment advice.
lf on skin or	Take off contaminated clothing.
clothing:	Rinse skin immediately with plenty of water for 15-20 minutes.
ciotining.	Call a poison control center or doctor for treatment advice.
	Move person to fresh air.
If inhaled:	• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by
ii iiiialeu.	mouth-to-mouth, if possible.
	Call a poison control center or doctor for further treatment advice.
	HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.

#### NOTE TO PHYSICIAN

Early signs of intoxication include dilation of pupils, muscular incoordination, and muscle tremors. Toxicity following accidental ingestion of this product can be minimized by early administration of chemical adsorbents (e.g., activated charcoal). If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms, and measurements.

In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since Abamectin is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic Abamectin exposure.

#### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. **DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** apply when weather conditions favor drift from target areas. **DO NOT** contaminate water when disposing of equipment washwater 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 if bees are visiting the treatment area.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a medium potential for reaching both surface water and aquatic sediment via runoff for several weeks to months after application. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of Abamectin from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours.

Use of this product may pose a risk to threatened and endangered species of fish, amphibians, crustaceans (including fresh water shrimp), and insects. All use of this product in the state of California should comply with the recommendations of the California Endangered Species Project. Before using this product in California, consult with your county agriculture commissioner to determine use limitations that apply in your area.

**ATTENTION:** This product contains chemicals known to the state of California to cause birth defects or other reproductive harm.

#### 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.

#### 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. **Exception:** For grape girdling cane turning, and tying in grapes. **DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 days.

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 made out of barrier laminate or butyl rubber  $\geq$  14 mils
- Shoes plus socks

# FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR PEST CONTROL, AND/OR ILLEGAL RESIDUES.

#### **PRODUCT INFORMATION**

When applied following the **Directions for Use** on this label, this product controls listed mites and insects in various crops. Optimum control of target insects requires this product to be mixed with sufficient amounts of water to provide a thorough coverage of foliage. Spray volume in gallons will vary with the size and number of trees per acre or with the density of target crop foliage. Optimum insect control is achieved only if the foliage receives a thorough coverage of this product. Calibrate all spray equipment to ensure delivery of sufficient spray solution to thoroughly cover foliage of target crops.

**Phytotoxicity:** Although this product has been tested for phytotoxicity and compatibility and is safe to use on a variety of crops and as a tank mix in combination with many commonly used products, it is not possible to test all

crop varieties grown under a variety of growing conditions or to test all possible combination of products. Before use, test potential mixtures with this product to ensure physical compatibility and lack of phytotoxic effects to the target crop.

New York State Restrictions: Aerial applications of this product are prohibited in the State of New York.

#### DO NOT apply this product through any type of irrigation system.

#### [OPTIONAL TEXT FOR TIP-N-MEASURE CONTAINERS]

Use Directions for Tip-N-Measure Container:

- 1. Remove the measuring chamber cap and seal over container opening.
- 2. Replace the cap and securely tighten.
- 3. Tip the container until the measuring chamber contains the desired amount of product.
- 4. Return container to its level position.
- 5. Remove measuring chamber cap and pour product into proper application equipment.
- 6. Replace the cap and securely tighten.

#### SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of equipment and weather related factors determine the potential for spray drift. It is the applicator's responsibility to consider these factors when making application decisions. **Note:** When states have more stringent regulations, they must be observed.

#### Spray Drift Precautions for Application with Aircraft or Ground Application Equipment

- Apply this product only when wind velocity favors on target product deposition (approximately 2 to 15 mph.)
- Do not apply with ground application within 25 feet of or with aircraft within 150 ft. of lakes, reservoirs, rivers, permanent streams, marshes, potholes, natural ponds, estuaries, or commercial fish farm ponds.
- Do not cultivate within 25 ft. of the aquatic area to allow growth of a vegetative filter strip.
- Do not allow this product to drift onto non-target areas. Drift may result in illegal residues or injury to nontarget species. Risk of exposure to sensitive areas can be reduced by applying this product when the wind direction is away from the sensitive area.
- Do not apply this product when weather conditions favor drift.
- Do not apply when wind speed is below 2 mph because wind direction will vary and there is a high potential for inversion.
- Observe the following precautions when using ground application to spray tree crops or hops in the vicinity of aquatic areas such as lakes, reservoirs, permanent streams, marshes, potholes, natural ponds, estuaries, or commercial fish farm ponds:
  - $\circ$   $\,$  Do not apply this product when weather conditions favor drift to aquatic areas.
  - Do not apply within 110 ft. upwind of aquatic areas or when wind speed is above 8 mph.
  - Spray last 3 rows windward of aquatic areas using nozzles on one side only, with spray directed away from the aquatic areas.
  - Avoid spray going over tops of trees by adjusting or turning off top nozzles. Shut off nozzles on the side away from the grove/orchard when spraying the outside row. Shut off nozzles when turning at ends of rows and passing tree gaps in rows.

#### SPRAY DRIFT PRECAUTIONS FOR AERIAL APPLICATION

#### Drift Management Requirements

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops.

<u>Outermost Nozzle Distance</u>: The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.

Nozzle Direction: Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Maximum Wind Speed: Do not apply when wind speed is greater than 15 mph.

<u>Droplet Size</u>: 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:

<u>Volume</u>: Use high flow nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

<u>Pressure</u>: Do not exceed the nozzle manufacturer's recommended 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.

<u>Nozzle Orientation</u>: Orienting nozzles so that the spray is released parallel to the air stream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

<u>Nozzle Type</u>: 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.

<u>Boom Length</u>: 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.

<u>Application Height</u>: Applications should not be made at a height greater than 10 ft. above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

<u>Swath Adjustment</u>: When applications are made with a cross wind, the swath will be displaced downwind. Therefore, on the up and downward edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind.

<u>Wind</u>: Drift potential is lowest between wind speeds of 2-15 mph. However, many factors including droplet size and equipment, 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 should be familiar with wind patterns and how they affect spray drift.

<u>Temperature and Humidity</u>: To compensate for evaporation when applying this product in low relative humidity, set up equipment to produce larger droplets. Evaporation of droplets is most severe when conditions are both hot and dry.

<u>Temperature Inversions</u>: This product must not be applied during a temperature inversion because the potential for drift is high. Temperature inversions restrict vertical air mixing, and this causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds that are common during inversions. Temperature inversions are characterized by temperatures that increase with altitude and are common on nights with limited cloud cover and light to no wind. Inversions 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, the movement of smoke from a ground source or an aircraft smoke generator can also identify inversions. 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.

#### **RESISTANCE MANAGEMENT**



For resistance management, this product contains a Group 6 insecticide. Any insect/mite population may contain individuals naturally resistant to this product and any other Group 6 insecticides. The resistant individuals may dominate the insect/mite population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

 Rotate the use of this product or other Group 6 insecticides within a growing season, or among growing seasons, with different groups that control the same pests.

- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, recordkeeping, and which considers cultural, biological and other chemical control practices.
- Monitor and treat pest populations for resistance development.
- If an insect pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or insecticide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistancemanagement and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance contact a Nufarm representative.

#### **CROP USE DIRECTIONS**

#### **AVOCADOS**

Target Insects	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
			Apply using ground equipment in 100 or more gal water/A.
		If using 400 gal/A or more, apply 2.5 fl.	<b>Pre-Harvest Interval</b> – 14 days
Avocado thrips (Scirtothrips perseae) Persea Mites (Oligonychus perseae)	DO NOT use less than 10 fl. oz./A of this product Low to moderate insect infestations: 10.0-15.0 Heavy pest infestations: 16.0- 20.0 ADD a horticultural oil for best results	oz. of this product/100 gal of water <b>and</b> 1.0-4.0% of NR (narrow range) 415 oil. Although aerial applications are permitted when this product is applied in 50 or more gal water/A, better control of target insects is obtained using ground applications. Users accept all liability for level and duration of thrip control from aerial applications of this product. Apply this product when thrips first appear but prior to finding 5 immature thrips per leaf or fruit. For low to moderate infestations, include 1.0-4.0% of NR 415 oil in combination with this product and the horticultural spray oil approved for use on avocados.	<ul> <li><b>DO NOT</b> make more than 2 applications of this product or any other Abamectincontaining product per year.</li> <li><b>DO NOT</b> apply more than 20 fl. oz./A (0.023 lb ai/A) of this product or any other Abamectin-containing product per application.</li> <li><b>DO NOT</b> apply more than 40 fl. oz./A (0.047 lb ai/A) of this product or any other Abamectin-containing product per year.</li> <li><b>DO NOT</b> allow livestock to graze in treated orchards.</li> </ul>
			Horticultural Spray Oil ( <b>DO</b> <b>NOT</b> use a dormant oil), minimum 1 to 4%, v/v (minimum)
		Make a second application, if needed, to maintain control, but wait at least 30 days after the first application to retreat. <b>SEE RESTRICTIONS.</b>	<b>Application Interval:</b> Wait at least 30 days before repeating application.

• Heavy/severe infestations are defined as more than 5 thrips per leaf/fruit. To prevent crop injury, observe all precautions and restrictions on the oil label. When using oil concentrations above 2.0%, treat a small test area before making a large-scale application.

#### **BEAN, DRY AND SUCCULENT**

Crops in this group include *Cicer* arietinum (chickpea, garbanzo bean); Lupinus spp. (including grain lupin, sweet lupin, white lupin, and white sweet lupin); *Phaseolus* spp. (including kidney bean, lima bean, mung bean, navy bean, pinto bean, snap bean, and waxbean); *Vicia faba* (broad bean, fava bean); *Vigna* spp. (including asparagus bean, blackeyed pea and cowpea<sup>\*</sup>)

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
			Do not apply in less than 10 gal. of water/A with ground application equipment. Do not apply in less than 5 gal. of water/A with aircraft.
		Under conditions such as high pest	Pre-Harvest Interval – 7 days
	Low to moderate pest infestations: 8.0-12.0	populations, dense foliage, or adverse application conditions (such as high temperatures), use a greater volume of water to ensure adequate coverage.	<b>DO NOT</b> apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing product
Liriomyza		Leafminers and Spider mites: Apply	per application.
leafminers Spider mite	Heavy pest infestations: 13.0-16.0	when adult leafminers or spider mites first appear, and repeat as needed to maintain control within constraints of a sound resistance management program.	<b>DO NOT</b> apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any other Abamectin-containing product per year.
		Make a second application, if needed, but wait at least 6 days after the first application. <b>SEE RESTRICTIONS.</b>	<b>DO NOT</b> make more than 2 sequential applications of this product or any other Abamectin-containing product per year.
			<b>DO NOT</b> apply by air in the State of New York.
			<b>Application Interval:</b> Wait at least 6 days before repeating application.

\* For use on cowpeas that are grown only for dry seed. Do not allow livestock to graze cowpea forage and do not harvest cowpea forage or hay for use as livestock feed.

