

**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.

**WILLOWOOD USA** 

**WILLOWOOD ABAMECTIN 0.15EC**

Miticide/Insecticide

<b>GROUP</b>	<b>6</b>	<b>INSECTICIDE</b>
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**ACTIVE INGREDIENT:**

Abamectin\* ..... 2.0%

**OTHER INGREDIENTS:** ..... 98.0%

**TOTAL:** ..... 100.0%

\*CAS No. 71751-41-2; 1 gallon contains 0.15 lb. Abamectin

EPA Reg. No. 87290-58

EPA Est. No. 005481-ID-001

**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.)

**WILLOWOOD USA** 

**Manufactured For:**

Willowood, LLC  
1600 NW Garden Valley Blvd. Suite #120  
Roseburg, OR 97471

**Net Contents:**

**1 Gallon**

## FIRST AID

<b>IF IN EYES:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<b>HOT LINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time or your poison control center at 1-800-222-1222.	
<b>NOTE TO PHYSICIAN</b>	
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 absorbents (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.	

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

Causes substantial but temporary eye injury. Harmful if swallowed. Do not get in eyes or on clothing. Wear goggles, face shield or safety glasses.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Socks and shoes
- Chemical-resistant gloves, such as barrier laminate or butyl rubber  $\geq$  14 mils
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables 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 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 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 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.

**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, such as barrier laminate or butyl rubber  $\geq$  14 mils
- Chemical-resistant footwear plus socks
- Protective eyewear

**INJURY TO CROPS, INSUFFICIENT CONTROL OF PESTS AND/OR ILLEGAL RESIDUES CAN RESULT IF THIS LABEL IS NOT FOLLOWED CAREFULLY.**

#### **PRODUCT INFORMATION**

Apply Willowood Abamectin 0.15EC in accordance with these label directions to control listed pest species on specified crops. Willowood Abamectin 0.15EC is an emulsifiable concentrate. Foliage must be covered thoroughly with application solution for effective pest control.

#### **Phytotoxicity**

Phytotoxicity to Willowood Abamectin 0.15EC has been tested on listed crops. Not all combinations of this product with various mix partners (such as other pesticides, crop oils, nutritional sprays, etc.), so any solutions should be pre-tested prior to making a broader application, to ensure physical compatibility and to assess the potential for damage to crops.

- **New York State Restriction:** Do not apply Willowood Abamectin 0.15EC with aircraft in New York State.

#### **Chemigation**

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

#### **Resistance Management**

Willowood Abamectin 0.15EC, which contains abamectin, should be applied in a resistance management program. Pests can develop resistance to pesticides, which render treatment ineffective. If strains of pests develop a tolerance to this product, the effectiveness of treatment with Willowood Abamectin 0.15EC can be reduced. It is important to implement a resistance management strategy with Willowood Abamectin 0.15EC in order to control labeled pests that will produce multiple generations in a plant or in a year. Resistance management measures to consider:

- Vary products with alternative modes of action
- Avoid use of the same product or mode of action to treat subsequent generations of labeled pests
- Correct use of products in accordance with product labels (correct use rates, application intervals etc.)

- Use of non-chemical pest management measures e.g. beneficial arthropods, plant rotation between vulnerable and less affected plants, beneficial cultural practices

Refer to your State Cooperative Extension Service for more on resistance management strategies and implementation.

## SPRAY DRIFT

### Responsibility

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator is responsible for considering all of 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 Willowood Abamectin 0.15EC only when wind velocity favors on-target product deposition (approximately 3 to 10 mph).
- Do not apply with ground application equipment within 25 ft. of or with aircraft within 150 ft. of lakes, reservoirs, rivers, permanent streams, marshes, pot holes, 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 non-target 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 when the 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.
- 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 ponds:

Do not apply Willowood Abamectin 0.15EC 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 outside row. Shut off nozzles when turning at ends of row 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  $\frac{3}{4}$  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 and Humidity, and Temperature Inversions**).

