

# 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 applicators certification.

# ZORO<sup>®</sup>

## MITICIDE/INSECTICIDE

### ACTIVE INGREDIENT:

Abamectin ..... 1.9%\*

OTHER INGREDIENTS: ..... 98.1%

TOTAL: ..... 100.0%

\*1 gal. contains 0.15 lb. abamectin

GROUP

6

INSECTICIDE

## KEEP OUT OF REACH OF CHILDREN WARNING / AVISO

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

### IN CASE OF MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL FREE, DAY OR NIGHT 1-866-303-6950

See additional precautionary statements directions for use in booklet.

Notice: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

EPA Reg. No. 67760-71

EPA Est. No. DNK-4787-001

## NET CONTENTS: 1 Gallon

Manufactured For: **Cheminova, Inc.**  
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Research Triangle Park, NC 27709

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ZORO<sup>®</sup> is a registered trademark of Cheminova

 **CHEMINOVA**  
HELPING YOU GROW

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

Causes substantial but temporary eye injury. Do not get in eyes. Harmful if absorbed through skin or if, swallowed. Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

<b>FIRST AID</b>	
<b>IF IN EYES:</b>	-Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. -Call a poison control center or doctor for treatment advice.
<b>IF SWALLOWED:</b>	-Call a poison control center or doctor immediately for treatment advice. -Do not give any liquid to the person. -Do not induce vomiting unless told to do so by a poison control center or doctor. -Do not give anything by mouth to an unconscious person.
<b>IF ON SKIN OR CLOTHING:</b>	-Take off contaminated clothing. -Rinse skin immediately with plenty of water for 15-20 minutes. -Call a poison control center or doctor for treatment advice.
<b>IF INHALED:</b>	-Move person to fresh air. -If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. -Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-866-303-6950 for emergency medical treatment information.	

**NOTE TO PHYSICIAN**

Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular 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 parental 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.

**Personal Protective Equipment**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category B on an EPA chemical-resistance category selection chart.

**Applicators and other handlers must wear:**

- Coveralls worn over short-sleeved shirt and short pants
- Chemical resistant gloves EPA chemical resistance category E (e.g., barrier laminate or butyl rubber  $\geq$  14 mils)
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure.
- Chemical-resistant apron when cleaning equipment, mixing, or loading.

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

### **User Safety Recommendations**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and wildlife. For terrestrial uses, 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 wash water 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.

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.

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 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 forecasted to occur within 48 hours.

### **PHYSICAL OR CHEMICAL HAZARDS**

Combustible. Do not use or store near heat or open flame.

#### **ATTENTION**

This product contains a chemical 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 over short-sleeved shirt and short pants
- Chemical-resistant gloves – EPA chemical-resistance category E (e.g., barrier laminate, nitrile rubber, neoprene rubber, viton)
- Chemical resistant shoes and socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

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

## **PRODUCT INFORMATION**

**ZORO** is an emulsifiable concentrate that will control certain pests on the crops listed on this label when the product is applied according to the Directions for Use. Thorough coverage of foliage is essential for good mite and insect control.

### **NOTE:**

- **Phytotoxicity:** **ZORO** has been tested for phytotoxicity and has a wide margin of safety on a variety of crops. **ZORO** has also been shown to be compatible with many commonly used pesticides, crop oils, and nutritional sprays. However, since it is not possible to test a large number of possible mixtures, the user should pre-test any proposed mixtures with **ZORO** to ensure the physical compatibility and lack of phytotoxic effects.
- **New York State Restriction:** Do not apply **ZORO** with aircraft in New York State.

### **Chemigation**

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

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

- Apply Zoro only when wind velocity favors on target deposition (approximately 3 to 10 mph).
- Do not apply with ground application equipment within 25 ft., 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 might result in illegal residues or harm nontarget species. Risk of exposure to sensitive areas can be reduced by product application made when wind direction is away from sensitive areas.
- Do not apply **ZORO** when weather conditions may cause drift.
- Avoid application when the temperature is high and/or the humidity is low. These conditions increase the evaporation of spray droplets and the likelihood of drift to aquatic areas.
- Do not apply when wind speed or wind gusts are greater than 15 mph.
- Do not apply when wind speed is below 2 mph because wind direction will vary and there is a high potential for inversion.

### **Ground application to tree crops or hops in the vicinity of aquatic areas such as lakes, reservoirs, permanent streams, marshes, potholes, natural ponds, estuaries, or commercial fish ponds:**

- Do not apply **ZORO** when weather conditions may cause drift in aquatic areas.
- Do not apply within 110 ft. upwind of aquatic areas or when wind speed is above 8mph.
- 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 when turning at row ends and when passing gaps in rows of trees or hops.

### **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  $\frac{3}{4}$  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.

#### **Droplet Size**

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

## Controlling Droplet Size

- **Volume**
  - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure**
  - Do not exceed the nozzle manufacturer's recommended pressures. For many 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.
- **Number of Nozzles**
  - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation**
  - Orienting nozzles so that the spray is released parallel to the 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.
- **Nozzle Type**
  - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid-stream nozzles oriented straight back produce the largest droplets and the lowest drift.
- **Boom Length**
  - For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application Height**
  - Application 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 to 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 down edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind.
- **Wind**
  - Drift potential is lowest between speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential.

**Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

## Temperature and Humidity

To compensate for evaporation when applying Zoro in low relative humidity, set up equipment to produce larger droplets. Evaporation of droplets is most severe when conditions are both hot and dry.

## Temperature Inversions

Zoro 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 lowwind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates, indicates good vertical air mixing.

## Resistance Management

**ZORO** is a Group 6 insecticide (contains the active ingredient abamectin). Because of the inherent risks of pests developing resistance to any product, it is strongly advised that **ZORO** be used in a sound resistance management program. Treatment may not be effective against labeled pests if insect or mite-tolerant strains develop. When applying **ZORO** to plants that are hosts of labeled pests with multiple generations per crop per year, use resistance management practices.

Resistance management practices may include, but are not limited to:

- rotating **ZORO** with other products with different modes of action,
- avoiding treatment of successive generations with **ZORO**.
- using labeled rates at the specified spray intervals,
- using non-chemical alternatives such as beneficial arthropods,
- rotating susceptible to non-susceptible plants, and
- using various cultural practices

For additional information regarding the implementation of these or other resistance management practices, consult your local agricultural advisor or company representative.

## **CROP USE DIRECTIONS:**

### **Apples**

**For control of European red mite, McDaniel spider mite, Tentiform leafminer, Twospotted spider mite, and White apple leafhopper**

ZORO may be applied using conventional dilute or concentrate ground application sprayers calibrated to deliver sufficient water for thorough coverage. Gallons of spray will vary with size and number of trees per acre and density of foliage. Thorough coverage is essential for good spider mite and insect control.