#### CELERIAC (Apium graveollens)

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
Twospotted spider mite	16.0	Apply when mites first appear. Make a second application, if needed, but wait at least 7 days after the first application. <b>SEE RESTRICTIONS.</b> For best results, use in combination with a non-ionic surfactant.	<ul> <li>Ground application only</li> <li>Apply using ground equipment using conventional dilute or concentrate sprayers.</li> <li>Use sufficient volumes (greater than 20 gal of water per acre) to ensure thorough foliage coverage.</li> <li>Pre-Harvest Interval – 7 days</li> <li>To avoid insect resistance to this product, do not apply more than two sequential applications of this product or any other Abamectin- containing product.</li> <li>DO NOT apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any other Abamectin-containing product per year after transplanting.</li> <li>Application Interval: Wait at least 7 days before repeating application.</li> </ul>

#### **CITRUS FRUIT CROP GROUP 10-10**

Crops in this group include Australian desert lime; Australian finger-lime; Australian round lime; Brown River finger lime; calamondin; citron; citrus hybrids; grapefruit; Japanese summer grapefruit; kumquat; lemon; lime; Mediterranean mandarin; mount white lime; New Guinea wild lime; orange, sour; orange, sweet; pummelo; Russell River lime; Satsuma mandarin; sweet lime; tachibana orange; Tahiti lime; tangelo; tangerine (mandarin); tangor; trifoliate orange; uniq fruit; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
Broad mite Citrus bud mite Twospotted spider mite	Concentrate Sprays: 10-20 fl. oz./A (Dilute Sprays: 1.0-2.0 fl. oz./100 gal) Concentrate Sprays:		Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough coverage (or outside coverage for Asian citrus psyllid, citrus leafminer, or citrus thrips).
Citrus rust mite	5-20 fl. oz./A (Dilute Sprays: 0.5-2.0 fl. oz./100 gal)	Apply using conventional dilute or concentrate ground equipment.	Apply this product with a minimum of 0.20% horticultural oil spray (not a dormant oil) in the spray mixture or not less than 1 gallon of oil/A (except when
Citrus leafminer	Concentrate Sprays: 5-20 fl. oz./A (Dilute Sprays: NR)	<ul> <li>Aerial application is permitted only for control of citrus leafminer. Aerial application to citrus is not approved in California.</li> <li>ADD a horticultural oil for best results.</li> <li>Asian citrus psyllid: Apply to protect newly expanding foliage flush during the spring, summer or fall. This product will only control adults and nymphs present at the time of application.</li> <li>Mites: Apply when mites first appear during spring,</li> </ul>	specified differently below). To control <b>citrus</b> <b>leafminer</b> -Ground or aerial application is permitted: however, do not apply with aircraft to citrus in California. For Aerial application use a minimum of 10
Asian citrus psyllid Citrus thrips	Concentrate Sprays: 10-20 fl. oz./A (Dilute Sprays: NR)	summer, and/or fall. <b>Citrus bud mite:</b> For best results, time the spray at "bud swell". <b>Citrus leafminer:</b> Apply to protect new growth during spring, summer, or fall.	gallons of finished spray volume per acre. Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures) use a greater volume of water to insure adequate coverage. <b>All other pests:</b> Ground application only. Do not apply with aircraft. <b>Pre-Harvest Interval</b> – 7 days To avoid insect resistance to this product, do not apply to citrus grown in nurseries. <b>DO NOT</b> apply this

Target Pests	Application Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
			product, or any other Abamectin-containing product within 30 days of the last treatment.
			<b>DO NOT</b> apply more than 40 fl. oz./A (0.047 lb ai/A) of this product or any other Abamectin- containing product per year.
			<b>DO NOT</b> make more than 3 applications of this product or any other Abamectin- containing product per year.
			<b>DO NOT</b> allow livestock to graze in treated orchards.
			Application is not permitted from onset of flowering until after petal fall is complete.

NR = Not recommended.

IMPORTANT: The rate of this product per 100 gallons is based on a volume of 1,000 gal/A dilute spray. For concentrate sprays, adjust the dosage to apply the amount/A equal to that used in full cover dilute spray. Ground application: For best results use 150-300 gal/A of spray mix with a minimum of 3 gal/A of horticultural oil (not a dormant oil) and apply at a ground speed of 1 to 1.5 mph. For best results, use 100-250 gal/A of spray mix applied to achieve outside coverage.

#### COTTON

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
Carmine spider mite Pacific spider mite Strawberry spider mite Twospotted spider mite	Early season: 4.0-6.0 Mid-season/Lay-by: 8.0-16.0	Apply this product when mites first appear. Rate will depend on the cotton plant size and thickness of foliage. Use the 4-6 fl. oz./A rate only early in season and for cotton plants 10 inches or less in height. Do not use less than 4 fl. oz./A. <b>West of the Rockies:</b> The lower use rates may only be used on cotton less than 10 inches in height and applied only with ground equipment. <b>Note:</b> This product may be used without a wetting agent. Spreading and penetrating surfactants can improve mite control. When necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended. Do not use binder or sticker-type surfactants. Apply this product when mites first appear. Rate will depend on the cotton plant size and thickness of foliage.	<ul> <li>Applications can be made by air or ground using a minimum of 5 gallons of water/A. Use sufficient volume to ensure thorough coverage.</li> <li>DO NOT apply more than 16 fl. oz/A (0.019 lb ai/A) of this product or any other Abamectin-containing product per application.</li> <li>DO NOT make more than 2 applications of this product or any other Abamectin-containing product per year.</li> <li>DO NOT apply more than 32 fl. oz./A (0.038 lb ai/A) of this product or any other Abamectin-containing product per year.</li> <li>DO NOT apply more than 32 fl. oz./A (0.038 lb ai/A) of this product or any other Abamectin-containing product per year.</li> <li>Pre-Harvest Interval – 20 days</li> <li>DO NOT graze livestock in treated fields or feed cotton foliage to livestock.</li> <li>Application Interval: Wait at least 21 days before repeating application.</li> </ul>

#### CUCURBIT VEGTABLE CROP GROUP (CROP GROUP 9)

Crops in this group include chayote, Chinese waxgourd, citron melon, cucumbers, gherkin, edible gourds (includes hyotan, cucuzza, hechima, Chinese okra); *Momordica* spp., (includes balsam apple, balsam pear, bittermelon, Chinese cucumber); muskmelon, (hybrids and/or cultivars of *Cucumis melo* includes true cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon and snake melon), pumpkin, summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), winter squash, (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash), watermelon (includes hybrids and/or varieties of Citrullus lanatus)

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
			Use ground equipment in 20 or more gal water/A. Although aerial applications are permitted when this product is applied in 5 or more gal water/A, better control of target insects is obtained using ground applications. Increased water volumes
			are required under certain situations (severe pest infestations, highly dense foliage, elevated temperatures) to ensure thorough foliage coverage.
	Low to moderate	Users accept all liability for level and	<b>Pre-Harvest Interval</b> – 7 days
Leafminers Spider mite	pest infestations:Leafminers8.0-12.0	duration of mite control from aerial applications of this product. Apply when insects first appear. Make a second application, if needed, but wait at least 7 days after the first application. <b>SEE RESTRICTIONS.</b>	<b>DO NOT</b> apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin- containing product per application.
			<b>DO NOT</b> apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any other Abamectin- containing product per year.
		<b>DO NOT</b> make more than 2 sequential applications of this product or any other Abamectin- containing product per year.	
			<b>DO NOT</b> apply by air in the State of New York.
			<b>Application Interval:</b> Wait at least 7 days before repeating application.

#### FRUITING VEGETABLES CROP GROUP (except Cucurbits) (CROP GROUP 8-10)

Crops in this group include African eggplant; bush tomato; bell pepper; cocona; currant tomato; eggplant; garden huckleberry; goji berry; groundcherry; martynia; naranjilla; okra; pea eggplant; pepino; nonbell pepper; roselle; scarlet eggplant; sunberry; tomatillo; tomato; tree tomato; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
Broad mite Colorado potato beetle <i>Liriomyza</i> leafminers Potato psyllid Spider mite Thrips palmi Tomato psyllid Tomato Russet mite	Low to moderate pest infestations: 8.0-12.0 Heavy pest infestations: 16.0 ADD a nonionic surfactant for best results	<ul> <li>Apply when insects first appear.</li> <li>Make a second application, if needed, but wait at least 7 days after the first application. SEE RESTRICTIONS.</li> <li>Users accept all liability for level and duration of mite control from aerial applications of this product.</li> <li>A non-ionic surfactant (not binder or sticker-types) used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray.</li> <li>Mites: For best control apply with ground equipment.</li> <li>Broad, russet, and spider mites: Apply when mites first appear.</li> <li>Thrips palmi: Apply when thrips are first observed.</li> <li>Leafminers: Apply when adult flies are first observed</li> <li>Potato Psyllids: Sequential application 10-14 days apart may be needed for infestations with heavy egg and nymph populations.</li> <li>Potato Psyllids: Sequential application</li> </ul>	Do not apply in less than 20 gal water/A with ground equipment. Increased water volumes are required under certain situations (severe pest infestations, highly dense foliage, elevated temperatures) to ensure adequate coverage. <b>Pre-Harvest Interval</b> – 7 days <b>DO NOT</b> apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing product per application. <b>DO NOT</b> apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any other Abamectin-containing product per year. <b>DO NOT</b> make more than 2 sequential applications of this product or any other Abamectin-containing product. <b>DO NOT</b> apply by air in the State of New York. For resistance management,
		10-14 days apart may be needed for infestations with heavy egg and nymph populations.	For resistance management, <b>DO NOT</b> use on fruiting vegetables grown for transplanting.
			<b>Application Interval:</b> Wait at least 7 days before repeating application.
Tomato pinworm	16.0	<b>Tomato pinworm:</b> Application may be made from the time moth activity is detected up to, but no later than, the time when newly emerged larvae are present.	

#### GRAPES AND SMALL FRUIT VINE CLIMBING SUBGROUP (except Fuzzy Kiwifruit) (CROP SUBGROUP 13-07F)

Crops in this group include Amure river grape; gooseberry; grape; kiwifruit, hardy; maypop; schisandra berry; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
Pacific spider mite Twospotted spider mite Variegated leafhoppers* Western grapeleaf skeletonizers Western grape* leafhoppers Willamette spider mite *NOTE: This product only provides knock- down control of pest.	Low to moderate pest infestations: 8.0-12.0 Heavy pest infestations: 16.0 ADD a nonionic surfactant for best results	<ul> <li>Spider mites: Apply when mites first appear (or before more than 5 motiles per leaf are observed).</li> <li>Western grapeleaf skeletonizer: Apply with a non-ionic surfactant when the larvae are initially seen. For best results, apply shortly after eggs hatch.</li> <li>Leafhoppers: For contact knock-down control of these pests, apply with a non-ionic surfactant when pest first appears.</li> <li>European Grapevine Moth: Apply to aid in control of first generation of pest on grapes.</li> <li>Make a second application, if needed, but wait at least 21 days after the first application. SEE RESTRICTIONS.</li> <li>A non-ionic (not binder or sticker-type) surfactant must be used in combination with this product to provide improved wetting of foliage and an even deposition of the spray.</li> <li>It is impossible to test the safety of this product plus non-ionic surfactants on all grape varieties under the various conditions which lead to</li> </ul>	Use conventional ground application equipment in 50 gal or more of water/A to ensure thorough foliage coverage, or with electrostatic spray equipment in 5 gal or more of water/A. <b>DO NOT</b> enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. <b>Exception:</b> For grape girdling cane turning, and tying in grapes. <b>DO NOT</b> enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 days. <b>Pre-Harvest Interval</b> – 28 days <b>DO NOT</b> exceed 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing product per application <b>DO NOT</b> make more than 32 fl. oz./A (0.038 lb ai/A) of this product or any other Abamectin- containing product per growing year. <b>DO NOT</b> make more than 2 applications of this product or any other Abamectin-containing product per year. <b>DO NOT</b> graze livestock in
European Grapevine Moth ( <i>Lobesia</i> <i>botrana</i> )	10-16	phytotoxicity. Therefore carefully follow the directions for use on the nonionic surfactant label.	treated vineyards. DO NOT apply by air. Application Interval: Wait at least 21 days before repeating application.

#### GUAVA

Crops in this group include guava; feijoa; jaboticaba; wax jambu; starfruit; passionfruit; and acerola

	Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
	(fl. oz./100 gal)		Ground application only. Do not apply in less than 50 gal water/A with conventional ground application equipment. When using an electro-static sprayer, less than 50 gal water/A may be used; however, do not use less than 5 gal water/A.
Twospotted spider mite		ADD a horticultural oil for best results Apply when mites first appear during spring, summer, and/or fall.	<ul> <li>Pre-Harvest Interval         <ul> <li>7 days</li> </ul> </li> <li>DO NOT apply more than 20 fl. oz./A         <ul> <li>(0.023 lb ai/A) of this product or any other Abamectin-containing product per application.</li> </ul> </li> <li>DO NOT make more than 3 applications of this product, or any</li> </ul>
16.0-20.0		other Abamectin- containing product per year. <b>DO NOT</b> apply more than 60 fl. oz./A (0.07 lb ai/A) of this product or any other Abamectin-containing product per year.	
		<b>Application Interval:</b> wait at least 14 days before repeating application.	
		Horticultural Spray Oil ( <b>DO NOT</b> use a dormant oil) 1 gal./A (minimum) (0.20%, v/v).	