#### Controlling Droplet Size

##### Volume

Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

**Pressure**

Do not exceed the nozzle manufacturer's 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.

**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**

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 downwind 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 Willowood Abamectin 0.15EC 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**

Willowood Abamectin 0.15EC 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.

**CROP USE DIRECTIONS****APPLES**

Apply Willowood Abamectin 0.15EC to apple trees by ground application (either conventional dilute or concentrate sprayers) to control listed pests.

**Pests controlled:**

European red mite	McDaniel spider mite	Twospotted spider mite
Tentiform leafminer	White apple leafhopper*	

\*Not for use West of Rocky Mountains against White apple leafhopper

## Application Rate

For use against listed species:

- Dilute spray: 2.5 – 5.0 fl. oz / 100 gal – based on a volume of 400 gallons spray per acre
- Concentrate spray: 10 – 20 fl. oz. / A - or concentrate spray rate can also be determined by establishing the amount of product that would be used for a dilute spray. The same amount of product can be used in a concentrate spray to cover an equivalent apple orchard. A rate less than 10 fl oz/A could be determined for use on small trees.

## Application Instructions

Apply Willowood Abamectin 0.15EC to apple orchards via ground application in a dilute or concentrate spray, using listed application rate, with sprayers calculated to deliver a sufficient volume of water to thoroughly cover foliage. Application should begin when pest thresholds are reached. If needed for control of pests, a second application of Willowood Abamectin 0.15EC can be made. Complete coverage of foliage is necessary for adequate pest control. Note that the size of trees per acre, number of trees per acre and foliage density will affect the amount of spray volume that is used.

### Mites:

- Application before 5 red mites or spider mites per leaf is observed will give best results
- Apply Willowood Abamectin 0.15EC from petal fall to 6 weeks after petal fall

### Tentiform Leafminer:

- Observe locally established pest thresholds, for best results
- To control new hatch, apply to eggs. Also apply to early sap feeder stages of first and second generation tentiform leafminers
- Do not apply during bloom

### White Apple Leafhopper (Not for use west of Rocky Mountains)

- Apply to first generation white apple leafhopper only
- Apply after petal fall, mixed with a horticultural spray oil (not a dormant oil)

### Horticultural Spray Oil

Applying Willowood Abamectin 0.15EC with horticultural spray oil (not a dormant oil) gives optimum results. Without horticultural spray oil (not a dormant oil), user could experience decreased effectiveness and/or reduced residual activity.

- For dilute applications, apply 0.25% or 1 gal / A horticultural spray oil to spray mixture.
- For Concentrate applications, apply a minimum of 1 gal / A.

### **Precautions:**

- When mixing with a horticultural spray oil, carefully follow precautions and directions on the spray oil's label, as well as precautions and directions on Willowood Abamectin 0.15EC label, to avoid injury to crops [as an example, apply Willowood Abamectin 0.15EC plus horticultural oil more than 14 days before or after application of a product containing Captan® to avoid injury and possible loss of crops]
- Some apple varieties may be injured by applications of Willowood Abamectin 0.15EC plus horticultural spray oil, either alone or in sequence with other products. Light skinned varieties, such as Golden Delicious can be particularly susceptible to russetting.
- Note that residual spider mite control obtained when mixing Willowood Abamectin 0.15EC with a horticultural spray oil will be better on newer foliage vs. older

### **Restrictions:**

- Willowood Abamectin 0.15EC must be applied in a minimum of 40 gallons of water per acre.
- Do not allow grazing in treated orchards/groves.
- A second application may be made, if needed to maintain control, but observe a minimum treatment interval of 21 days between applications
- Do not make more than 2 applications of this product or any other foliarly applied abamectin-containing product per calendar year.
- Do not apply more than 20 fl. oz. per acre of Willowood Abamectin 0.15EC (0.023 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per application.
- Do not apply more than 40 fl. oz. per acre of Willowood Abamectin 0.15EC (or 0.047 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Apply via ground application only. Do not apply with aircraft.
- Preharvest interval is 28 days.