#### **NOTE:**

- For best results, apply in combination with horticulture spray oil (not a dormant oil) as directed. Applications without horticultural spray oil may result in reduced efficacy and/or residual control.
- When used alone or when other products are applied sequentially, ZORO in combination with horticultural spray oil may injure the fruit of certain apple varieties (e.g. russetting on light-skinned varieties such as Golden Delicious).
- When using ZORO plus horticultural spray oil, carefully follow the **Directions for Use and Precautions** section on the horticultural spray oil label, as well as, the precautions in official spray guides or on product labels. For example, applying ZORO plus horticultural spray oil fewer than 14 days before or after applying abamectin can result in phytotoxicity and crop loss.

<b>Pest</b>	<b>For Dilute Sprays<sup>a</sup> fl. oz./ 100 gals.</b>	<b>For Concentrate Sprays<sup>b</sup> fl. oz./acre</b>	<b>Instructions</b>
European red mite McDaniel spider mite Tentiform leafminer Twospotted spider mite White apple leafhopper	2.5-5.0	10-20	<ul style="list-style-type: none"> <li>• Apply <b>ZORO</b> when spider mite or insect thresholds are reached.</li> <li>• A second application may be made if needed to maintain control. (<b>See Use Restrictions</b>)</li> <li>• <b>Spider Mites:</b> For best results, apply before a threshold of 5 spider mites per leaf is reached. Residual spider mite control with <b>ZORO</b> in combination with horticultural spray oil (not a dormant oil) is greater from spray deposits on newer leaves compared to older. Applications of <b>ZORO</b> for spider mite control should be limited to a period extending from petal fall through 6 weeks following petal fall.</li> <li>• <b>Tentiform leafminer:</b> For best results, apply onto eggs (to control new hatch) and early sap feeder stages of first and second-generation tentiform leafminers when locally established thresholds have been reached. Do not apply during bloom.</li> <li>• <b>White Apple Leafhopper (Not for use west of the Rocky Mountains):</b> Application of <b>ZORO</b> is limited only to first generation white apple leafhoppers. Apply soon after petal fall in combination with horticultural spray oil (not a dormant oil).</li> </ul>
<b>Horticultural Spray Oil (not a dormant oil)</b>	0.25% or 1 gal./acre	Minimum of 1 gal./acre	

<sup>a</sup>The rate of ZORO per 100 gals. is based on a volume of 400 gals./acre dilute spray.

<sup>b</sup>To determine the amount of product per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of product/acre in concentrate sprays as would be required for the dilute sprays to the same orchard/grove. This may result in use of less than 10 fl. oz./acre on small trees.

#### Use Restrictions – Apples

- **PHI:** Do not apply within **28** days of harvest.
- **Application Method:** Ground application only. Do not apply with aircraft.
- **Amount of Water:** Do not apply in less than 40 gals. of water/acre.
- **Maximum Amount per Application:** Do not apply more than 20 fl. oz. (or 0.023 lb. ai/acre) of ZORO per application or any other applied product containing abamectin applied to foliage
- **Application Interval:** If a second application is necessary, wait at least 21 days before repeating application.
- **Number of Applications:** Do not make more than 2 applications per growing season of ZORO or any other product containing abamectin applied to foliage
- **Maximum Amount per Season:** Do not apply more than 40 fl. oz./acre (or 0.047 lb. ai/acre) of ZORO in a growing season of Zoro or any other product containing abamectin applied to foliage
- **Grazing:** Do not allow livestock to graze in treated orchards.

#### Avocados

For Control of Avocado thrips

**NOTE:** ZORO may be applied using ground application equipment or aircraft. Aerial application is permitted because of its importance to the avocado growing industry. However, aerial application is not the preferred method of application for the best control of thrips. With aerial application, spray coverage and the resulting control of thrips is less than with ground application. For this reason, the user accepts all liability for the level and duration of control of thrips when ZORO is aerially applied.

Gallorage of spray will vary with size and number of trees per acre and density of foliage. In every case, thorough coverage is essential for good mite and insect control.

Pest	fl. oz./A	Instructions
Avocado Thrips ( <i>Scirtothrips perseae</i> )	10.0 – 20.0  Do not use less than 10 fl. oz. of product/A	<ul style="list-style-type: none"><li>• For best results, apply when immature thrips are first observed but before numbers exceed 5 immature thrips per leaf/fruit.</li><li>• Use 10-15 fl. oz. of product/A for low* to moderate* infestations and 15-20 fl. oz. of product/A for severe* infestations. Add a 1.0% - 4.0% of a horticultural spray oil (not a dormant oil) approved for use on avocados.</li><li>• Make a second application, if needed, to maintain control, but wait at least 30 days after the first application to retreat. <b>(See Use Restrictions.)</b></li><li>• <b>For Ground Application:</b> If spray volume is greater than 400 gals/A apply ZORO at a rate of 2.5 fl. oz. per 100 gals. of water plus 1.0% - 4.0% of a horticultural spray oil (not a dormant oil) approved for use on avocados.</li><li>• <b>NOTE:</b> To prevent crop injury, observe all precautions and restrictions on the oil label. When using oil concentrations above 2% treat a small test area before making a large-scale application.</li></ul>

*Thrips Infestation Level	Number of immature thrips per leaf/fruit
Low	1-2
Moderate	3-4
Severe	More than 5

#### Use Restrictions – Avocados

- **PHI:** Do not apply within 14 days of harvest.
- **Application Method:** Ground and aerial application permitted.
- **Amount of Water:** Do not apply in less than 100 gals. of water with ground equipment or 50 gals. of water with aircraft.
- **Maximum Amount Per Application:** Do not apply more than 20 fl. oz./acre (or 0.023 lb. ai/acre) per application of Zoro or any other product containing abamectin applied to foliage.
- **Application Interval:** Wait at least 30 days before repeating application.
- **Number of Applications:** Do not make more than 2 applications per season of Zoro or any other product containing abamectin applied to foliage.
- **Maximum Amount Per Season:** Do not apply more than 40 fl. oz./acre (or 0.047 lb. ai/acre) per season of Zoro or any other product containing abamectin applied to foliage.
- **Grazing:** Do not allow livestock to graze in treated orchards.

#### Celeriac (*Apium graveollens*)

For control of Twospotted spider mite

ZORO may be applied using conventional dilute or concentrate sprayers. Thorough coverage of the crop canopy is essential for optimum results. Inadequate crop coverage may result in reduced control. Calibrate sprayer to deliver sufficient water for thorough coverage of the foliage.