#### HERB CROP SUBGROUP (CROP SUBGROUP 19A)

Crops in this group include angelica, balm, basil, borage, burnet, camomile (or chamomile), catnip, chervil (dried), chives, chives (Chinese), cilantro (leaf), clary, coriander (leaf), costmary, culantro (leaf), curry (leaf), dill weed, horehound, hyssop, lavender, lemongrass, lovage (leaf), marigold, marjoram (*Origanum* species), nasturtium, parsley (dried), pennyroyal, rosemary, rue, sage, summer and winter savory, sweet bay, tansy, tarragon, thyme, wintergreen, woodruff, and wormwood

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions		
		Apply when adult leafminer flies first appear. Make a second application, if	Apply using ground equipment using conventional dilute or concentrate sprayers.		
		necessary, but wait at least 7 days after the first application. <b>SEE RESTRICTIONS.</b>	Use sufficient volumes (greater than 20 gal of water per acre) to ensure thorough foliage coverage.		
		A non-ionic surfactant (not binder or sticker-types) used in combination with this product provides improved	Application is not permitted from onset of flowering until after petal fall is complete.		
	Low to moderate	wetting of foliage and allows an even deposition of the spray on the foliage.	Pre-Harvest Interval for listed herbs except chive- 14 days.		
	iriomyza Heavy pest infestations: 8.0 A Heavy pest ir infestations: s pider mite 16.0 ir a	t infestations: Do not use a surfactant when applying this product to chives.	Pre-Harvest Interval for chives - 7 days.		
<i>Liriomyza</i> leafminers Spider mite		Although this product has been tested in combination with a nonionic surfactant for safety to herbs, it is impossible to test on all herb types and varieties under the variety of	<b>DO NOT</b> apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any Abamectin-containing product per application.		
		surfactant for best	surfactant for best	conditions that may cause crop injury.	<b>DO NOT</b> make more than 2 applications of this product or any Abamectin-containing product per single cutting (harvest).
			<b>DO NOT</b> apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any Abamectin-containing product per year.		
			<b>DO NOT</b> apply by air.		
			<b>DO NOT</b> graze livestock in treated fields or feed treated foliage to livestock.		
			<b>Application Interval:</b> Wait at least 7 days before repeating application.		

### HOPS (EXCLUDING CALIFORNIA)

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
			Ground application only.
			Pre-Harvest Interval – 28 days
		Use conventional ground application as dilute or concentrate sprays. Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage. If trellis height is 6-8 feet, use 40 gal of water/A at the 8-16 fl. oz./A rate; if height is greater than 6-8 feet, use 100 gal/A at the 16 fl. oz./A rate.	<b>DO NOT</b> apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any Abamectin- containing product per application.
	8.0-16.0		<b>DO NOT</b> apply more than 32 fl. oz./A (0.038 lb ai/A) of this product or any Abamectin- containing product per year.
Twospotted spider mite	ADD a nonionic surfactant for best results	Apply when twospotted spider mites	DO NOT apply by air.
Spider mite		reach treatment thresholds. Make a second application, if needed, but wait at least 21 days after the first application. <b>SEE RESTRICTIONS.</b>	<b>DO NOT</b> apply more than 2 applications of this product or any other Abamectin-containing product per year.
		A non-ionic surfactant (not binder or sticker-types) used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray on the foliage.	<b>DO NOT</b> graze livestock in treated hop yards.
			<b>Application Interval:</b> Wait at least 21 days before repeating application and repeat application only after using an alternative miticide with a different mode of action.

#### LEAFY VEGETABLE (Except Brassica Vegetables) CROP GROUP (CROP GROUP 4)

Crops in this group include amaranth (leafy amaranth, Chinese spinach, tampala), arugula (roquette), cardoon, celery, celtuce, chervil, Chinese celery, chrysanthemum (edible leaved and garland), corn salad, cress (garden and upland (yellow rocket and winter cress)), dandelion, dock (sorrel), endive (escarole), fennel, Florence fennel, lettuce (head and leaf), New Zealand spinach, orach, parsley, purslane (garden and winter), radicchio (red chicory), rhubarb, spinach, Swiss chard and vine spinach

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
			Apply this product when mites or adult leafminer flies are observed and use ground equipment in 20 or more gal water/A, or with electrostatic spray equipment in 5 gal or more of water/A.
			Although aerial applications are permitted when this product is applied in 5 or more gal water/A, better control of target insects is obtained using ground applications.
	Low to moderate pest infestations: 10.0 – 15.0	Users accept all liability for level and duration of insect control from aerial applications of this product. <b>Spider mites:</b> Apply when mites first appear, and repeat as needed to maintain control.	Increased water volumes are required under certain situations (severe pest infestations, highly dense foliage, elevated temperatures) to ensure thorough foliage coverage.
Carmine spider mite	Heavy pest infestations: 16.0 ADD a nonionic surfactant for best results		Pre-Harvest Interval – 7 days
<i>Liriomyza</i> leafminers Twospotted spider mite		Make a second application, if needed, but wait at least 7 days after the first	<b>DO NOT</b> apply more than 16 oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing produc per application.
		surfactant for best	rfactant for best
			To avoid insect resistance to this product, do not apply to vegetables grown for transplants.
			<b>DO NOT</b> make more than 2 sequential applications of this product or any other Abamectin-containing product.
			<b>DO NOT</b> apply by air in the State of New York.
			<b>Application Interval:</b> Wait at least 7 days before repeating application.

#### LYCHEE Crops in this group include lychee, longan, Spanish lime, rambutan, and pulasan

Target Pests	Application Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
			Apply using conventional dilute or concentrate ground equipment.
			Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage.
			Pre-Harvest Interval – 14 days
Twospotted spider mite	Low to moderate pest infestations:	ADD a horticultural oil for best results <b>Mites:</b> Apply when mites first appear during spring, summer, and/or fall.	<b>DO NOT</b> apply more than 20 fl. oz./A (0.023 lb ai/A) of this product or any other Abamectin-containing product per application.
Liriomyza leafminers Thrips 20.0	Leafminers: Apply to protect new growth during spring, summer, or fall. Thrips: Applications targeted for thrips will only control the current generation and must be correctly timed. Apply when economic thresholds have been reached (after egg hatch has begun – preferably early to mid-	<b>DO NOT</b> make more than 2 applications of this product or any other Abamectin- containing product pe year.	
		hatch).	<b>DO NOT</b> apply more than 40 fl. oz./A (0.046 lb ai/A) of this product or any other Abamectin-containing product per year.
			Application Interval: wait at least 30 days before repeating application.
			Horticultural Spray Oil ( <b>DO NOT</b> use a dormant oil) 1 gal./A (minimum) (0.20%, v/v
cover dilute spra horticultural oil (r	y. Ground application	tes (this product/A) are adjusted to apply the amount/A eq on: For best results, use 150-300 gal/A of spray mix with a d apply at a ground speed of 1 to 1.5 mph. Rates of this p	a minimum of 3 gal/A of

#### MINT (PEPPERMINT AND SPEARMINT)

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions		
	wospotted         spider mite         ADD a nonionic         surfactant for best         results		Use ground equipment in 20 or more gal water/A. Although aerial applications are permitted when this product is applied in 5 or more gal water/A, better control of target insects is obtained using ground applications.		
		Apply this product when mites first appear. Users accept all liability for level and duration of insect control from aerial applications of this product. Make a second application, if needed, but wait at least 7 days after the first application. <b>SEE RESTRICTIONS.</b> A non-ionic surfactant (not binder or sticker-types) used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray on the foliage.	Increased water volumes are required under certain situations (severe pest infestations, highly dense foliage, elevated temperatures) to ensure thorough foliage coverage.		
			Pre-Harvest Interval – 28 days		
Twospotted spider mite			<b>DO NOT</b> exceed 12 fl. oz./A (0.014 lb ai/A) of this product or any Abamectin-containing product per application.		
			<b>DO NOT</b> apply more than 36 fl. oz./A (0.042 lb ai/A) of this product or any Abamectin- containing product per year.		
			<b>DO NOT</b> make more than 2 sequential applications of this product or any other Abamectin-containing product.		
			<b>DO NOT</b> apply by air in the State of New York.		
			<b>DO NOT</b> graze livestock in treated fields or feed treated foliage to livestock.		

#### ONION, BULB (CROP SUBGROUP 3-07A)

Crops in this group are bulb onion, including bulb Chinese, bulb daylily, bulb fritillaria, bulb garlic, bulb great-headed garlic, bulb lily, bulb onion, pearl onion, potato onion, bulb serpent garlic, bulb shallot, cultivars, varieties, and/or hybrids of bulb onion, subgroup 3-07A.

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
		Leafminers: Apply when adult leafminers first appear, and repeat as needed to maintain control within constraints of a sound resistance management program. Thrips: Apply in a thrips management program and when thrips are at economic threshold. Repeat application, as needed, to maintain control within constraints of a sound resistance management program. Do not use this product as a rescue treatment for thrips control. Make a second application, if needed, but wait at least 7 days after the first application. SEE RESTRICTIONS.	
	use binder sticker typ duce performance of	e adjuvants. Tank mixing with products that	nave binder sticker type

#### **ONION, GREEN (CROP SUBGROUP 3-07B)**

Crops in this group are chive, fresh leaves; chive, Chinese, fresh leaves; Elegans hosta; fritillaria, leaves; kurrat; lady's leek; leek; leek, wild; onion, Beltsville bunching; onion, fresh; onion, green; onion, macrostem; onion, tree, tops; onion, Welsh, tops; shallot, fresh leaves; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions	
Liriomyza leafminers Thrips	fl. oz./A Low to moderate pest infestations: 8.0-12.0 Heavy pest infestations: 13.0-16.0	Application instructions and Timing Leafminers: Apply when adult leafminers first appear, and repeat as needed to maintain control within constraints of a sound resistance management program. Thrips: Apply in a thrips management program and when thrips are at economic threshold. Repeat application, as needed, to maintain control within constraints of a sound resistance management program. Do not use this product as a rescue treatment for thrips control. Make a second application, if needed, but wait at least 7 days after the first application. SEE RESTRICTIONS.	RestrictionsDo not apply in less than 20gal. of water/A with groundapplication equipment. Do notapplication equipment. Do notapplication equipment. Do notapplication equipment. Do notapply in less than 5 gal. ofwater/A with aircraft.Under conditions such as highpest populations, densefoliage, or adverseapplication conditions (such ashigh temperatures), use agreater volume of water toensure adequate coverage.Pre-Harvest Interval – 7 daysDO NOT apply more than 16 fl.oz./A (0.019 lb ai/A) of thisproduct or any otherAbamectin-containing productper application.DO NOT apply more than 64 fl.oz./A (0.076 lb ai/A) of thisproduct or any otherAbamectin-containing productper year.DO NOT make more than 2sequential applications of thisproduct or any otherAbamectin-containing productDO NOT apply by air in theState of New York orCalifornia.Application Interval: Wait 7days before repeatingapplication. Make 2	
			consecutive applications o then rotate to a chemistry with a different mode of action. Make at least 2 applications of a chemistry with a different mode of action before making	
			additional applications of this product.	
bulb onion. Do not	IMPORTANT: Add a non-ionic activator type wetting, spreading and/or penetrating adjuvant approved for use on bulb onion. Do not use binder sticker type adjuvants. Tank mixing with products that have binder sticker type formulations can reduce performance of this product.			