## AVOCADOS

Apply Willowood Abamectin 0.15EC to avocados by ground application or aerial application in order to control avocado thrips.

### Application Rate

10 – 20 fl. oz. per acre

- Low to Moderate Infestations: 10 – 15 fl. oz. / A
- Severe Infestations: 15 - 20 fl. oz. / A

Low infestation is defined as 1-2 immature thrips per leaf or fruit.

Moderate infestation is defined as 3-4 immature thrips per leaf or fruit.

Sever infestation is defined as 5 or more immature thrips per leaf or fruit.

Do not use less than 10 fl. oz. per acre of Willowood Abamectin 0.15EC.

For ground application – if spray volume is greater than 400 gallons/A, apply this product at a rate of 2.5 fl. oz. per 100 gallons of water plus 1.0% to 4.0% of a horticultural spray oil (not a dormant oil) approved for use on avocados.

### Application Instructions

Apply Willowood Abamectin 0.15EC to avocados via ground application or aerial application, using listed application rate, with sprayers calculated to deliver a sufficient volume of water to thoroughly cover foliage. For best results, apply when immature thrips are first observed but before numbers exceed 5 immature thrips per leaf/fruit. If needed for control of avocado thrips, a second application of Willowood Abamectin 0.15EC can be made. Complete coverage of foliage is necessary for adequate pest control. Note that the size of trees per acre, number of trees per acre and foliage density will affect the amount of spray volume that is used.

NOTE – Aerial application is less effective than ground application in controlling thrips. If Willowood Abamectin 0.15EC is applied by air, the user is solely responsible for any reduced control of thrips or any reduction in the duration of control of thrips.

### Precautions:

- When mixing with a horticultural spray oil, carefully follow precautions and directions on the spray oil's label, as well as precautions and directions on Willowood Abamectin 0.15EC label.
- When applying horticultural spray oil in a concentration exceeding 2%, apply the combination in a small test area prior to full application.

### Restrictions:

- Ground application: Willowood Abamectin 0.15EC must be applied in a minimum of 100 gallons of water per acre.
- Aerial application: Willowood Abamectin 0.15EC must be applied in a minimum of 50 gal of water per acre.
- Do not allow grazing in treated orchards.
- A second application may be made, if needed to maintain control, but observe a minimum treatment interval of 30 days between applications
- Do not make more than 2 applications of this product or any other foliarly applied abamectin-containing product per calendar year.
- Do not apply more than 20 fl. oz. per acre of Willowood Abamectin 0.15EC (0.023 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per application.
- Do not apply more than 40 fl. oz. per acre of Willowood Abamectin 0.15EC (or 0.047 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Preharvest interval is 14 days.

## CELERIAC (*APIUM GRAVEOLLENS*)

Apply Willowood Abamectin 0.15EC to celeriac by ground application (either conventional dilute or concentrate sprayers) to control two spotted spider mite.

### Application Rate

16 fl. oz. Willowood Abamectin 0.15EC per acre

### Application Instructions

Apply Willowood Abamectin 0.15EC to celeriac via ground application in a dilute or concentrate spray, using listed application rate, with sprayers calculated to deliver an adequate volume of water to thoroughly cover crop canopy. Reduced control may result if coverage is insufficient. If needed for control of pests, a second application of Willowood Abamectin 0.15EC can be made.

#### Two-spotted spider mites:

- Apply Willowood Abamectin 0.15EC when mites are first seen.
- For optimal effectiveness, combine Willowood Abamectin 0.15EC with a non-ionic surfactant.

## Restrictions:

- Willowood Abamectin 0.15EC must be applied in a minimum of 20 gallons of water per acre.
- A repeat application may be made, if needed to maintain control, but observe a minimum treatment interval of 7 days between applications.
- Do not make more than 2 sequential applications of this product or any other foliarly applied abamectin-containing product.
- Following transplant, do not exceed a maximum of 48 fl. oz. per acre of Willowood Abamectin 0.15EC (or 0.056 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Apply Willowood Abamectin 0.15EC to celeriac with ground application only.
- Preharvest interval is 7 days.