#### Celeriac

Pest	fl. oz./A	Instructions
Twospotted spider mite	16.0	<ul style="list-style-type: none"> <li>• For best results, use in combination with a non-ionic surfactant.</li> <li>• Apply when mites first appear and repeat as necessary to maintain control.</li> </ul> <b>(See Use Restrictions.)</b>

#### Use Restrictions - Celeriac

- **PHI:** Do not apply within 7 days of harvest.
- **Application Method:** Apply with ground application equipment.
- **Amount of water:** Do not apply in less than 20 gals. of water/acre.
- **Application Interval:** Wait at least 7 days before repeating application.
- **Number of Applications:** For resistance management, do not make more than 2 sequential applications of Zoro or any other product containing abamectin applied to foliage.
- **Maximum Amount per Season:** Do not apply more than 48 fl. oz./acre after transplanting of Zoro or any other product containing abamectin applied to foliage.

#### Citrus Fruit Crop Group (Crop Group 10)

Crops in this group are: Calamondin, Citrus citron, Citrus hybrids, *Citrus* species (includes chironja, tangelo, tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Sour orange, Sweet orange, Pummelo, and Satsuma mandarin.

For control of Asian citrus psylla, Broad mite, Citrus bud mite, Citrus leafminer, Citrus rust mite, Citrus thrips, and Twospotted spider mite

Apply using conventional dilute or concentrate ground application sprayers calibrated to deliver sufficient water for thorough coverage (or outside coverage for Asian citrus psylla, citrus leafminer, or citrus thrips). In every case, thorough coverage is essential for good mite and insect control.

**Aerial Application is permitted only for control of Citrus Leafminer. Aerial application is prohibited in California.**

**Citrus Fruit Crop Group**

<b>Pest</b>	<b>For Dilute Sprays<sup>a</sup> fl. oz./100 gals.</b>	<b>For Concentrate Sprays<sup>b</sup> fl. oz./acre</b>	<b>Instructions</b>
Asian citrus psyllid	-	10-20 <sup>c</sup>	<ul style="list-style-type: none"> <li>• Applications should be made with a minimum of 0.20% horticultural spray oil (not a dormant oil) in the spray mixture or not less than 1.0 gal. of oil/acre (except when specified differently below).</li> <li>• <b>Asian Citrus Psyllid:</b> Apply to protect newly expanding foliage flush during the spring, summer or fall. <b>ZORO</b> will only control adults and nymphs present at the time of application.</li> <li>• <b>Mites:</b> Apply when mites first appear during spring, summer, and/or fall.</li> <li>• <b>Citrus Bud Mite:</b> For best results, time the spray at "bud swell".</li> <li>• <b>Citrus Leafminer:</b> Apply to protect new growth during spring, summer, or fall.</li> <li>• <b>Citrus Thrips:</b> Application targeted for citrus 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-hatch).</li> </ul>
Broad mite	1.0-2.0	10-20 <sup>c</sup>	
Citrus bud mite	1.0-2.0	10-20 <sup>d</sup>	
Citrus rust mite	0.5-2.0	5-20 <sup>e</sup>	
Twospotted spider mite	1.0-2.0	10-20	
Citrus leafminer	-	5-20 <sup>f</sup>	
Citrus thrips	-	10-20 <sup>g</sup>	

<sup>a</sup>The rate of **ZORO** per 100 gals. is based on a volume of 1,000 gals./acre dilute spray.

<sup>b</sup>For concentrate sprays, adjust the dosage to apply an amount/acre equal to that used in full cover dilute spray.

<sup>c</sup>Ground Application: For best results, use 150-300 gals./acre of spray mix with a minimum of 3 gal./acre of horticultural oil (not a dormant oil) and apply at a ground speed of 1 to 1.5 MPH.

<sup>d</sup>For best results, use a minimum of 500 gals/acre of spray mix with a minimum of 0.5% of finished spray horticultural oil (not a dormant oil).

<sup>e</sup>For best results, use 100-250 gals./acre of spray mix applied to achieve outside coverage.

**Use Restrictions – Citrus Fruit Crop Group**

- **PHI:** Do not apply within 7 days of harvest.
- **Application Method: For Control of Citrus Leafminer**  
Ground or aerial application is permitted. (Do not apply with aircraft to citrus in California.) For aerial application use a 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) a greater volume of water must be used to insure adequate coverage.
- **Application Method - All other pests:** Ground application only. Do not apply with aircraft.
- **Prohibited Use:** To manage resistance do not use in citrus nurseries.
- **Application Interval:** Do not apply ZORO, or any other abamectin containing product within 30 days of the last treatment.
- **Maximum Amount per Season:** Do not apply more than 40 fl. oz./acre (0.047 lb a.i./acre) of ZORO or any other abamectin containing product, in any growing season. Do not make more than 3 applications of ZORO or any other abamectin containing product in any growing season.
- **Grazing:** Do not allow livestock to graze in treated orchards.

## COTTON

For control of spider mites.

Mix with water as indicated below. Thorough coverage of the crop is essential for optimum results. Inadequate coverage may result in reduced control. For best control and coverage apply ZORO with ground application equipment.

Spider Mites	Fl. oz./acre	Instructions
Carmine spider mite	4-6	Apply when mites first appear. The use rate depends on the size of the plant and density of the foliage. Repeat application if needed to maintain control. See <b>Use Restrictions</b> below.
Pacific spider mite	(Early Season Cotton – See <b>Instructions</b> )	
Strawberry spider mite		The lower use rates of 4-6 fl. oz./acre are only recommended if cotton is early season and under 10 inches in height. Do not use less than 4 fl. oz./acre.
Twospotted spider mite	8-16	<b>West of the Rocky Mountains</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> ZORO 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.

### Use Restrictions

- **PHI:** Do not apply within 20 days of harvest.
- **Application Method:** Ground or aerial application is permitted.
- **Minimum Amount of Water:** Do not apply in fewer than 5 gallons of water per acre. Use sufficient volume to insure thorough coverage.
- **Maximum Amount per Application:** Do not apply more than 16 fl. oz./A (or 0.019 lb a.i./acre) per application of Zoro or any other product containing abamectin applied to foliage.
- **Application Interval:** Wait at least 21 days before repeating application of Zoro or any other product containing abamectin applied to foliage.
- **Maximum Amount per Season:** Do not apply more than 32 fl. oz./acre (or 0.038 lb.a.i./acre per season of Zoro or any other product containing abamectin applied to foliage).
- **Grazing Restriction:** Do not feed or allow livestock to graze treated cotton.

### Cucurbit Vegetables Crop Group (Crop Group 9)

Crops in this group are: Chayote, Chinese waxgourd, Citron Melon, Cucumber, Gherkin, Edible Gourd (includes hyotan, cucuzza, hechima, Chinese okra); *Momordica* spp. (includes balsam apple, balsam pear, bittermelon, Chinese cucumber); Muskmelon (includes hybrids and/or cultivars of Cucumis melo, true cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honeyballs, mangomelon, 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*).

For Control of Spider Mites and Leafminers

Mix with water as indicated below. Thorough coverage of the crop canopy is essential for best results. Inadequate coverage may result in reduced control.