#### PAPAYA

Target Pests	Application Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
			Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage. When using an electro-static sprayer, less than 50 gal water/A may be used; however, do not use less than 5 gal water/A.
			Pre-Harvest Interval – 3 days
	Low to		<b>DO NOT</b> apply to mango.
Twospotted spider mite	moderate pest infestations: 10.0-15.0 Heavy pest infestations:	Apply using conventional dilute or concentrate ground equipment. ADD a horticultural oil for best results	<b>DO NOT</b> apply more than 20 fl. oz./A (0.023 lb ai/A) of this product or any other Abamectin-containing product per application.
	16.0-20.0 Dilute Sprays: 1.0 – 2.0 fl. oz./100 gal)	Apply when mites first appear during spring, summer, and/or fall.	<b>DO NOT</b> make more than 3 applications of this product or any other Abamectin- containing product per year.
			<b>DO NOT</b> apply more than 60 fl. oz./A (0.070 lb ai/A) of this product or any other Abamectin-containing product per year.
			<b>Application Interval:</b> wait at least 14 days before repeating application.
		Horticultural Spray Oil ( <b>DO NOT</b> use a dormant oil) 1 gal./A (minimum) (0.20%, v/v)	
cover dilute spra best results, use	y. Rates of this prod	tes (this product/A) are adjusted to apply the amount/A eq luct/100 gal are based on 1,000 gal/A of dilute spray. Gro ray mix with a minimum of 3 gal/A of horticultural oil (not a	und application: For

Crops in this group include papaya, star apple, black sapote, sapodilla, canistel, and mamey sapote

#### PINEAPPLE

Application           Farget Pests         Rate           fl. oz./A	Application Instructions and Timing	Restrictions
Target Pests Rate	Application Instructions and Timing	Restrictions Ground application only. Use sufficient volumes (greater than 50 gal of water/A) with conventional ground application equipment. When using an electro-static sprayer, less than 50 gal of water/A may be used; however, do not use less than 5 gal of water/A. Pre-Harvest Interval – 16 weeks DO NOT apply more than 20 fl. oz./A (0.023 lb ai/A) of this product per application. DO NOT make more than 2 applications of this product or any other Abamectin- containing product per year. DO NOT apply more than 40 fl. oz./A (0.046 lb ai/A) of this product or any other Abamectin-containing product per wait at least 7 days

POME FRUIT (CROP GROUP 11-10) Crops in this group include apple; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; quince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
			Apply using conventional dilute or concentrate ground equipment.
			Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage.
		Gallons of spray will vary with size and number of trees per acre and density of foliage.	Application is not permitted from onset of flowering until after petal fall is complete.
European red		For best results, apply in combination	Pre-Harvest Interval – 28 days
mite McDaniel spider mite Pear rust mite	Concentrate Sprays: 10-20 fl. oz./A	with horticultural spray oil (not a dormant oil) as directed. Applications without horticultural spray oil may result in reduced efficacy and/or residual control.	<b>DO NOT</b> apply more than 20 fl. oz./A (0.023 lb ai/A) of this product or any other Abamectin-containing product per application.
Pear psylla Tentiform leafminers Twospotted	(Dilute Sprays: 2.5- 5.0 fl. oz./100 gal) Add a horticultural	Applying this product plus horticultural spray oil fewer than 14 days before or after applying Captan <sup>®</sup> can result in phytotoxicity and crop loss.	<b>DO NOT</b> apply more than 40 fl. oz./A (0.047 lb ai/A) of this product or any other Abamectin-containing product per year.
wosponed spider mite White apple leafhoppers Yellow mite	oil for best results	Make a second application, if needed, but wait at least 21 days after the first application. <b>SEE RESTRICTIONS.</b> <b>Spider Mites:</b> Apply when spider mite or	<b>DO NOT</b> make more than 2 applications of this product or any other Abamectin-containing product per year.
renow mite		insect thresholds are reached.	<b>DO NOT</b> apply by air.
			<b>DO NOT</b> graze livestock in treated orchard.
			Horticultural Spray Oil ( <b>DO NOT</b> use a dormant oil): For dilute sprays use 0.25% or 1 gal./A. For concentrate sprays use a minimum of 1 gal./A.
			<b>Application Interval:</b> Wait at least 21 days before repeating application.
IMPORTANT: Concentrate Spray rates (this product/A) are determined by selecting the amount needed for a full cover dilute spray. The amount of this product/A as a concentrate spray is the same amount as required for dilute sprays to the orchard/grove and could be less than 10 fl oz. this product/A for small trees. Rates of this product/100 gal are based on 400 gal/A of dilute spray.			

#### STONE FRUIT CROP GROUP (CROP GROUP 12)

Crops in this group include apricot; apricot, Japanese; capulin; cherry, black; cherry, Nanking; cherry (sweet and tart); Jujube, Chinese; nectarine; peach; plum; plum, American; plum, beach; plum, Canada; plum, cherry; plum (chickasaw, damson, and Japanese); plum, Klamath; plum, prune; plumcot; sloe; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
			Apply using conventional dilute or concentrate ground equipment.
			Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage.
		Make applications when mites first are	<b>Pre-Harvest Interval</b> – 21 days
European red mite Pacific spider mite Twospotted spider mite	Concentrate Sprays: 10-20 fl. oz./A (Dilute Sprays: 2.5- 5.0 fl. oz./100 gal) PLUS a horticultural oil or nonionic surfactant	10-20 fl. oz./Awith either a nonionic surfactant, or with horticultural spray oil (not a dormant oil), but use caution since oil may cause phytotoxicity to foliage and fruit.PLUShorticultural oil or	<b>DO NOT</b> apply more than 20 fl. oz./A (0.023 lb ai/A) of this product or any other Abamectin-containing product per application.
			<b>DO NOT</b> apply more than 40 fl. oz./A (0.047 lb ai/A) of this product or any other Abamectin-containing product per year.
			<b>DO NOT</b> make more than 2 applications of this product or any other Abamectin- containing product per year. <b>DO NOT</b> make applications from onset of flowering until after petal fall is complete.
			<b>DO NOT</b> apply by air.
			<b>DO NOT</b> graze livestock in treated orchards.
			Horticulture Spray Oil (NOT a dormant oil) 1 gal/A (minimum) (0.25%, v/v)
			Nonionic Surfactant – labeled rate

IMPORTANT: Concentrate Spray rates (this product/A) are determined by selecting the amount needed for a full cover dilute spray. The amount of this product/A as a concentrate spray is the same amount as required for dilute sprays to the orchard and could be less than 10 fl oz. This product/A for small trees. Rates of this product/100 gal are based on 400 gal/A of dilute spray.

- A nonionic surfactant that spreads on and/or penetrates the leaf cuticle can improve insect control. It is impossible to test on all stone fruit varieties under the variety of conditions that may cause crop injury. Therefore, when using this product in combination with a non-ionic surfactant, carefully follow the **Directions** for Use and **Precautions** on the surfactant label and in official spray guides.
- 2) A horticultural oil (not a dormant oil) may improve efficacy and may be used but it may increase the possibility of phytotoxicity to foliage and fruit.

#### STRAWBERRIES, LOW GROWING BERRY (CROP SUBGROUP 13-07G)

# Crops in this group include bearberry; bilberry; blueberry, lowbush; cloudberry; cranberry; ligonberry; muntries; partridgeberry; strawberry; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
Strawberry spider mite Twospotted spider mite	16.0	Optimum coverage of the leaves (tops and bottoms) can be achieved by adjusting the spray volumes and placement of the nozzles. Apply when mites first appear. Make a second application at 7-10 day intervals. Repeat the two step application process, if needed. <b>SEE RESTRICTIONS.</b> A non-ionic or silicone-based (not a sticker or binder type) surfactant used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray.	<ul> <li>Ground application only.</li> <li>Apply using conventional ground equipment or electrostatic sprayers.</li> <li>Use sufficient volumes (greater than 50 gal of water/A for conventional sprayers, greater than 10 gal of water/A for electrostatic sprayers) to ensure thorough foliage coverage.</li> <li>Pre-Harvest Interval – 3 days</li> <li>To avoid insect resistance to this product, do not apply to strawberries grown in nurseries.</li> <li>DO NOT apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing product per application.</li> <li>DO NOT apply more than 64 fl. oz./A (0.075 lb ai/A) of this product or any other Abamectin-containing product per year.</li> <li>DO NOT apply by air.</li> <li>Application Interval: Wait at least 21 days after the second application before repeating application.</li> </ul>

#### TREE NUTS CROP GROUP (CROP GROUP 14-12)

Crops in this group include African nut-tree; almond; beech nut; Brazil nut; Brazilian pine; bunya; bur oak; butternut, Cajou nut; candlenut; cashew; chestnut; chinquapin; coconut; coquito nut; dika nut; ginkgo; Guiana chestnut; hazelnut (filbert); heartnut; hickory nut; Japanese horse-chestnut; macadamia nut; mongongo nut; monkey-pot; monkey puzzle nut; Okari nut; Pachira nut; peach palm nut; pecan; pequi; Pili nut; pine nut; pistachio; Sapucaia nut; tropical almond; walnuts (black and English); yellowhorn; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
			Apply using conventional dilute or concentrate ground equipment.
European red mite		Apply this product when spider mites first appear. Greater residual spider mite control is achieved when spray is deposited on new foliage growth.	Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage. <b>Pre-Harvest Interval</b> – 21 days
	Concentrate Sprays: 10-20 fl. oz./A		<b>DO NOT</b> apply more than 20 fl. oz./A (0.023 lb aiA) of this product or any other Abamectin-containing product per application.
Pacific spider mite Strawberry spider mite	(Dilute Sprays: 2.5- 5.0 fl. oz./100 gal)	Make a second application, if needed, but wait at least 21 days after the first application. <b>SEE RESTRICTIONS.</b>	<b>DO NOT</b> apply more than 40 fl. oz./A (0.047 lb ai/A) of this product or any other Abamectin-containing product per year.
Twospotted spider mite	a horticultural spray oil labeled	To manage resistance, if pest infestation requires additional treatments, use other alternative insecticides with different modes of action which are labeled for use on these pests and crops.	<b>DO NOT</b> make more than 2 applications of this product or any other Abamectin-containing product per year.
			<b>DO NOT</b> apply by air.
			<b>DO NOT</b> graze livestock in treated groves/orchards.
			Horticultural Spray Oil ( <b>DO NOT</b> use a dormant oil) 1 gal./A (minimum) (0.25%, v/v)
are determined by	selecting the amount ne	eded for a full cover dilute spray. Use	Concentrate Spray rates (this product/A) the same amount of product per acre in /grove. This may result in use of less than

10 fl oz. of this product/A on small trees.

#### TUBEROUS AND CORM VEGETABLES CROP SUBGROUP (CROP SUBGROUP 1 C)

Crops in this group include arracacha, arrowroot, artichoke, Chinese artichoke, edible canna, Jerusalem artichoke, cassava (bitter and sweet), chayote (root), chufa, dasheen, ginger, leren, potato, sweet potato, tanier, turmeric, yam bean, and yam (true)

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
			Apply using conventional ground or aerial application equipment.
			Use sufficient volumes (greater than 20 gal of water/A for ground applications and greater than 5 gal of water/A for aerial applications).
			Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures) use a greater volume of water to ensure adequate coverage.
		Apply when mites and adult leafminer flies first appear.	<b>Pre-Harvest Interval</b> – 14 days
Colorado potato beetle <i>Liriomyza</i> leafminers Potato psyllid Spider mite	Low to moderate pest infestations: 8.0-12.0 Heavy pest infestations: 16.0	<ul> <li>Colorado potato beetle: Begin applications when 50% of the egg masses have hatched or larvae are observed. If a second application is made, ensure it is to control a single Colorado potato beetle generation.</li> <li><i>Liriomyza</i> leafminers: Make the first application when adult flies are first observed. Repeat applications as needed to maintain control.</li> <li>Spider mites: Make the first application when mites first appear. Repeat application as needed to maintain control.</li> <li>Make a second application, if needed, but wait at least 7 days after the first application. SEE RESTRICTIONS.</li> <li>A non-ionic or silicone-based (not a sticker or binder type) surfactant used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray.</li> </ul>	<b>DO NOT</b> apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing product per application.
			<b>DO NOT</b> apply more than 32 fl. oz./A (0.038 lb ai/A) of this product or any other Abamectin-containing product per year for control <b>spider mites</b> or <b>Colorado</b> <b>potato beetle</b> .
			DO NOT apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any other Abamectin-containing product per year for control of <b>leafminers</b> . DO NOT make more than 2
			applications to control <b>Colorado potato beetle</b> per year.
			<b>DO NOT</b> make more than 2 sequential applications of this product or any other Abamectin-containing product.
			<b>DO NOT</b> apply by air in the State of New York.
			<b>DO NOT</b> graze or feed treated foliage to livestock.
			<b>Application Interval:</b> Wait at least 7 days before repeating application.

#### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Store in a tightly closed container in a cool, dry place.

**PESTICIDE DISPOSAL:** 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 DISPOSAL:** Nonrefillable container. **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ 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 if available or puncture and dispose of in a sanitary landfill, or by incineration.

**SPILLS:** For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-424-9300, day or night.

#### WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS 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. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

#### LIMITATION OF LIABILITY

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THEIR NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE TO BUYER OR USER BY WAY OF INDEMNIFICATION TO BUYER OR TO CUSTOMERS OF BUYER, IF ANY, OR FOR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR RISING OUT OF THE MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD BY MANUFACTURER OR SELLER TO BUYER. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR ITS CUSTOMERS. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND MANUFACTURER'S OR SELLER'S TOTAL LIABILITY SHALL BE FOR DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT.

If you do not agree with or do not accept any of directions for use, the warranty disclaimers, or limitations on liability, do not use the product, and return it unopened to the Seller, and the purchase price will be refunded.

(RV041917)

#### **RESTRICTED USE PESTICIDE**

TOXIC TO FISH, MAMMALS, AND AQUATIC ORGANISMS FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

#### SUPPLEMENTAL LABELING

This supplemental labeling expires on (three years from approval date), and must not be distributed or used after that date.

11901 South Austin Avenue

Alsip, IL 60803

#### DIRECTIONS FOR USE

#### RESTRICTED USE

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

Before using this product as permitted according to this supplemental label, read and follow all applicable directions, restrictions, and precautions on the EPA-registered label on or attached to the pesticide product container. This supplemental labeling contains revised use instructions or restrictions that may differ from those that appear on the container label. This supplemental labeling must be in the possession of the user at the time of pesticide application.

#### **PRODUCT INFORMATION**

When applied following the **Directions for Use** on this label, this product controls listed mites and insects in various crops. Optimum control of target insects requires this product to be mixed with sufficient amounts of water to provide a thorough coverage of foliage. Spray volume in gallons will vary with the size and number of trees per acre or with the density of target crop foliage. Optimum insect control is achieved only if the foliage receives a thorough coverage of this product. Calibrate all spray equipment to ensure delivery of sufficient spray solution to thoroughly cover foliage of target crops.

**Phytotoxicity:** Although this product has been tested for phytotoxicity and compatibility and is safe to use on a variety of crops and as a tank mix in combination with many commonly used products, it is not possible to test all crop varieties grown under a variety of growing conditions or to test all possible combination of products. Before use, test potential mixtures with this product to ensure physical compatibility and lack of phytotoxic effects to the target crop.

New York State Restrictions: Aerial applications of this product are prohibited in the State of New York.

#### DO NOT apply this product through any type of irrigation system.

#### SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of equipment and weather related factors determine the potential for spray drift. It is the applicator's responsibility to consider these factors when making application decisions. **Note:** When states have more stringent regulations, they must be observed.

#### Spray Drift Precautions for Application with Aircraft or Ground Application Equipment

- Apply this product only when wind velocity favors on target product deposition (approximately 2 to 15 mph.)
- Do not apply with ground application within 25 feet of or with aircraft within 150 ft. of lakes, reservoirs, rivers, permanent streams, marshes, potholes, natural ponds, estuaries, or commercial fish farm ponds.
- Do not cultivate within 25 ft. of the aquatic area to allow growth of a vegetative filter strip.
- Do not allow this product to drift onto non-target areas. Drift may result in illegal residues or injury to nontarget species. Risk of exposure to sensitive areas can be reduced by applying this product when the wind direction is away from the sensitive area.
- Do not apply this product when weather conditions favor drift.
- Do not apply when wind speed is below 2 mph because wind direction will vary and there is a high potential for inversion.
- Observe the following precautions when using ground application to spray tree crops or hops in the vicinity of aquatic areas such as lakes, reservoirs, permanent streams, marshes, potholes, natural ponds, estuaries, or commercial fish farm ponds:
  - Do not apply this product when weather conditions favor drift to aquatic areas.
  - Do not apply within 110 ft. upwind of aquatic areas or when wind speed is above 8 mph.
  - Spray last 3 rows windward of aquatic areas using nozzles on one side only, with spray directed away from the aquatic areas.

• Avoid spray going over tops of trees by adjusting or turning off top nozzles. Shut off nozzles on the side away from the grove/orchard when spraying the outside row. Shut off nozzles when turning at ends of rows and passing tree gaps in rows.

#### SPRAY DRIFT PRECAUTIONS FOR AERIAL APPLICATION

#### **Drift Management Requirements**

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops. Outermost Nozzle Distance: The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.

Nozzle Direction: Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Maximum Wind Speed: Do not apply when wind speed is greater than 15 mph.

<u>Droplet Size</u>: 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:

<u>Volume</u>: Use high flow nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. <u>Pressure</u>: Do not exceed the nozzle manufacturer's recommended 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.

<u>Nozzle Orientation</u>: Orienting nozzles so that the spray is released parallel to the air stream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

<u>Nozzle Type</u>: 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.

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.

<u>Application Height</u>: Applications should not be made at a height greater than 10 ft. above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a cross wind, the swath will be displaced downwind. Therefore, on the up and downward edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind.

<u>Wind</u>: Drift potential is lowest between wind speeds of 2-15 mph. However, many factors including droplet size and equipment, 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 should be familiar with wind patterns and how they affect spray drift.

<u>Temperature and Humidity</u>: To compensate for evaporation when applying this product in low relative humidity, set up equipment to produce larger droplets. Evaporation of droplets is most severe when conditions are both hot and dry.

<u>Temperature Inversions</u>: This product must not be applied during a temperature inversion because the potential for drift is high. Temperature inversions restrict vertical air mixing, and this causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds that are common during inversions. Temperature inversions are characterized by temperatures that increase with altitude and are common on nights with limited cloud cover and light to no wind. Inversions 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, the movement of smoke from a ground source or an aircraft smoke generator can also identify inversions. 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.

#### **RESISTANCE MANAGEMENT**

GROUP	6 INSECTICIDE	
-------	---------------	--

For resistance management, this product contains a Group 6 insecticide. Any insect/mite population may contain individuals naturally resistant to this product and any other Group 6 insecticides. The resistant individuals may dominate the insect/mite population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of this product or other Group 6 insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, recordkeeping, and which considers cultural, biological and other chemical control practices.
- Monitor and treat pest populations for resistance development.
- If an insect pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or insecticide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

For further information or to report suspected resistance contact a Nufarm representative.

#### **CROP USE DIRECTIONS**

#### AVOCADOS

Target Insects	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
Avocado thrips (Scirtothrips perseae) Persea Mites (Oligonychus perseae)	DO NOT use less than 10 fl. oz./A of this product Low to moderate insect infestations: 10.0-15.0 Heavy pest infestations: 16.0-20.0 ADD a horticultural oil for best results	If using 400 gal/A or more, apply 2.5 fl. oz. of this product/100 gal of water and 1.0-4.0% of NR (narrow range) 415 oil. Although aerial applications are permitted when this product is applied in 50 or more gal water/A, better control of target insects is obtained using ground applications. Users accept all liability for level and duration of thrip control from aerial applications of this product. Apply this product when thrips first appear but prior to finding 5 immature thrips per leaf or fruit. For low to moderate infestations, include 1.0-4.0% of NR 415 oil in combination with this product and the horticultural spray oil approved for use on avocados. Make a second application, if needed, to maintain control, but wait at least 30 days after the first application to retreat. SEE RESTRICTIONS.	Apply using ground equipment in 100 or more gal water/A. <b>Pre-Harvest Interval</b> – 14 days <b>DO NOT</b> make more than 2 applications of this product or any other Abamectin-containing product per year. <b>DO NOT</b> apply more than 20 fl. oz./A (0.023 lb ai/A) of this product or any other Abamectin-containing product per application. <b>DO NOT</b> apply more than 40 fl. oz./A (0.047 lb ai/A) of this product or any other Abamectin-containing product per year. <b>DO NOT</b> apply more than 40 fl. oz./A (0.047 lb ai/A) of this product or any other Abamectin-containing product per year. <b>DO NOT</b> allow livestock to graze in treated orchards. Horticultural Spray Oil ( <b>DO NOT</b> use a dormant oil), minimum 1 to 4%, v/v (minimum) <b>Application Interval:</b> Wait at least 30 days before repeating application.

Moderate infestations are defined as 3-4 thrips per leaf/fruit;
 Heavy/severe infestations are defined as more than 5 thrips per leaf/fruit.
 To prevent crop injury, observe all precautions and restrictions on the oil label. When using oil concentrations above 2.0%, treat a small test area before making a large-scale application.

### BEAN, DRY AND SUCCULENT

Crops in this group include *Cicer* arietinum (chickpea, garbanzo bean); Lupinus spp. (including grain lupin, sweet lupin, white lupin, and white sweet lupin); *Phaseolus* spp. (including kidney bean, lima bean, mung bean, navy bean, pinto bean, snap bean, and waxbean); *Vicia faba* (broad bean, fava bean); *Vigna* spp. (including asparagus bean, blackeyed pea and cowpea\*)

\* For use on cowpeas that are grown only for dry seed. Do not allow livestock to graze cowpea forage and do not harvest cowpea forage or hay for use as livestock feed.

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
<i>Liriomyza</i> leafminers Spider mite	Low to moderate pest infestations: 8.0-12.0 Heavy pest infestations: 13.0-16.0	Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures), use a greater volume of water to ensure adequate coverage. Leafminers and Spider mites: Apply when adult leafminers or spider mites first appear, and repeat as needed to maintain control within constraints of a sound resistance management program. Make a second application, if needed, but wait at least 6 days after the first application. SEE RESTRICTIONS.	Do not apply in less than 10 gal. of water/A with ground application equipment. Do not apply in less than 5 gal. of water/A with aircraft. <b>Pre-Harvest Interval</b> – 7 days <b>DO NOT</b> apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing product per application. <b>DO NOT</b> apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any other Abamectin-containing product per year. <b>DO NOT</b> make more than 2 sequential applications of this product or any other Abamectin-containing product per year. <b>DO NOT</b> make more than 2 sequential applications of this product or any other Abamectin-containing product per year. <b>DO NOT</b> apply by air in the State of New York. <b>Application Interval:</b> Wait at least 6 days before repeating application.