## CITRUS FRUIT CROP GROUP (CROP GROUP 10)

**(Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo, tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Sour orange, Sweet orange, Pummelo, and Satsuma mandarin)**

Apply Willowood Abamectin 0.15EC to citrus by ground application (either conventional dilute or concentrate sprayers) or aerial application\* to control listed pests.

\*Aerial application can only be used for control of citrus leafminer.

### Do not apply Willowood Abamectin 0.15EC to citrus by air in California.

Pests controlled:

Broad mite	Citrus bud mite	Citrus rust mite
Twospotted spider mite	Citrus thrips	Asian citrus psyllid
Citrus leafminer*		

### Application Rate

For use against listed species:

- Dilute spray (based on a spray volume of 1000 gallons per acre)
  - 1.0 – 2.0 fl. oz. / 100 gal - broad mite, citrus bud mite, twospotted spider mite
  - 0.5 to 2.0 fl. oz. / 100 gal – citrus rust mite
- Concentrate spray:
  - 10 – 20 fl. oz. / A - Asian citrus psyllid, broad mite, citrus bud mite, citrus thrips or two spotted spider mite
  - 5 – 20 fl oz. / A – citrus leafminer or citrus rust miteor concentrate spray rate can also be determined by establishing the amount of product that would be used for a dilute spray.

### Application Instructions

Apply Willowood Abamectin 0.15EC to citrus groves via ground application (or aerial application to control citrus leafminer) in a dilute or concentrate spray, using listed application rate, with sprayers calculated to deliver a sufficient volume of water to completely cover foliage, or, for Asian citrus psyllid, citrus leafminer or citrus thrips, to give thorough outside coverage. If needed for control of pests, subsequent applications of Willowood Abamectin 0.15EC can be made. Coverage of foliage is necessary for adequate pest control. Note that the size of trees per acre, number of trees per acre and foliage density will affect the amount of spray volume that is used.

#### Broad Mite, Citrus bud mite, Citrus Rust Mite, Twospotted Spider Mite:

- Apply in the fall, spring or summer when mites first appear.
- For optimal control of citrus bud mites, apply at bud swell.
- For optimal concentrate spray application to broad mite and citrus rust mite, apply 3 gallons per acre of horticultural oil (not a dormant oil) in 150 – 300 gallons per acre spray mixture at a ground speed of 1 – 1.5 mph.
- For optimal concentrate spray application to citrus bud mite, apply 0.5% minimum horticultural oil (not a dormant oil) in at least 500 gallons per acre spray mixture.

#### Citrus Thrips:

- Apply this product for control of citrus thrips once economic thresholds have been attained (i.e., after egg hatch has begun – preferably early to mid-hatch).
- Treatment must be timed correctly, as application will only control the current generation of citrus thrips.
- For best results, apply 100 – 250 gallons per acre of spray mixture to achieve outside coverage.

#### Citrus Leafminer:

- Apply this product to safeguard new growth in the fall, spring or summer.
- When treating by air apply a minimum of 10 gallons of spray mixture.
- For optimal concentrate spray application to citrus leafminer, apply 3 gallons per acre of horticultural oil (not a dormant oil) in 150 – 300 gallons per acre spray mixture at a ground speed of 1 – 1.5 mph.
- When there are extreme conditions (e.g., high temperatures, high pest populations or dense foliage), apply this product in a greater volume of water to make certain that plants receive sufficient coverage of spray solution.



### Asian citrus psyllid

- Application with this product will only control nymphs and adults that are on the plant at the time of treatment.
- Apply this product to safeguard newly growing foliage flush in the fall, spring or summer.
- For optimal concentrate spray application to Asian citrus psyllid, apply 3 gallons per acre of horticultural oil (not a dormant oil) in 150 – 300 gallons per acre spray mixture at a ground speed of 1 – 1.5 mph.