**Note:** ZORO may be applied with ground application equipment or aircraft. For best control of mites, apply ZORO with ground application equipment. With aerial application, spray coverage and the resulting control of mites is less than with ground application. For this reason, the user accepts all liability for the level and duration of control of mites when ZORO is aerially applied.

## Cucurbits Crop Group

Pest	fl. oz./acre	Instructions
Leafminers Spider mites	8.0-16.0	<ul style="list-style-type: none"><li>• Use 8-12 fl. oz./acre for low to moderate infestations and 16 fl. oz./acre for severe infestations.</li><li>• Apply when adult leafminer flies or spider mites are first observed. Repeat applications as needed to maintain control within constraints of a sound resistance management program. <b>(See Use Restrictions).</b></li></ul>

### Use Restrictions – Cucurbit Vegetables Crop Group

- **PHI:** Do not apply within 7 days of harvest.
- **Application Method:** Ground or aerial application is permitted; however, do not apply with aircraft in New York State.
- **Amount of Water:** Do not apply in less than 20 gals. of water/A with ground application equipment. Do not apply in less than 5 gals. 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 insure adequate coverage.
- **Maximum Amount per Application:** Do not apply more than 16 fl. oz./acre (or 0.019 lb.a.i./acre) of Zoro or any other product containing abamectin applied to foliage.
- **Application Interval:** Wait at least 7 days before repeating application.
- **Number of Applications:** Do not make more than 2 sequential applications of Zoro or any other product containing abamectin applied to foliage.
- **Maximum Amount Per Season:** Do not apply more than 48 fl. oz./acre (or 0.056 lb. a.i./acre) in a growing season of Zoro or any other foliarly applied product containing abamectin.

### Fruiting Vegetables (except cucurbits) Crop Group (Crop Group 8)

Crops in this group are: Tomato; Eggplant; Groundcherry, Pepino, peppers (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper); Tomatillo.

For control of Broad mite, Colorado potato beetle, *Liriomyza* leafminers, Spider mites, *Thrips palmi*, Tomato pinworm,,Tomato psyllid and Tomato russet mite

Mix with water as indicated below. Thorough coverage of the crop canopy is essential for best results. Inadequate coverage may result in reduced control.

**Note:** ZORO may be applied with ground application equipment or aircraft. For best control of mites, apply ZORO with ground application equipment. With aerial application, spray coverage and the resulting control of mites is less than with ground application. For this reason, the user accepts all liability for the level and duration of control of mites when ZORO is aerially applied.

## Fruiting Vegetables Crop Group

Pest	fl. oz./acre	Instructions
Broad mite Colorado potato beetle <i>Liriomyza</i> leafminers Spider mites <i>Thrips palmi</i> Tomato psyllid Tomato Russet mite Potato psyllid (in CA)*	8.0-16.0	<ul style="list-style-type: none"> <li>• <b>Broad, Russet, and spider mites:</b> Apply when mites first appear.</li> <li>• <b><i>Thrips palmi</i>:</b> Apply when thrips are first observed.</li> <li>• <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.</li> <li>• <b>Potato psyllid:</b> for low to moderate infestations use 8-12 fluid ounces. 16 fluid ounces per acre for heavy infestations. Sequential applications 10-14 days apart may be needed for infestations with heavy egg and nymph populations.</li> </ul>
Tomato pinworm	16.0	<ul style="list-style-type: none"> <li>• <b>Mites, leafminers, <i>Thrips palmi</i>, and Colorado potato beetle:</b> Use 8 fl. oz./acre for low to moderate infestations and 16 fl. oz./acre for severe infestations.</li> <li>• Repeat application as necessary to maintain control. (<b>See Use Restrictions</b>).</li> </ul> <p><b>Note:</b> ZORO may be used without a wetting agent. Spreading and penetrating surfactants can improve insect 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.</p>

\* Suppression

### Use Restrictions –Fruiting Vegetables Crop Group

- **PHI:** Do not apply within 7 days of harvest.
- **Application Method:** Ground or aerial application permitted; however, do not apply with aircraft in New York State.
- **Prohibited Use:** For resistance management, do not use on fruiting vegetables grown for transplanting.
- **Amount of Water:** Do not apply in less than 20 gals. of water/acre with ground application equipment. Do not apply in less than 5 gals. of water/acre 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 insure adequate coverage.
- **Maximum Amount per Application:** Do not apply more than 16 fl. oz./acre (or 0.019 lb a.i./acre) of Zoro or any other product containing abamectin applied to foliage.
- **Application Interval:** Wait at least 7 days before repeating application.
- **Maximum Amount per Season:** Do not apply more than 48 fl. oz./acre (or 0.056 lb.a.i./Acre) in a growing season.

### Grapes

For control of Pacific spider mite, Twospotted spider mite, Willamette spider mite, Variegated leafhopper, Western grape leafhopper, first generation European Grapevine Moth (*Lobesia botrana*), and Western grapeleaf skeletonizer

ZORO may be applied using ground sprayers calibrated to deliver sufficient water for thorough coverage. Thorough coverage is essential for good spider mite and insect control. Do not spray alternate rows. ZORO must be applied to both sides of each row for maximum coverage.

ZORO will aid in control of first generation European Grapevine Moth when applied at the rate of 10-16 fl. oz/acre with a non-ionic surfactant using thorough coverage. Make application at or shortly after egg hatch. Application of other products may be required for an acceptable level of control of first generation European Grapevine Moth.

## Grapes

Pest	fl. oz./A	Instructions
Pacific spider mite Twospotted spider mite Willamette spider mite Western grapeleaf skeletonizer Western grape leaf-hopper Varigated leafhopper	8.0-16.0 Plus a nonionic surfactant	<ul style="list-style-type: none"> <li>• Use a 8-12 fl. oz./A for low to moderate infestations and 16 fl. oz. for severe infestations.</li> <li>• Repeat application, if needed. <b>(See Use Restrictions)</b></li> <li>• <b>Note: ZORO</b> must be applied in combination with a nonionic surfactant to improve wetting of foliage and to smooth out spray deposits. Spreading and penetrating surfactants can improve insect control. Do not use binder or sticker-type surfactants. Although <b>ZORO</b> has been tested in combination with a nonionic surfactant for safety to grapes, it is impossible to test on all grape varieties under the variety of conditions that may cause crop injury. Therefore, when using <b>ZORO</b> in combination with a nonionic surfactant, carefully follow the <b>Directions for Use</b> and <b>Precautions</b> on the nonionic surfactant label and in official spray guides.</li> <li>• <b>Spider mites:</b> Apply when mites first appear but before motiles exceed 5 per leaf.</li> <li>• <b>Western grapeleaf skeletonizer:</b> Apply <b>ZORO</b> plus a nonionic surfactant when larvae are first observed. For optimum control, apply shortly after egg hatch.</li> <li>• <b>Western grape leaf-hopper and Varigated leafhopper:</b> Apply <b>ZORO</b> plus nonionic surfactant when pest first observed. Provides contact knock-down control only.</li> </ul>