### CELERIAC (Apium graveollens)

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
Twospotted spider mite	16.0	Apply when mites first appear. Make a second application, if needed, but wait at least 7 days after the first application. <b>SEE</b> <b>RESTRICTIONS.</b> For best results, use in combination with a non- ionic surfactant.	<ul> <li>Ground application only</li> <li>Apply using ground equipment using conventional dilute or concentrate sprayers.</li> <li>Use sufficient volumes (greater than 20 gal of water per acre) to ensure thorough foliage coverage.</li> <li>Pre-Harvest Interval – 7 days</li> <li>To avoid insect resistance to this product, do not apply more than two sequential applications of this product or any other Abamectin-containing product.</li> <li>DO NOT apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any other Abamectin-containing product per year after transplanting.</li> <li>Application Interval: Wait at least 7 days before repeating application.</li> </ul>

### **CITRUS FRUIT CROP GROUP 10-10**

Crops in this group include Australian desert lime; Australian finger-lime; Australian round lime; Brown River finger lime; calamondin; citron; citrus hybrids; grapefruit; Japanese summer grapefruit; kumquat; lemon; lime; Mediterranean mandarin; mount white lime; New Guinea wild lime; orange, sour; orange, sweet; pummelo; Russell River lime; Satsuma mandarin; sweet lime; tachibana orange; Tahiti lime; tangelo; tangerine (mandarin); tangor; trifoliate orange; uniq fruit; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
Broad mite Citrus bud mite Twospotted spider mite	Concentrate Sprays: 10-20 fl. oz./A (Dilute Sprays: 1.0- 2.0 fl. oz./100 gal)		Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough coverage (or outside coverage for Asian citrus psyllid, citrus leafminer, or citrus thrips).
Citrus rust mite	Concentrate Sprays: 5-20 fl. oz./A (Dilute Sprays: 0.5- 2.0 fl. oz./100 gal)		Apply this product with a minimum of 0.20% horticultural oil spray (not a dormant oil) in the spray mixture or not less than 1 gallon of oil/A (except when specified differently below). To control <b>citrus leafminer</b> -Ground or aerial application is permitted: however, do not apply with aircraft to citrus in California. For Aerial application use a
Citrus leafminer	Concentrate Sprays: 5-20 fl. oz./A (Dilute Sprays: NR)	<ul> <li>Apply using conventional dilute or concentrate ground equipment.</li> <li>Aerial application is permitted only for control of citrus leafminer.</li> <li>Aerial application to citrus is not approved in California.</li> <li>ADD a horticultural oil for best results.</li> <li>Asian citrus psyllid: Apply to protect newly expanding foliage flush during the spring, summer or fall. This product will only control adults and nymphs present at the time of application.</li> <li>Mites: Apply when mites first appear during spring, summer, and/or fall.</li> <li>Citrus bud mite: For best results, time the spray at "bud swell".</li> </ul>	minimum of 10 gallons of finished spray volume per acre. Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures) use a greater volume of water to insure adequate coverage. All other pests: Ground application only. Do not apply with aircraft. Pre-Harvest Interval – 7
Asian citrus psyllid Citrus thrips	Concentrate Sprays: 10-20 fl. oz./A (Dilute Sprays: NR)	Citrus leafminer: Apply to protect new growth during spring, summer, or fall.	days To avoid insect resistance to this product, do not apply to citrus grown in nurseries. <b>DO NOT</b> apply this product, or any other Abamectin- containing product within 30 days of the last treatment. <b>DO NOT</b> apply more than 40 fl. oz./A (0.047 lb ai/A) of this product or any other Abamectin- containing product per year. <b>DO NOT</b> make more than 3 applications of this product or any other Abamectin- containing product per year. <b>DO NOT</b> allow livestock to graze in treated orchards. Application is not permitted from onset of flowering until after petal fall is complete.

NR = Not recommended.

IMPORTANT: The rate of this product per 100 gallons is based on a volume of 1,000 gal/A dilute spray. For concentrate sprays, adjust the dosage to apply the amount/A equal to that used in full cover dilute spray. Ground application: For best results use 150-300 gal/A of spray mix with a minimum of 3 gal/A of horticultural oil (not a dormant oil) and apply at a ground speed of 1 to 1.5 mph. For best results, use 100-250 gal/A of spray mix applied to achieve outside coverage.

### COTTON

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
Carmine spider mite Pacific spider mite Strawberry spider mite Twospotted spider mite	Early season: 4.0-6.0 Mid-season/Lay-by: 8.0-16.0	Apply this product when mites first appear. Rate will depend on the cotton plant size and thickness of foliage. Use the 4-6 fl. oz./A rate only early in season and for cotton plants 10 inches or less in height. Do not use less than 4 fl. oz./A. <b>West of the Rockies:</b> The lower use rates may only be used on cotton less than 10 inches in height and applied only with ground equipment. <b>Note:</b> This product may be used without a wetting agent. Spreading and penetrating surfactants can improve mite control. When necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended. Do not use binder or sticker-type surfactants. Apply this product when mites first appear. Rate will depend on the cotton plant size and thickness of foliage.	<ul> <li>Applications can be made by air or ground using a minimum of 5 gallons of water/A. Use sufficient volume to ensure thorough coverage.</li> <li>DO NOT apply more than 16 fl. oz/A (0.019 lb ai/A) of this product or any other Abamectin-containing product per application.</li> <li>DO NOT make more than 2 applications of this product or any other Abamectin-containing product per year.</li> <li>DO NOT apply more than 32 fl. oz./A (0.038 lb ai/A) of this product or any other Abamectin-containing product per year.</li> <li>Pre-Harvest Interval – 20 days</li> <li>DO NOT graze livestock in treated fields or feed cotton foliage to livestock.</li> <li>Application Interval: Wait at least 21 days before repeating application.</li> </ul>

# CUCURBIT VEGTABLE CROP GROUP (CROP GROUP 9)

Crops in this group include chayote, Chinese waxgourd, citron melon, cucumbers, gherkin, edible gourds (includes hyotan, cucuzza, hechima, Chinese okra); *Momordica* spp., (includes balsam apple, balsam pear, bittermelon, 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, summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), winter squash, (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash), watermelon (includes hybrids and/or varieties of Citrullus lanatus)

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
			Use ground equipment in 20 or more gal water/A. Although aerial applications are permitted when this product is applied in 5 or more gal water/A, better control of target insects is obtained using ground applications.
			Increased water volumes are required under certain situations (severe pest infestations, highly dense foliage, elevated temperatures) to ensure thorough foliage coverage.
Leafminers	Low to moderate pest infestations: 8.0-12.0	as:       8.0-12.0       control from aerial applications of this product.         Apply when insects first appear.         infestations:       Make a second application, if needed, but wait at	Pre-Harvest Interval – 7 days
Spider mite	Heavy pest infestations: 16.0		<b>DO NOT</b> apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing product per application.
			<b>DO NOT</b> apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any other Abamectin-containing product per year.
			<b>DO NOT</b> make more than 2 sequential applications of this product or any other Abamectin- containing product per year.
			<b>DO NOT</b> apply by air in the State of New York.
			<b>Application Interval:</b> Wait at least 7 days before repeating application.

FRUITING VEGETABLES CROP GROUP (except Cucurbits) (CROP GROUP 8-10) Crops in this group include African eggplant; bush tomato; bell pepper; cocona; currant tomato; eggplant; garden huckleberry; goji berry; groundcherry; martynia; naranjilla; okra; pea eggplant; pepino; nonbell pepper; roselle; scarlet eggplant; sunberry; tomatillo; tomato; tree tomato; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
Broad mite Colorado potato beetle <i>Liriomyza</i> leafminers Potato psyllid Spider mite Thrips palmi Tomato psyllid Tomato Russet mite	Low to moderate pest infestations: 8.0-12.0 Heavy pest infestations: 16.0 ADD a nonionic surfactant for best results	Apply when insects first appear. Make a second application, if needed, but wait at least 7 days after the first application. <b>SEE</b> <b>RESTRICTIONS.</b> Users accept all liability for level and duration of mite control from aerial applications of this product. A non-ionic surfactant (not binder or sticker-types) used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray. <b>Mites:</b> For best control apply with ground equipment. <b>Broad, russet, and spider mites:</b> Apply when mites first appear. <b>Thrips palmi:</b> Apply when thrips are first observed. <b>Leafminers:</b> Apply when adult flies are first observed <b>Potato Psyllids:</b> Sequential application 10-14 days apart may be needed for infestations with heavy egg and nymph populations.	Do not apply in less than 20 gal water/A with ground equipment. Increased water volumes are required under certain situations (severe pest infestations, highly dense foliage, elevated temperatures) to ensure adequate coverage. <b>Pre-Harvest Interval</b> – 7 days <b>DO NOT</b> apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing product per application. <b>DO NOT</b> apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any other Abamectin-containing product per year. <b>DO NOT</b> make more than 2 sequential applications of this product or any other Abamectin- containing product. <b>DO NOT</b> apply by air in the State of New York. For resistance management, <b>DO</b> <b>NOT</b> use on fruiting vegetables grown for transplanting. <b>Application Interval:</b> Wait at least 7 days before repeating application.
Tomato pinworm	16.0	<b>Tomato pinworm:</b> Application may be made from the time moth activity is detected up to, but no later than, the time when newly emerged larvae are present.	

# GRAPES AND SMALL FRUIT VINE CLIMBING SUBGROUP (except Fuzzy Kiwifruit) (CROP SUBGROUP 13-07F)

Crops in this group include Amure river grape; gooseberry; grape; kiwifruit, hardy; maypop; schisandra berry; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
Pacific spider mite Twospotted spider mite Variegated leafhoppers* Western grapeleaf skeletonizers Western grape* leafhoppers Willamette spider mite *NOTE: This product only provides knock- down control of pest.	Low to moderate pest infestations: 8.0-12.0 Heavy pest infestations: 16.0 ADD a nonionic surfactant for best results	<ul> <li>Spider mites: Apply when mites first appear (or before more than 5 motiles per leaf are observed).</li> <li>Western grapeleaf skeletonizer: Apply with a non-ionic surfactant when the larvae are initially seen. For best results, apply shortly after eggs hatch.</li> <li>Leafhoppers: For contact knock-down control of these pests, apply with a non-ionic surfactant when pest first appears.</li> <li>European Grapevine Moth: Apply to aid in control of first generation of pest on grapes.</li> <li>Make a second application, if needed, but wait at least 21 days after the first application. SEE RESTRICTIONS.</li> <li>A non-ionic (not binder or sticker-type) surfactant must be used in combination with this product to provide improved wetting of foliage and an even deposition of the spray.</li> <li>It is impossible to test the safety of this product plus non-ionic surfactants on all grape varieties under the various conditions which lead to phytotoxicity. Therefore carefully follow the directions for use on the nonionic surfactant label.</li> </ul>	Use conventional ground application equipment in 50 gal or more of water/A to ensure thorough foliage coverage, or with electrostatic spray equipment in 5 gal or more of water/A. <b>DO NOT</b> enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. <b>Exception</b> : For grape girdling cane turning, and tying in grapes. <b>DO NOT</b> enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 days. <b>Pre-Harvest Interval</b> – 28 days <b>DO NOT</b> exceed 16 fl. oz./A (0.019 lb ai/A of this product or any other Abamectin- containing product per application <b>DO NOT</b> apply more than 32 fl. oz./A (0.038 lb ai/A) of this product or any other Abamectin-containing product per growing year. <b>DO NOT</b> make more than 2 applications of this product or any other Abamectin- containing product per year. <b>DO NOT</b> graze livestock in treated vineyards. <b>DO NOT</b> apply by air. <b>Application Interval</b> : Wait at least 21 days before repeating application.
European Grapevine Moth ( <i>Lobesia</i> <i>botrana</i> )	10-16		

Target Pests	Application Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
Twospotted spider mite		ADD a horticultural oil for best results Apply when mites first appear during spring, summer, and/or fall.	Ground application only. Do not apply in less than 50 gal water/A with conventional ground application equipment. When using an electro-static sprayer, less than 50 gal water/A may be used; however, do not use less than 5 gal water/A. <b>Pre-Harvest Interval</b> – 7 days <b>DO NOT</b> apply more than 20 fl. oz./A (0.023 lb ai/A) of this product or any other Abamectin-containing product per application. <b>DO NOT</b> make more than 3 applications of this product, or any other Abamectin- containing product per year. <b>DO NOT</b> apply more than 60 fl. oz./A (0.07 lb ai/A) of this product or any other Abamectin-containing product per year. <b>Application Interval:</b> wait at least 14 days before
			repeating application. Horticultural Spray Oil ( <b>DO</b> <b>NOT</b> use a dormant oil) 1 gal./A (minimum) (0.20%, v/v).