### Horticultural Spray Oil

Applying Willowood Abamectin 0.15EC with horticultural spray oil (not a dormant oil) can give enhanced efficacy and residual control. See section above for rates of horticultural spray oil, or:

- For dilute applications, apply 0.20% or 1 gal / A horticultural spray oil to spray mixture.
- For concentrate applications, apply a minimum of 1 gal / A.

### **Restrictions:**

- Do not allow livestock to graze in treated orchards.
- Do not apply Willowood Abamectin 0.15EC in citrus nurseries.
- A subsequent application may be made if needed to maintain control, but observe a minimum treatment interval of 30 days between applications.
- Do not make more than three applications of Willowood Abamectin 0.15EC or any other foliarly applied abamectin product per calendar year.
- Do not exceed a maximum of 40 fl. oz. per acre of Willowood Abamectin 0.15EC (or 0.047 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Do not apply Willowood Abamectin 0.15EC via aerial application to citrus groves (except citrus leafminer).
- Citrus leafminer may be treated via ground or air application.
- Do not apply this product to citrus by air in California.
- Preharvest interval is 7 days.

## **COTTON**

Apply Willowood Abamectin 0.15EC to cotton via aerial application or via ground application to control listed pests.

### **Pests controlled:**

Carmine Spider mite	Pacific Spider Mite
Strawberry Spider Mite	Twospotted Spider Mite

### **Application Rate**

For use against listed species:

- Early Season cotton: 4 – 6 fl. oz. per acre
- All other cotton: 8-16 fl. oz. per acre

### **Application Instructions**

Apply Willowood Abamectin 0.15EC to cotton via aerial or ground application using listed application rate, when mites are first seen. For best control, complete coverage is essential. Apply this product with ground application equipment for best coverage. Reduced control may result if coverage is insufficient.

Use the lower use rate for early season cotton that is less than 10 inches tall. When applying the lower use rate to early season cotton **West of the Rocky Mountains**, only apply with ground application to cotton that is less than 10 inches tall. Do not apply Willowood Abamectin 0.15EC at a use rate of less than 4 fl. oz. per acre. Application should begin when mites are first seen. If needed for control, a subsequent application of Willowood Abamectin 0.15EC can be made.

### Surfactants and Wetting Agents

A wetting agent is not required. Where it is necessary to smooth out spray deposits and/or to improve foliage wetting, use a nonionic surfactant. Combining this product with surfactants that facilitate penetration and spreading may enhance control of mites. Do not combine this product with sticker-type / binder surfactants.

### **Restrictions:**

- Willowood Abamectin 0.15EC must be applied in a minimum of 5 gallons of water per acre. Ensure there is sufficient application spray volume for thorough coverage.
- Do not feed or allow livestock to graze treated cotton.
- Observe a minimum treatment interval of 21 days between applications of this product.
- Do not exceed a maximum of 16 fl. oz. per acre of Willowood Abamectin 0.15EC (0.019 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per application.
- Do not exceed a maximum of 32 fl. oz. per acre of Willowood Abamectin 0.15EC (0.038 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Preharvest interval is 20 days.

## CUCURBIT VEGETABLES CROP GROUP (CROP GROUP 9)

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 (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*)

Apply Willowood Abamectin 0.15EC to cucurbit vegetables using ground application equipment or via aerial application to control listed pests.

### Pests controlled:

Leafminers Spider Mites

### Application Rate

For use against listed species:

- Low to Moderate infestations: 8 – 12 fl. oz. per acre
- Severe Infestations: 16 fl. oz. per acre

### Application Instructions

Apply Willowood Abamectin 0.15EC to cucurbits, using listed application rate. Treat with Willowood Abamectin 0.15EC when leafminer flies or spider mites first appear. Application may be repeated to maintain control as required. For optimal control, complete coverage of the crop canopy is necessary. Reduced control may result if coverage is insufficient.