\*Suppression

### Use Restrictions – Grapes

- **PHI:** Do not apply within 28 days of harvest.
- **Application Method:** Ground application only.
- **Amount of Water:** Do not apply in less than 50 gals. of water/acre with conventional ground application equipment.
- When using an electro-static sprayer, less than 50 gals. of water/acre may be used however, do not use less than 5 gals. of water/acre.
- **Maximum Amount per Application:** Do not apply more than 16 fl. oz./acre (or 0.019 lb. a.i./acre) per application of Zoro or any other product containing abamectin applied to foliage.
- **Application Interval:** If a second application is necessary, wait at least 21 days before repeating application.
- **Number of Applications:** Do not make more than 2 applications per growing season of Zoro or any other product containing abamectin applied to foliage.
- **Maximum Amount per Season:** Do not apply more than 32 fl. oz./acre (or 0.038 lb.a.i./acre) in a growing season of Zoro or any other product containing abamectin applied to foliage.
- **Grazing:** Do not allow livestock to graze in treated vineyards.

### Herb Crop Subgroup (19A) (Except Chives)

Crops in this subgroup are: Angelica, Balm Basil; Borage, Burnet, Camomile; Catnip; Chervil (dried), Clary, Coriander (leaf); Cilantro (leaf), Costmary, Culantro (leaf), Curry (leaf) Dill Weed; Horehound, hyssop, Lavender; lemongrass, lovage (leaf), Marigold; Marjoram (*Oiganum* species); Nasturtium; Parsley (dried); pennyroyal, Rosemary; Rue, Sage; Summer and Winter Savory; sweet bay, tansy, Tarragon; Thyme; Wintergreen, woodruff, and wormwood.

For control of *Liriomyza* leafminers

Mix with water as indicated below. Apply thoroughly with ground application equipment as a foliar spray and ensure good upper and lower leaf coverage.

### Herb Crop Subgroup (Except Chives)

Pest	fl. oz./acre	Instructions
<i>Liriomyza</i> leafminers	8.0-16.0	<ul style="list-style-type: none"><li>• Use 8 fl. oz./acre for low to moderate infestations and 16 fl. oz./acre for severe infestations.</li><li>• Apply when adult flies are first observed and repeat application, as necessary to maintain control. <b>(See Use Restrictions)</b></li><li>• <b>ZORO</b> may be used without a wetting agent. When necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended.</li></ul> <p><b>Note:</b> Although <b>ZORO</b> 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. Therefore, when using <b>ZORO</b> in combination with a nonionic surfactant, carefully follow the <b>Directions for Use</b> and <b>Precautions</b> on the nonionic surfactant label and in official spray guides.</p>

#### Use Restrictions – Herb Crop Subgroup (Except Chives)

- **PHI:** Do not apply within 14 days of harvest.
- **Application Method:** Apply with ground application equipment.
- **Amount of Water:** Use a minimum of 20 gals. of water/acre.
- **Maximum Amount per Application:** Do not apply more than 16 fl.oz./acre (or 0.019 lb. a.i./acre) of Zoro or any other foliarly applied product containing abamectin.
- **Application Interval:** Wait at least 7 days before repeating application.
- **Number of Applications:** Do not make more than 2 applications per single cutting (harvest) of Zoro or any other product containing abamectin applied to foliage.
- **Maximum Amount per Season:** Do not apply more than 48 fl oz/acre (or 0.056 lb. a.i./acre) of Zoro or any other abamectin applied to the foliage per cropping season.

#### Hops (Not approved for use in California)

For control of Twospotted spider mite

Mix with water as indicated below. Apply with ground application equipment as a foliar spray and ensure good upper and lower leaf coverage. Gallons of spray may vary with the size of plants and density of foliage. In every case, thorough coverage is essential for good control of Twospotted spider mite. When using concentrate sprays, the amount of water is reduced, but the amount of **ZORO** should remain the same as for dilute sprays.

## Hops

Pest	fl. oz./acre	Instructions
Twospotted spider mite	8-16.0	<ul style="list-style-type: none"><li>• Apply <b>ZORO</b> when Twospotted spider mites reach treatment thresholds.</li><li>• For applications at ½ trellis growth (6-8 ft. height) apply 8-16 fl. oz./acre in a minimum of 40 gals. of water/acre.</li><li>• For applications beyond ½ trellis growth, do not use less than 16 fl. oz./acre in a minimum of 100 gals. of water/acre.</li></ul> <p><b>Note:</b> <b>ZORO</b> may be used without a wetting agent. When necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended.</p>

### Use Restrictions – Hops

- **PHI:** Do not apply within 28 days of harvest.
- **Application Method:** Ground application only. Do not apply with aircraft.
- **Application Interval:** If a second application is necessary to maintain control, wait at least 21 days before repeating application and repeat application only after an alternative miticide with a different mode of action has been used.
- **Maximum amount per application:** Do not apply more than 16 fl.oz./acre (or 0.019 lb.a.i./acre) of Zoro or any other product containing abamectin applied to foliage per application.
- **Maximum Number of Applications:** Do not make more than 2 applications of Zoro or any other product containing abamectin applied to foliage per growing season.
- **Grazing:** Do not allow livestock to graze in treated hops yards.

### Leafy Vegetable (except Brassica vegetables) Crop Group (Crop Group 4)

Crops in this group are: Amaranth (leafy amaranth Chinese spinach, tampala), Arugula (Roquette), Cardoon, Celery, Lettuce (head and leaf), Chervil, Chinese celery, Chrysanthemum, (edible leaved and garland), Corn salad, Cress (Garden, upland yellow rocket and winter), Celtnce, Dandelion, Dock (Sorrel) Endive, Escarol, Florence Fennel, New Zealand spinach, Orach, Parsley, Purslane (garden and winter) Radicchio (red chicory), Rhubarb, Spinach, Vine spinach and Swiss chard.

For Control of Carmine spider mite, *Liriomyza* leafminers, and Twospotted spider mite

Mix with water as indicated below. Thorough coverage of the crop canopy is essential for best results. Inadequate coverage may result in reduced control.

**Note:** **ZORO** may be applied with ground application equipment or aircraft. For best control of mites, apply **ZORO** with ground application equipment. With aerial application, spray coverage and the resulting control of mites is less than with ground application. For this reason, the user accepts all liability for the level and duration of control of mites when **ZORO** is aerially applied.