# HERB CROP SUBGROUP (CROP SUBGROUP 19A)

Crops in this group include angelica, balm, basil, borage, burnet, camomile (or chamomile), catnip, chervil (dried), chives, chives (Chinese), cilantro (leaf), clary, coriander (leaf), costmary, culantro (leaf), curry (leaf), dill weed, horehound, hyssop, lavender, lemongrass, lovage (leaf), marigold, marjoram (*Origanum* species), nasturtium, parsley (dried), pennyroyal, rosemary, rue, sage, summer and winter savory, sweet bay, tansy, tarragon, thyme, wintergreen, woodruff, and wormwood

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
<i>Liriomyza</i> leafminers Spider mite	Low to moderate pest infestations: 8.0 Heavy pest infestations: 16.0 ADD a nonionic surfactant for best results	Apply when adult leafminer flies first appear. Make a second application, if necessary, but wait at least 7 days after the first application. <b>SEE RESTRICTIONS.</b> A non-ionic surfactant (not binder or sticker- types) used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray on the foliage. Do not use a surfactant when applying this product to chives. Although this product has been tested in combination with a nonionic surfactant for safety to herbs, it is impossible to test on all herb types and varieties under the variety of conditions that may cause crop injury.	<ul> <li>Apply using ground equipment using conventional dilute or concentrate sprayers.</li> <li>Use sufficient volumes (greater than 20 gal of water per acre) to ensure thorough foliage coverage.</li> <li>Application is not permitted from onset of flowering until after petal fall is complete.</li> <li>Pre-Harvest Interval for listed herbs except chive- 14 days.</li> <li>Pre-Harvest Interval for chives - 7 days.</li> <li>DO NOT apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any Abamectincontaining product per application.</li> <li>DO NOT make more than 2 applications of this product or any Abamectincontaining product per single cutting (harvest).</li> <li>DO NOT apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any Abamectincontaining product per year.</li> <li>DO NOT apply by air.</li> <li>DO NOT apply by air.</li> <li>DO NOT graze livestock in treated fields or feed treated foliage to livestock.</li> <li>Application Interval: Wait at least 7 days before repeating application.</li> </ul>

## HOPS (EXCLUDING CALIFORNIA)

Target Pests Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
Twospotted spider mite     8.0-16.0       ADD a nonionic surfactant for best results	Use conventional ground application as dilute or concentrate sprays. Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage. If trellis height is 6-8 feet, use 40 gal of water/A at the 8-16 fl. oz./A rate; if height is greater than 6-8 feet, use 100 gal/A at the 16 fl. oz./A rate. Apply when twospotted spider mites reach treatment thresholds. Make a second application, if needed, but wait at least 21 days after the first application <b>SEE</b> <b>RESTRICTIONS.</b> A non-ionic surfactant (not binder or sticker-types) used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray on the foliage.	Ground application only. Pre-Harvest Interval – 28 days DO NOT apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any Abamectin-containing product per application. DO NOT apply more than 32 fl. oz./A (0.038 lb ai/A) of this product or any Abamectin-containing product per year. DO NOT apply by air. DO NOT apply by air. DO NOT apply more than 2 applications of this product or any other Abamectin- containing product per year. DO NOT graze livestock in treated hop yards. Application Interval: Wait at least 21 days before repeating application and repeat application only after using an alternative miticide with a different mode of

# LEAFY VEGETABLE (Except Brassica Vegetables) CROP GROUP (CROP GROUP 4)

Crops in this group include amaranth (leafy amaranth, Chinese spinach, tampala), arugula (roquette), cardoon, celery, celtuce, chervil, Chinese celery, chrysanthemum (edible leaved and garland), corn salad, cress (garden and upland (yellow rocket and winter cress)), dandelion, dock (sorrel), endive (escarole), fennel, Florence fennel, lettuce (head and leaf), New Zealand spinach, orach, parsley, purslane (garden and winter), radicchio (red chicory), rhubarb, spinach, Swiss chard and vine spinach

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
			Apply this product when mites or adult leafminer flies are observed and use ground equipment in 20 or more gal water/A, or with electrostatic spray equipment in 5 gal or more of water/A.
			Although aerial applications are permitted when this product is applied in 5 or more gal water/A, better control of target insects is obtained using ground applications.
Carmine spider mite <i>Liriomyza</i> leafminers Twospotted spider mite	Low to moderate pest infestations: 10.0 – 15.0 Heavy pest infestations: 16.0 ADD a nonionic surfactant for best results	Users accept all liability for level and duration of insect control from aerial applications of this product. <b>Spider mites:</b> Apply when mites first appear, and repeat as needed to maintain control. <b>Leafminers:</b> Apply when adult flies are first observed and repeat applications as needed to maintain control. Make a second application, if needed, but wait at least 7 days after the first application. <b>SEE RESTRICTIONS.</b> A non-ionic surfactant (not binder or sticker-types) used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray on the foliage.	<ul> <li>ground applications.</li> <li>Increased water volumes are required under certain situations (severe pest infestations, highly dense foliage, elevated temperatures) to ensure thorough foliage coverage.</li> <li>Pre-Harvest Interval – 7 days</li> <li>DO NOT apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing product per application.</li> <li>DO NOT apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any other Abamectin-containing product per year.</li> <li>To avoid insect resistance to this product, do not apply to vegetables grown for transplants.</li> <li>DO NOT make more than 2 sequential applications of this product or any other Abamectin-containing product.</li> <li>DO NOT apply by air in the State of New York.</li> <li>Application Interval: Wait at least 7 days before repeating application.</li> </ul>

### LYCHEE Crops in this group include lychee, longan, Spanish lime, rambutan, and pulasan

Target Pests	Application Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
			Apply using conventional dilute or concentrate groun equipment.
			Use sufficient volumes (greater than 40 gal of water/A) to ensure thoroug foliage coverage.
			Pre-Harvest Interval – 14 days
Twospotted spider mite <i>Liriomyza</i> leafminers Thrips	Low to moderate pest infestations: 8.0-12.0 Heavy pest infestations: 20.0	Low to moderate pest infestations: 8.0-12.0 Heavy pest infestations: Heavy pest infestations: Heavy pest infestations: Apply to protect new growth during spring, summer, or fall. Thrips: Apply and the current	<ul> <li>DO NOT apply more than 2 fl. oz./A (0.023 lb ai/A) of this product or any other Abamectin-containing product per application.</li> <li>DO NOT make more than 2 applications of this product or any other Abamectin- containing product per year</li> <li>DO NOT apply more than 4 fl. oz./A (0.046 lb ai/A) of this product or any other Abamectin-containing product per year.</li> </ul>
			Application Interval: wait at least 30 days before repeating application.
			Horticultural Spray Oil ( <b>DO</b> <b>NOT</b> use a dormant oil) 1 gal./A (minimum) (0.20%, v/v

MINT (PEPPERMINT AND SPEARMINT)

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
	8.0-12.0 ADD a nonionic surfactant for best results	Apply this product when mites first appear. Users accept all liability for level and duration	Use ground equipment in 20 or more gal water/A. Although aerial applications are permitted when this product is applied in 5 or more gal water/A, better control of target insects is obtained using ground applications.
			Increased water volumes are required under certain situations (severe pest infestations, highly dense foliage, elevated temperatures) to ensure thorough foliage coverage.
		of insect control from aerial applications of this product.	Pre-Harvest Interval – 28 days
Twospotted spider mite		Make a second application, if needed, but wait at least 7 days after the first application. SEE RESTRICTIONS.	<b>DO NOT</b> exceed 12 fl. oz./A (0.014 lb ai/A) of this product or any Abamectin-containing product per application.
		A non-ionic surfactant (not binder or sticker- types) used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray on the foliage.	<b>DO NOT</b> apply more than 36 fl. oz./A (0.042 lb ai/A) of this product or any Abamectin-containing product per year.
			<b>DO NOT</b> make more than 2 sequential applications of this product or any other Abamectin-containing product.
			<b>DO NOT</b> apply by air in the State of New York.
			<b>DO NOT</b> graze livestock in treated fields or feed treated foliage to livestock.
			<b>Application Interval:</b> Wait at least 7 days before repeating application.

### ONION, BULB (CROP SUBGROUP 3-07A)

Crops in this group are bulb onion, including bulb Chinese, bulb daylily, bulb fritillaria, bulb garlic, bulb great-headed garlic, bulb lily, bulb onion, pearl onion, potato onion, bulb serpent garlic, bulb shallot, cultivars, varieties, and/or hybrids of bulb onion, subgroup 3-07A.

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
<i>Liriomyza</i> leafminers Thrips	Low to moderate pest infestations: 8.0-12.0 Heavy pest infestations: 13.0-16.0	Leafminers: Apply when adult leafminers first appear, and repeat as needed to maintain control within constraints of a sound resistance management program. Thrips: Apply in a thrips management program and when thrips are at economic threshold. Repeat application, as needed, to maintain control within constraints of a sound resistance management program. Do not use this product as a rescue treatment for thrips control. Make a second application, if needed, but wait at least 7 days after the first application. SEE RESTRICTIONS.	Do not apply in less than 20 gal. of water/A with ground application equipment. Do not apply in less than 5 gal. of water/A with aircraft. Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures), use a greater volume of water to ensure adequate coverage. Make 2 consecutive applications of this product then rotate to a chemistry with a different mode of action. Make at least 2 applications of a chemistry with a different mode of action before making additional applications of this product. <b>Pre-Harvest Interval</b> – 30 days <b>DO NOT</b> apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing product pe application. <b>DO NOT</b> apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any Abamectin-containing product pe year <b>DO NOT</b> make more than 2 sequential applications of this product or any other Abamectin-containing product. <b>DO NOT</b> apply by air in the State of New York. <b>Application Interval:</b> Wait at least 7 days before repeating application.

### ONION, GREEN (CROP SUBGROUP 3-07B)

Crops in this group are chive, fresh leaves; chive, Chinese, fresh leaves; Elegans hosta; fritillaria, leaves; kurrat; lady's leek; leek; leek, wild; onion, Beltsville bunching; onion, fresh; onion, green; onion, macrostem; onion, tree, tops; onion, Welsh, tops; shallot, fresh leaves; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
			Do not apply in less than 20 gal. of water/A with ground application equipment. Do not apply in less than 5 gal. of water/A with aircraft.
			Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures), use a greater volume of water to ensure adequate coverage.
		Leafminers: Apply when adult leafminers first	Pre-Harvest Interval – 7 days
Lizionumo	Low to moderate pest infestations: 8.0-12.0	appear, and repeat as needed to maintain control within constraints of a sound resistance management program.	<b>DO NOT</b> apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing product per application.
Liriomyza leafminers	Heavy pest infestations:	<b>Thrips:</b> Apply in a thrips management program and when thrips are at economic threshold. Repeat	••
Thrips	13.0-16.0	application, as needed, to maintain control within constraints of a sound resistance management program. Do not use this product as a rescue treatment for thrips control. Make a second application, if needed, but wait at least 7 days after the first application. <b>SEE</b> <b>RESTRICTIONS.</b>	<b>DO NOT</b> apply more than 64 fl. oz./A (0.076 lb ai/A) of this product or any other Abamectin-containing product per year.
			<b>DO NOT</b> make more than 2 sequential applications of this product or any othe Abamectin-containing product.
			<b>DO NOT</b> apply by air in the State of New York or California.
			Application Interval: Wait 7 days before repeating application. Make 2 consecutive applications o then rotate to a chemistry with a different mode of action. Make at least 2 applications of a chemistry with a different mode of action before making additional applications of this product.