NOTE – Aerial application results in reduced spray coverage pest control when compared to ground application. The user accepts sole responsibility for the length and effectiveness of treatment when this product is applied by air.

### Restrictions:

- Ground application: Willowood Abamectin 0.15EC must be applied in a minimum of 20 gallons of water per acre.
- Aerial application: Willowood Abamectin 0.15EC must be applied in a minimum of 5 gallons of water per acre.
- Where there are extreme conditions, e.g. high temperatures, high pest populations or where foliage is dense, apply this product in enough water to make certain that plants receive sufficient coverage.
- Where subsequent application is necessary, observe a minimum treatment interval of 7 days between applications.
- Do not make more than 2 sequential applications of this product or any other foliarly applied abamectin-containing product.
- Do not exceed a maximum of 16 fl. oz. per acre of Willowood Abamectin 0.15EC (0.019 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Do not exceed a maximum of 48 fl. oz. per acre of Willowood Abamectin 0.15EC ( 0.056 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Preharvest interval is 7 days.

## DRY BEANS

Including: *Cicer arietinum* (chickpea, garbanzo bean); *Lupinus* spp. (including sweet lupine, white sweet lupine, white lupine, and grain lupine), *Phaseolus* spp. (including kidney bean, lima bean, mung bean, navy bean, pinto bean, snap bean, and waxbean); *Vicia faba* (broad bead, fava bean); *Vigna* spp. (including adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea (grown for dry seed only), crowder pea, moth bean, mung bean rice bean, southern pea, urd bean, and yardlong bean)

Apply Willowood Abamectin 0.15EC to dry beans via aerial application or via ground application equipment to control listed pests.

### Pests controlled:

*Liriomyza* Leafminers Spider Mites

### Application Rate

For use against listed species:

- Low to Moderate infestations: 8 – 12 fl. oz. per acre
- Severe Infestations: 13 - 16 fl. oz. per acre

### Application Instructions

Apply Willowood Abamectin 0.15EC to dry beans, using listed application rate. Treat with Willowood Abamectin 0.15EC when leafminers or spider mites first appear. Application may be repeated to maintain control as required. It is necessary to achieve complete coverage of the crop canopy for best control of insects / mites. Reduced control may result if coverage is insufficient.

NOTE – Apply this product with ground application equipment for best coverage. Aerial application may result in reduced control of listed pests when compared with ground application.

**Restrictions:**

- For use on cowpeas that are grown for dry seed only.
- Treated cowpea forage must not be used for grazing and cowpea hay and forage must not be harvested for use as a livestock feed.
- Ground application: Willowood Abamectin 0.15EC must be applied in a minimum of 10 gallons of water per acre. Ensure there is sufficient application spray volume for thorough coverage.
- Aerial application: Willowood Abamectin 0.15EC must be applied in a minimum of 5 gallons of water per acre. Ensure there is sufficient application spray volume for thorough coverage.
- Where there are extreme conditions, e.g. high temperatures, high pest populations or where foliage is dense, apply this product in a greater volume of water to ensure adequate coverage.
- Observe a minimum treatment interval of 6 days between applications of this product
- Do not make more than 2 sequential applications of this product or any other foliarly applied abamectin-containing product.
- Do not exceed a maximum of 16 fl. oz. per acre of Willowood Abamectin 0.15EC (0.019 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Do not exceed a maximum of 48 fl. oz. per acre of Willowood Abamectin 0.15EC ( 0.056 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Preharvest interval is 7 days.

**FRUITING VEGETABLES (EXCEPT CUCURBITS) CROP GROUP (CROP GROUP 8)**

**(Eggplant, Groundcherry, Pepino, Peppers (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, and Tomato)**

Apply Willowood Abamectin 0.15EC to fruiting vegetables via aerial application or via ground application equipment to control listed pests.