## Leafy Vegetable Crop Group

Pest	fl. oz./acre	Instructions
Carmine spider mite <i>Liriomyza</i> leafminers Twospotted spider mite	8.0-16.0 Plus a nonionic surfactant	<ul style="list-style-type: none"> <li>Use 8-12 fl. oz./acre for low to moderate infestations and 16 fl. oz./acre for severe infestations.</li> <li><b>Spider mites:</b> Apply when mites first appear, and repeat as needed to maintain control. <b>(See Use Restrictions)</b></li> <li><b>Leafminers:</b> Apply when adult flies are first observed and repeat applications as needed to maintain control. <b>(See Use Restrictions)</b></li> <li><b>Note: ZORO</b> may be used without a wetting agent. Spreading and penetrating surfactants can improve insect 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.</li> </ul>

### Use Restrictions – Leafy Vegetable Crop Group

- PHI:** Do not apply within 7 days of harvest.
- Application Method:** Ground or aerial application permitted (exception: do not apply with aircraft in New York State).
- Prohibited Use:** For resistance management, do not use on leafy vegetables grown for transplanting.
- Amount of Water:** Do not apply in less than 20 gals. of water/acre with ground application equipment. Do not apply in less than 5 gals. of water per acre 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 insure adequate coverage.
- Maximum Amount per Application:** Do not apply more than 16 fl. oz./acre (or 0.019lb. a.i./acre) of Zoro or any other product containing abamectin applied to foliage.
- Application Interval:** Wait at least 7 days before repeating application.
- Number of applications:** Do not make more than 2 sequential applications of Zoro or any other product containing abamectin applied to foliage
- Maximum Amount per Season:** Do not apply more than 48 fl. oz./acre (or 0.056 lb. a.i./acre) per growing season of Zoro or any other product containing abamectin applied to foliage

### Mint (peppermint and spearmint)

#### For control of Twospotted spider mite

Mix with water as indicated below. Thorough coverage of the crop canopy is essential for best results. Inadequate coverage may result in reduced control.

#### Mint

Pest	fl. oz./acre	Instructions
Twospotted spider mite	8.0-12.0	<ul style="list-style-type: none"> <li>Treat when mites first appear.</li> <li>For optimum control, a nonionic surfactant or organosilicone-based surfactant should be used at the manufacturer's recommended rate.</li> </ul>

### Use Restrictions – Mint

- PHI:** Do not apply within 28 days of harvest.
- Application Method:** Ground or aerial application permitted (exception: do not apply with aircraft in New York State).
- Amount of Water:** Do not apply in less than 20 gals. of water/acre with ground application equipment. Do not apply in less than 5 gals. of water/acre 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 insure adequate coverage.
- Maximum Amount per Application:** Do not apply more than 12 fl. oz./acre (or 0.014 lb. a.i./Acre) per application of Zoro or any other product containing abamectin applied to foliage.
- Application Interval:** Wait at least 7 days before repeating application.
- Number of Applications:** Do not make more than 2 sequential applications and do not apply more than 3 applications per season of Zoro or any other product containing abamectin applied to foliage.
- Maximum Amount per Season:** Do not apply more than 36 fl. oz./acre (or 0.042 lb. a.i./acre) per crop per season of Zoro or any other product containing abamectin applied to foliage.
- Grazing:** Do not allow livestock to graze or feed treated foliage to livestock.

## Pears (including Oriental pear trees)

For control of European red mite, McDaniel spider mite, Pear psylla, Pear rust mite, Twospotted spider mite, and Yellow mite

**ZORO** may be applied using conventional dilute or concentrated ground application sprayers calibrated to deliver sufficient water for thorough coverage. Gallons of spray will vary with size and number of trees per acre and density of foliage. In every case, thorough coverage is essential for good spider mite and insect control.

### NOTE:

- Apply in combination with horticultural spray oil (not a dormant oil) as directed. Applications without horticultural spray oil may result in reduced efficacy and/or reduced residual control.
- When using **ZORO** plus horticultural spray oil, carefully follow the **Directions for Use** and **Precautions** on the horticultural spray oil label. Also follow precautions in official local spray guides or on product labels. For example, applying **ZORO** plus horticultural spray oil in less than 14 days before or after applying Captan can result in phytotoxicity and crop loss.

## Pears

Pest	For Dilute Sprays <sup>a</sup> fl. oz./100 gals.	For Concentrate Sprays <sup>b</sup> fl. oz./acre	Instructions
European red mite McDaniel spider mite Pear psylla Pear rust mite Twospotted spider mite Yellow mite	2.5-5.0	10-20	<ul style="list-style-type: none"><li>• Apply <b>ZORO</b> when spider mite or insect thresholds are reached.</li><li>• A second application may be made if needed to maintain control (<b>See Use Restrictions</b>).</li></ul>
<b>Horticultural Spray Oil (not a dormant oil)</b>	0.25% or 1 gal./acre	Minimum of 1 gal./acre	

<sup>a</sup>The rate of **ZORO** per 100 gals. is based on a volume of 400 gals./acre dilute spray.

<sup>b</sup>To determine the amount of product per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of product/acre in concentrate sprays as would be required for the dilute sprays to the same orchard/grove. This may result in use of less than 10 fl. oz./acre on small trees.

### Use Restrictions – Pears

- **PHI:** Do not apply within 28 days of harvest.
- **Application Method:** Ground application only. Do not apply with aircraft.
- **Amount of Water:** Do not apply in less than 40 gals. of water/acre.
- **Maximum Amount per Application:** Do not apply more than 20 fl. oz./A (or 0.023 lb a.i./acre) of **ZORO** per application or any other product that contains abamectin applied to foliage.
- **Application Interval:** If a second application is necessary, wait at least 21 days before repeating application.
- **Number of Applications:** Do not make more than 2 applications per growing season of Zoro or any other product containing abamectin applied to foliage.
- **Maximum Amount per Season:** Do not apply more than 40 fl. oz./acre or (0.047 lb. a.i./acre) in a growing season of Zoro or any other product containing abamectin applied to foliage.
- **Grazing:** Do not allow livestock to graze in treated orchards.

## Stone Fruit Crop Group (Crop Group 12)

Crops in this group are: apricot, cherry (sweet and tart), nectarine, peach, plum, plum (chickasaw, damson, and Japanese), plumcot, and prune (fresh)

For control of European spider mite, Pacific spider mite, and Twospotted spider mite

**ZORO** may be applied using conventional dilute or concentrate sprayers calibrated to deliver sufficient water for thorough coverage. Gallons of spray will vary with size and number of trees per acre and density of foliage. In every case, thorough coverage is essential for good spider mite control.