### Crops in this group include papaya, star apple, black sapote, sapodilla, canistel, and mamey sapote

Target Pests	Application Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
			Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage. When using an electro-static sprayer, less than 50 gal water/A may be used; however, do not use less than 5 gal water/A.
			<b>Pre-Harvest Interval</b> – 3 days
	Low to moderate post		DO NOT apply to mango.
Twospotted spider mite	Low to moderate pest infestations: 10.0- 15.0 Heavy pest	Apply using conventional dilute or concentrate ground equipment.	<b>DO NOT</b> apply more than 20 fl. oz./A (0.023 lb ai/A) of this product or any other Abamectin-containing product per application.
into	infestations: 16.0-20.0 Dilute Sprays: 1.0 – 2.0 fl. oz./100 gal)	ADD a horticultural oil for best results Apply when mites first appear during spring, summer, and/or fall.	<b>DO NOT</b> make more than 3 applications of this product or any other Abamectin-containing product per year.
			<b>DO NOT</b> apply more than 60 fl. oz./A (0.070 lb ai/A) of this product or any other Abamectin-containing product per year.
			Application Interval: wait at least 14 days before repeating application.
			Horticultural Spray Oil ( <b>DO</b> <b>NOT</b> use a dormant oil) 1 gal./A (minimum) (0.20%, v/v)
product/100 gal are b	ased on 1,000 gal/À of dilu	duct/A) are adjusted to apply the amount/A equal to that used in full cover the spray. Ground application: For best results, use 150-300 gal/A of spra apply at a ground speed of 1 to 1.5 mph.	

PINEAPPLE

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
Twospotted spider mite	Low to moderate pest infestations: 10.0- 15.0 Heavy pest infestations: 16.0-20.0	Apply using conventional dilute or concentrate ground equipment.	Ground application only. Use sufficient volumes (greater than 50 gal of water/A) with conventional ground application equipment. When using an electro-static sprayer, less than 50 gal of water/A may be used; however, do not use less than 5 gal of water/A. <b>Pre-Harvest Interval</b> – 16 weeks <b>DO NOT</b> apply more than 20 fl. oz./A (0.023 lb ai/A) of this product or any other Abamectin-containing product per application. <b>DO NOT</b> make more than 2 applications of this product or any other Abamectin- containing product per year. <b>DO NOT</b> apply more than 40 fl. oz./A (0.046 lb ai/A) of this product or any other Abamectin-containing product per year. <b>Application Interval:</b> wait at least 7 days before repeating application.

POME FRUIT (CROP GROUP 11-10)

Crops in this group include apple; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; quince; quince; Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or hybrids of these. hył

Target Pests	Application Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
			Apply using conventional dilute or concentrate ground equipment.
			Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage.
		Gallons of spray will vary with size and number of trees per acre and density of foliage.	Application is not permitted from onset of flowering until after petal fall is complete.
European red mite		For best results, apply in combination with	Pre-Harvest Interval – 28 days
McDaniel spider mite	Concentrate Sprays:	Applications without horticultural spray oil may result	<b>DO NOT</b> apply more than 20 fl. oz./A (0.023 ll ai/A) of this product or any other Abamectin-
Pear rust mite	10-20 fl. oz./A	in reduced efficacy and/or residual control.	containing product per application.
Pear psylla Tentiform leafminers	(Dilute Sprays: 2.5-5.0 fl. oz./100 gal)	Applying this product plus horticultural spray oil fewer than 14 days before or after applying Captan <sup>®</sup> can result in phytotoxicity and crop loss.	<b>DO NOT</b> apply more than 40 fl. oz./A (0.047 ll ai/A) of this product or any other Abamectin- containing product per year.
Twospotted spider mite White apple	Add a horticultural oil for best results	Make a second application, if needed, but wait at least 21 days after the first application. <b>SEE</b> <b>RESTRICTIONS.</b> <b>Spider Mites:</b> Apply when spider mite or insect thresholds are reached.	<b>DO NOT</b> make more than 2 applications of th product or any other Abamectin-containing product per year.
leafhoppers Yellow mite			<b>DO NOT</b> apply by air.
Tellow Hille			<b>DO NOT</b> graze livestock in treated orchard.
			Horticultural Spray Oil ( <b>DO NOT</b> use a dorma oil): For dilute sprays use 0.25% or 1 gal./A. For concentrate sprays use a minimum of 1 gal./A.
			Application Interval: Wait at least 21 days before repeating application.

400 gal/A of dilute spray.

### STONE FRUIT CROP GROUP (CROP GROUP 12)

Crops in this group include apricot; apricot, Japanese; capulin; cherry, black; cherry, Nanking; cherry (sweet and tart); Jujube, Chinese; nectarine; peach; plum, American; plum, beach; plum, Canada; plum, cherry; plum (chickasaw, damson, and Japanese); plum, Klamath; plum, prune; plumcot; sloe; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
raiger i esta	(fl. oz./100 gal)		Nookitokiono
			Apply using conventional dilute or concentrate ground equipment.
			Use sufficient volumes (greater tha 40 gal of water/A) to ensure thorough foliage coverage.
			Pre-Harvest Interval – 21 days
European red mite Pacific spider mite Twospotted spider mite	Concentrate Sprays: 10-20	Make applications when mites first are seen. Make a second application, if needed, but wait at least 21 days after the first application. <b>SEE</b> <b>RESTRICTIONS.</b> Always apply this product in combination with either a nonionic surfactant, or with horticultural spray oil (not a dormant oil), but use caution since oil may cause phytotoxicity to foliage and fruit.	<b>DO NOT</b> apply more than 20 fl. oz./ (0.023 lb ai/A) of this product or any other Abamectin-containing produc per application.
	11. oz./A (Dilute Sprays: 2.5-5.0 fl. oz./100 gal) PLUS a horticultural oil or nonionic surfactant		<b>DO NOT</b> apply more than 40 fl. oz (0.047 lb ai/A) of this product or any other Abamectin-containing produc per year.
			<b>DO NOT</b> make more than 2 applications of this product or any other Abamectin-containing produc per year.
			<b>DO NOT</b> make applications from onset o flowering until after petal fall is complete.
			DO NOT apply by air.
			<b>DO NOT</b> graze livestock in treated orchards.
			Horticulture Spray Oil (NOT a dormant oi 1 gal/A (minimum) (0.25%, v/v)
			Nonionic Surfactant – labeled rate

3) A nonionic suffactant that spreads on and/or penetrates the lear cuticle can improve insect control. It is impossible to test on an some num varieties under the variety of conditions that may cause crop injury. Therefore, when using this product in combination with a non-ionic suffactant, carefully follow the **Directions for Use** and **Precautions** on the suffactant label and in official spray guides. A horticultural oil (not a dormant oil) may improve efficacy and may be used but it may increase the possibility of phytotoxicity to foliage and fruit. 4)

### STRAWBERRIES, LOW GROWING BERRY (CROP SUBGROUP 13-07G)

Crops in this group include bearberry; bilberry; blueberry, lowbush; cloudberry; cranberry; ligonberry; muntries; partridgeberry; strawberry; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
Strawberry spider mite Twospotted spider mite	16.0	Optimum coverage of the leaves (tops and bottoms) can be achieved by adjusting the spray volumes and placement of the nozzles. Apply when mites first appear. Make a second application at 7-10 day intervals. Repeat the two step application process, if needed. <b>SEE RESTRICTIONS.</b> A non-ionic or silicone-based (not a sticker or binder type) surfactant used in combination with this product provides improved wetting of foliage and allows an even deposition of the spray.	<ul> <li>Ground application only.</li> <li>Apply using conventional ground equipment or electrostatic sprayers.</li> <li>Use sufficient volumes (greater than 50 gal of water/A for conventional sprayers, greater than 10 gal of water/A for electrostatic sprayers) to ensure thorough foliage coverage.</li> <li>Pre-Harvest Interval – 3 days</li> <li>To avoid insect resistance to this product, do not apply to strawberries grown in nurseries.</li> <li>DO NOT apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing product per application.</li> <li>DO NOT apply more than 64 fl. oz./A (0.075 lb ai/A) of this product or any other Abamectin-containing product per year.</li> <li>DO NOT apply by air.</li> <li>Application Interval: Wait at least 21 days after the second application before repeating application.</li> </ul>

### TREE NUTS CROP GROUP (CROP GROUP 14-12)

Crops in this group include African nut-tree; almond; beech nut; Brazil nut; Brazilian pine; bunya; bur oak; butternut, Cajou nut; candlenut; cashew; chestnut; chinquapin; coconut; coquito nut; dika nut; ginkgo; Guiana chestnut; hazelnut (filbert); heartnut; hickory nut; Japanese horse-chestnut; macadamia nut; mongongo nut; monkey-pot; monkey puzzle nut; Okari nut; Pachira nut; peach palm nut; pecan; pequi; Pili nut; pine nut; pistachio; Sapucaia nut; tropical almond; walnuts (black and English); yellowhorn; cultivars, varieties, and/or hybrids of these.

Target Pests	Application Rate fl. oz./A (fl. oz./100 gal)	Application Instructions and Timing	Restrictions
			Apply using conventional dilute or concentrate ground equipment. Use sufficient volumes (greater than 40 gal of water/A) to ensure thorough foliage coverage. <b>Pre-Harvest Interval</b> – 21 days <b>DO NOT</b> apply more than 20 fl. oz./A (0.023 lb aiA) of this product or any other Abamectin-containing product per application. <b>DO NOT</b> apply more than 40 fl. oz./A (0.047 lb ai/A) of this product or any other Abamectin-containing product per year. <b>DO NOT</b> make more than 2 applications of this product or any other Abamectin-containing product per year. <b>DO NOT</b> apply by air. <b>DO NOT</b> apply by air. <b>DO NOT</b> graze livestock in treated groves/orchards. Horticultural Spray Oil ( <b>DO NOT</b> use a dormant oil) 1 gal./A (minimum) (0.25%, v/v)
		me amount of product per acre in concentrate spi 10 fl oz. of this product/A on small trees.	rays that would be required for the dilute sprays to the

### TUBEROUS AND CORM VEGETABLES CROP SUBGROUP (CROP SUBGROUP 1 C)

Crops in this group include arracacha, arrowroot, artichoke, Chinese artichoke, edible canna, Jerusalem artichoke, cassava (bitter and sweet), chayote (root), chufa, dasheen, ginger, leren, potato, sweet potato, tanier, turmeric, yam bean, and yam (true)

Target Pests	Application Rate fl. oz./A	Application Instructions and Timing	Restrictions
			Apply using conventional ground or aerial application equipment.
			Use sufficient volumes (greater than 20 gal of water/A for ground applications and greater than 5 gal of water/A for aerial applications).
			Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures) use a greater volume of water to ensure adequate coverage.
		Apply when mites and adult leafminer flies first appear.	Pre-Harvest Interval – 14 days
Colorado potato	Low to moderate pest	<b>Colorado potato beetle:</b> Begin applications when 50% of the egg masses have hatched or larvae are observed. If a second application is made, ensure it is to control a single Colorado potato beetle generation.	<b>DO NOT</b> apply more than 16 fl. oz./A (0.019 lb ai/A) of this product or any other Abamectin-containing product per application.
beetle <i>Liriomyza</i> leafminers Potato psyllid	infestations: 8.0-12.0 Heavy pest infestations: 16.0	Heavy pest infestations: flies are first observed. Repeat applications as needed to	<b>DO NOT</b> apply more than 32 fl. oz./A (0.038 lb ai/A) of this product or any other Abamectin-containing product per year for control <b>spider mites</b> or
Spider mite		appear. Repeat application as needed to maintain control.	Colorado potato beetle.
		Make a second application, if needed, but wait at least 7 days after the first application. <b>SEE RESTRICTIONS.</b>	<b>DO NOT</b> apply more than 48 fl. oz./A (0.056 lb ai/A) of this product or any other Abamectin-containing product
		A non-ionic or silicone-based (not a sticker or binder type) surfactant used in combination with this product provides	per year for control of leafminers.
		improved wetting of foliage and allows an even deposition of the spray.	<b>DO NOT</b> make more than 2 applications to control <b>Colorado</b> <b>potato beetle</b> per year.
			<b>DO NOT</b> make more than 2 sequential applications of this product or any other Abamectin- containing product.
			<b>DO NOT</b> apply by air in the State of New York.
			<b>DO NOT</b> graze or feed treated foliage to livestock.
			<b>Application Interval:</b> Wait at least 7 days before repeating application.

RV041917