**Pests controlled:**

Broad mite	Spider mite	Tomato russet mite
<i>Liriomyza</i> leafminer	<i>Thrips palmi</i>	Tomato psyllid
Colorado potato beetle	Tomato pinworm	

**Application Rate**

8 – 16 fl. oz. per acre

- Low to Moderate infestations: 8 fl. oz. per acre
- Severe Infestations, and against Tomato pinworm: 16 fl. oz. per acre

**Application Instructions**

Apply Willowood Abamectin 0.15EC to fruiting vegetables, using listed application rate.

Application may be repeated to maintain control as required. It is necessary to achieve complete coverage of the crop canopy for best control of pests. Reduced control may result if coverage is insufficient.

NOTE – Apply this product with ground application equipment for best coverage. Aerial application may result in reduced control of listed pests when compared with ground application. The user accepts sole responsibility for the length and effectiveness of treatment when this product is applied by air.

Thrips and Mites

- Apply Willowood Abamectin 0.15EC when mites or thrips are first seen.

Tomato pinworm

- Apply this product during the period from when moth activity is first observed to when newly emerged larvae are present (but no later than this time).

Surfactants and Wetting Agents

A wetting agent is not required. Where it is necessary to smooth out spray deposits and/or to improve foliage wetting, use a nonionic surfactant. Combining this product with surfactants that facilitate penetration and spreading may enhance control of mites. Do not combine this product with sticker-type / binder surfactants.

**Restrictions:**

- Willowood Abamectin 0.15EC must not be applied to fruiting vegetables that are grown for transplanting.
- Ground application: Willowood Abamectin 0.15EC must be applied in a minimum of 20 gallons of water per acre. Ensure there is sufficient application spray volume for thorough coverage.
- Aerial application: Willowood Abamectin 0.15EC must be applied in a minimum of 5 gallons of water per acre. Ensure there is sufficient application spray volume for thorough coverage.
- Where there are extreme conditions, e.g. high temperatures, high pest populations or where foliage is dense, apply this product in a greater volume of water to ensure adequate coverage.
- Observe a minimum treatment interval of 7 days between applications of this product

- Do not make more than 2 sequential applications of this product or any other foliarly applied abamectin-containing product. Do not exceed a maximum of 16 fl. oz. per acre of Willowood Abamectin 0.15EC (0.019 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Do not exceed a maximum of 48 fl. oz. per acre of Willowood Abamectin 0.15EC (0.056 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Preharvest interval is 7 days.

## GRAPES

Apply Willowood Abamectin 0.15EC to grapes with conventional ground spray equipment to control listed pests.

### Pests controlled:

Pacific spider mite	Twospotted spider mite	Willamette spider mite
Variiegated leafhopper	Western grape leafhopper	
Western grapeleaf skeletonizer		

### Application Rate

8 – 16 fl. oz. per acre

- **Low to Moderate infestations:** 8 - 12 fl. oz. per acre
- **Severe Infestations:** 16 fl. oz. per acre

### Application Instructions

Apply Willowood Abamectin 0.15EC to grapes, using listed application rate.

Application may be repeated to maintain control as required.

Complete coverage must be achieved in order to gain control of listed pests. For optimum coverage, apply this product each side of the row, making sure to treat every row (i.e., do not spray every other row). Ensure spray equipment is calibrated so that an adequate amount of water is dispensed for complete coverage.

#### Pacific, Twospotted and Willamette spider mite:

- Apply Willowood Abamectin 0.15EC when mites are first observed but prior to exceeding 5 mites per leaf.

#### Variiegated and Western grape leafhopper:

- Apply this product with nonionic surfactant.
- Ensure spray coverage is complete for contact knock-down only.

#### Western grapeleaf skeletonizer:

- Apply this product combined with a nonionic surfactant when larvae first appear.
- For best effectiveness, treat soon after egg hatch.