## Stone Fruit Crop Group

Pest	For Dilute Sprays <sup>a</sup> fl. oz./ 100 gals.	For Concentrate Sprays <sup>b</sup> fl. oz./acre	Instructions
European red mite Pacific spider mite Twospotted spider mite	2.5-5.0	10-20	<ul style="list-style-type: none"> <li>Apply when mites first appear. A second application may be made, if needed, to maintain control. <b>(See Use Restrictions)</b></li> <li>Always apply <b>ZORO</b> in combination with a nonionic surfactant that spreads on and/or penetrates the leaf cuticle, or apply with horticultural spray oil (not a dormant oil).</li> </ul> <p><b>NOTE:</b></p> <ol style="list-style-type: none"> <li>1) A nonionic surfactant that spreads on and/or penetrates the leaf cuticle can improve insect control. Although <b>ZORO</b> has been tested in combination with nonionic surfactants for safety to stone fruit, it is impossible to test on all stone fruit varieties under the variety of conditions that may cause crop injury. Whenever using <b>ZORO</b> in combination with a nonionic surfactant, carefully follow the <b>Directions for Use</b> and <b>Precautions</b> on the surfactant label and in official local spray guides.</li> <li>2) A horticultural oil (not a dormant oil) may improve efficacy and can be used but it may increase the possibility of phytotoxicity to foliage and fruit.               <ul style="list-style-type: none"> <li>Use a minimum of 0.25% horticultural spray oil (not a dormant oil) in the dilute spray mixture and not less than 1.0 gal. of horticultural spray oil per acre in the final finished spray.</li> <li>Use nonionic surfactants at the manufacturer's recommended rate.</li> </ul> </li> </ol>
<b>Horticultural Spray Oil (not a dormant oil)</b>	0.25% or 1 gal./acre	Minimum of 1 gal./acre	
<b>OR</b>  <b>Nonionic Surfactant</b>	Labeled Rate		

<sup>a</sup>The rate of **ZORO** per 100 gals. is based on a volume of 400 gals./acre dilute spray.

<sup>b</sup>To determine the amount of product per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of product per acre in concentrate sprays as would be required for the dilute sprays to the same orchard/grove. This may result in use of less than 10 fl. oz./acre on small trees.

### Use Restrictions – Stone Fruit Crop Group

- PHI:** Do not apply within 21 days of harvest.
- Application Method:** Ground application only. Do not apply with aircraft.
- Amount of Water:** Do not apply in less than 40 gals. of water/acre.
- Maximum Amount Per Application:** Do not apply more than 20 fl. oz./acre (or 0.023 lb a.i./acre) per application of Zoro or any other product containing abamectin applied to foliage.
- Application Interval:** If a second application is needed, wait at least 21 days before repeating application.
- Number of Applications:** Do not make more than 2 applications per growing season of Zoro or any other product containing abamectin applied to foliage.
- Maximum Amount per Season:** Do not apply more than 40 fl. oz./acre (or 0.047 lb.a.i./acre) in a growing season of Zoro or any other product containing abamectin applied to foliage.
- Grazing:** Do not allow livestock to graze in treated orchards.

## Strawberries

### For control of Strawberry spider mite and Twospotted spider mite

Mix with water as indicated below. Apply with ground application equipment as a foliar spray and insure thorough coverage on upper and lower leaf surfaces. Adjust spray volume and nozzle placement to insure maximum coverage of tops and undersides of leaves.

## Strawberries

Pest	fl. oz./acre	Instructions
Strawberry spider mite Twospotted spider mite Carmine mites* Cyclamen mites* Aphids* Thrips* Whiteflies*	16.0	<ul style="list-style-type: none"><li>• Make 2 applications 7-10 days apart when mites first appear. Repeat this application sequence, if needed, to maintain control. <b>(See Use Restrictions)</b></li></ul> <p><b>Note:</b> ZORO may be used without a wetting agent. When necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended. Good coverage into the crown of the plant will enhance the results of ZORO application for Cyclamen mites. The addition of surfactant will also aid in suppression of all these pests.</p>

\*suppression

### Use Restrictions – Strawberries

- **PHI:** Do not apply within 3 days of harvest.
- **Application Method:** Ground application only. Do not apply with aircraft.
- **Prohibited Use:** For resistance management purposes, do not use in strawberry nurseries.
- **Amount of Water:** Do not apply in less than 50 gals. of water/acre with conventional ground application equipment. When using electro-static sprayers do not apply in less than 10 gallons of water/A.
- **Maximum Amount per Application:** Do not apply more than 16 fl. oz./acre (or 0.019 lb a.i./acre) per application of Zoro or any other product containing abamectin applied to foliage.
- **Application Interval:** Wait at least 21 days after the second application before repeating application.
- **Maximum Amount per Season:** Do not apply more than 64 fl. oz./acre (or 0.075 lb a.i./acre) in a growing season of Zoro or any other product containing abamectin applied to foliage.

### Tree Nuts Crop Group (Crop Group 14) and Pistachio

Crops in this group are Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazlenut), Hickory nut, Macadamia nut, Pecan, and Walnuts (black and English)

### For control of European red mite, Pacific spider mite, Strawberry spider mite, and Twospotted spider mite.

Zoro may be applied using conventional dilute or concentrate sprayers calibrated to deliver sufficient water for thorough coverage. Gallons of spray will vary with size and number of trees per acre and density of foliage. In every case, thorough coverage is essential for good spider mite and insect control.

## Tree Nuts Crop Group and Pistachio

Pest	For Dilute Sprays <sup>a</sup> fl. oz./ 100 gals.	For Concentrate Sprays <sup>b</sup> fl. oz./acre	Instructions
European red mite Pacific spider mite Strawberry Spider mite Twospotted spider mite	2.5-5.0	10-20	Always apply <b>ZORO</b> in combination with a horticultural spray oil (not a dormant oil) approved for use on tree nuts.  Apply <b>ZORO</b> when spider mites first appear. Residual spider mite control is greater from spray deposits on newer leaves compared to older leaves.
<b>Horticultural Spray Oil (not a dormant oil)</b>	0.25% or 1 gal./acre	Minimum of 1 gal./acre	If needed, a second application may be made, to maintain control ( <b>See Use Restrictions</b> ).

<sup>a</sup>The rate of **ZORO** per 100 gals. is based on a volume of 400 gals./A dilute spray.

<sup>b</sup>To determine the amount of product per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of product per acre in concentrate sprays as would be required for the dilute sprays to the same orchard/grove. This may result in use of less than 10 fl. oz./acre on small trees.

### Use Restrictions – Tree Nuts Crop Group (Crop Group 14) and Pistachio

- **PHI:** Do not apply within 21 days of harvest.
- **Application Method:** Ground application only. Do not apply with aircraft.
- **Amount of Water:** Do not apply in less than 40 gals. of water/acre.
- **Application Interval:** If a second application is necessary, wait at least 21 days before repeating application.
- **Maximum Amount per Application:** Do not apply more than 20 fl oz./acre (or 0.023 lb a.i./acre) of **ZORO** or any other product containing abamectin applied to foliage per application.
- **Applications per season:** Do not make more than 2 applications of **ZORO** or any other product containing abamectin applied to foliage per growing season.
- **Maximum Amount per Season:** Do not apply more than 40 fl. oz./acre (or 0.0478 lb. a.i./acre) of **ZORO** or any other product containing abamectin applied to foliage in a growing season.
- **Grazing:** Do not allow livestock to graze in treated groves/orchards.

### Tuberous and Corm Vegetables Crop Subgroup (Crop Subgroup 1C)

Crops in this subgroup are Arracacha, Arrowroot, Artichoke, Chinese artichoke, Jerusalem canna, Edible, Cassava (bitter and sweet), Chayote (root), Chufa, Dasheen, Ginger, Leren, Potato, Sweet potato, Tanier, Turmeric, Yam bean, Yam (true)

For control of Colorado potato beetle, *Liriomyza* leafminers, Potato *psyllid*, and Spider mites (European, Pacific, and Twospotted)

Mix with water as indicated below. Thorough coverage of the crop canopy is essential for best results. Inadequate coverage may result in reduced control.

**Note:** **ZORO** may be applied using ground application equipment or aircraft. For best control of mites, apply **ZORO** with ground application equipment. With aerial application, spray coverage and the resulting control of mites is less than with ground application. For this reason, the user accepts all liability for the level and duration of control of mites when **ZORO** is aerially applied.

### Tuberous and Corm Vegetables Crop Subgroup (Crop Subgroup 1C)

Pest	fl. oz./acre	Instructions
Colorado potato beetle <i>Liriomyza</i> leafminers Potato psyllid Spider mites	8.0-16.0	<ul style="list-style-type: none"> <li>• Use 8-12 fl. oz./acre for low to moderate infestations and 16 fl. oz/acre for severe infestations.</li> <li>• The addition of a nonionic surfactant or organosilicone-based surfactant, at the manufacturer's recommended rate, is suggested for best spider mite and insect control.</li> <li>• Insect and spider mite control may be reduced if <b>ZORO</b> is used in combination with a sticker or binder type product such as Bravo® Weather Stik®.</li> <li>• <b>Colorado potato beetle:</b> Make the first application after approximately 50% of the egg masses have hatched and larvae are present. If 2 applications are needed, limit them to a single Colorado potato beetle generation per crop. Do not make more than 2 applications per crop <b>(See Use Restrictions)</b></li> <li>• <b><i>Liriomyza</i> leafminers:</b> Make the first application when adult flies are first observed. Repeat applications as needed to maintain control. <b>(See Use Restrictions)</b></li> <li>• <b>Spider mites:</b> Make the first application when mites first appear. Repeat application as needed to maintain control. <b>(See Use Restrictions)</b></li> </ul>

#### Use Restrictions – Tuberous and Corm Vegetables (Crop Subgroup 1C)

- **PHI:** Do not apply within 14 days of harvest.
- **Application Method:** Ground or aerial application permitted (exception: do not apply with aircraft in New York State).
- **Amount of Water:** Do not apply in less than 20 gals. of water/acre with ground application equipment. Do not apply in less than 5 gals. of water/acre 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 insure adequate coverage.
- **Maximum Amount per Application:** Do not apply more than 16 fl oz./acre (or 0.019 lb a.i./acre) per application.
- **Application Interval:** Wait at least 7 days before repeating application.
- **Number of Applications:** Do not make more than 2 sequential applications or **ZORO** or any other foliarly applied abamectin containing product.
- **Maximum Amount per Crop:** Do not apply more than 32 fl. oz./acre (or 0.038. lb a.i./acre) per crop for spider mite or Colorado potato beetle control. Do not apply more than 48 fl. oz./acre (or 0.056 lb.a.i./acre) per crop for leafminer control.
- **Grazing:** Do not allow livestock to graze or feed treated foliage to livestock.

## **STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

### **Pesticide Storage**

Store in a tightly closed container in a cool, dry place.

### **Pesticide Disposal**

Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

### **Container Disposal**

#### **Nonrefillable containers 5 gallons or less:**

Do not reuse or refill this container. 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  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

#### **Nonrefillable containers greater than 5 gallons:**

Do not reuse or refill this container. Offer for recycling if available. Triple rinse container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank and store rinsate for later use or disposal. Repeat this procedure two more times.

## **IMPORTANT: READ BEFORE USE**

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following warranty disclaimer, inherent risks of use and limitation of remedies.

### **WARRANTY DISCLAIMER**

Cheminova warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, CHEMINOVA MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

### **INHERENT RISKS OF USE**

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Cheminova or the seller. All such risks shall be assumed by the Buyer.

### **LIMITATION OF REMEDIES**

To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Cheminova's election, one of the following:

- 1) Refund of purchase price paid by buyer or user for product bought, or
- 2) Replacement of amount of product used.

Cheminova shall not be liable for losses or damages resulting from handling or use of this product unless Cheminova is promptly notified of such loss or damage in writing. In no case shall Cheminova be liable for consequential or incidental damages or losses. The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Cheminova or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

#### **Trademarks:**

ZORO is a registered trademark of Cheminova A/S

Bravo and Weather Stik are registered trademarks of a Syngenta Group Company

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## NOTES

# 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 applicators certification.

GROUP

6

INSECTICIDE

# ZORO®

## MITICIDE/INSECTICIDE

### ACTIVE INGREDIENT:

Abamectin ..... 1.9%\*

OTHER INGREDIENTS:..... 98.1%

TOTAL:..... 100.0%

\*1 gal. contains 0.15 lb. abamectin

## KEEP OUT OF REACH OF CHILDREN WARNING / AVISO

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

### IN CASE OF MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL FREE, DAY OR NIGHT 1-866-303-6950

See additional precautionary statements directions for use in booklet.  
Notice: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING/AVISO

Causes substantial but temporary eye injury. Do not get in eyes. Harmful if absorbed through skin or if, swallowed. Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

#### Personal Protective Equipment

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category B on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- Coveralls worn over short-sleeved shirt and short pants
- Chemical resistant gloves EPA chemical resistance category E (e.g., barrier laminate or butyl rubber  $\geq$  14 mils)
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure.
- Chemical-resistant apron when cleaning equipment, mixing, or loading. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do no reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**FIRST AID - IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. -Call a poison control center or doctor for treatment advice. **IF SWALLOWED:** -Call a poison control center or doctor immediately for treatment advice. -Do not give any liquid to the person. -Do not induce vomiting unless told to do so by a poison control center or doctor. -Do not give anything by mouth to an unconscious person. **IF ON SKIN OR CLOTHING:** -Take off contaminated clothing. -Rinse skin immediately with plenty of water for 15-20 minutes. -Call a poison control center or doctor for treatment advice. **IF INHALED:** -Move person to fresh air. -If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. -Call a poison control center or doctor for further treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-866-303-6950 for emergency medical treatment information.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-866-303-6950 for emergency medical treatment information.

### NOTE TO PHYSICIAN

Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular 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 parental 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.

### NET CONTENTS: 1 Gallon

EPA Reg. No. 67760-71

EPA Est. No. DNK-4787-001

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HELPING YOU GROW

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P.O. Box 110566  
Research Triangle Park, NC 27709

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