### Surfactants and Wetting Agents

Apply Willowood Abamectin 0.15EC with a nonionic surfactant to smooth out spray deposits and/or to improve foliage wetting. Combining this product with surfactants that facilitate penetration and spreading may enhance insect control. Do not combine this product with sticker-type / binder surfactants.

This product has been tested for use in grapes in combination with a non-ionic surfactant. However, it is impossible to test all varieties of grape and in all conditions that may cause crop injury. Read and follow all directions and restrictions in this label and in the non-ionic surfactant label.

### Restrictions:

- Ground application: Willowood Abamectin 0.15EC must be applied in a minimum of 50 gallons of water per acre, unless application is with an electro-static sprayer, where a minimum of 5 gallons of water per acre must be used. Ensure there is sufficient application spray volume for thorough coverage.
- Treated vineyards must not be used for grazing.
- Observe a minimum treatment interval of 21 days between applications of this product
- Do not make more than 2 applications of this product or any other foliarly applied abamectin-containing product per calendar year. Do not exceed a maximum of 16 fl. oz. per acre of Willowood Abamectin 0.15EC (0.019 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Do not exceed a maximum of 32 fl. oz. per acre of Willowood Abamectin 0.15EC (0.038 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Do not apply this product via aerial application to grapes. Apply via ground application only.
- Preharvest interval is 28 days.

## HERB CROP SUBGROUP (CROP SUBGROUP 19A)

(Angelica, Balm, Basil, Borage, Burnet, Camomile, Catnip, Chervil (dried), Chives, Chives (Chinese), Clary, Coriander (leaf), Cilantro (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)

Apply Willowood Abamectin 0.15EC to herbs with ground application equipment to control listed pests.

Pests controlled:

*Liriomyza* leafminer                      Spider mite

### Application Rate

- Low to Moderate infestations: 8 fl. oz. per acre
- Severe Infestations: 16 fl. oz. per acre

### Application Instructions

Apply Willowood Abamectin 0.15EC when leafminers and mites first appear. Treat as a foliar spray and thoroughly cover both upper and lower leaves with Willowood Abamectin 0.15EC spray solution.

Application may be repeated to maintain control as required. For optimal control, thorough coverage of the crop canopy is essential. Reduced coverage may result if coverage is insufficient.

### Surfactants and Wetting Agents

A wetting agent is not required. Where it is necessary to smooth out spray deposits and/or to improve foliage wetting, use a nonionic surfactant. Combining this product with surfactants that facilitate penetration and spreading may enhance control of mites. Do not combine this product with sticker-type / binder surfactants.

This product has been tested for use in herbs in combination with a non-ionic surfactant. However, it is impossible to test all varieties of herbs and in all conditions that may cause crop injury. Read and follow all directions and restrictions in this label and in the non-ionic surfactant label.

### Restrictions:

- Do not use a surfactant on chives.
- Ground application: Willowood Abamectin 0.15EC must be applied in at least 20 gallons of water per acre.
- Observe a minimum treatment interval of 7 days between applications of this product.
- Do not make more than 2 applications of this product or any other foliarly applied abamectin-containing product per single cutting (harvest).
- Do not exceed a maximum of 16 fl. oz. per acre of Willowood Abamectin 0.15EC (0.019 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Do not exceed a maximum of 48 fl. oz. per acre of Willowood Abamectin 0.15EC (0.056 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Do not apply this product via aerial application. Apply via ground application only.
- Preharvest interval is 14 days, except for chives. Preharvest interval for chives is 7 days.

## HOPS

(Not for use in California)

Apply Willowood Abamectin 0.15EC to hops with ground application equipment to control Twospotted spider mite.

### Application Rate

8 – 16 fl. oz. per acre

Apply to hops when they are 6-8 feet tall (1/2 trellis growth) at a rate of 8 – 16 fl. oz. in at least 40 gallons of water per acre. When hops are taller than 6 – 8 feet (have exceeded 1/2 trellis growth), use 16 fl. oz. in at least 100 gallons of water per acre.

### Application Instructions

Apply Willowood Abamectin 0.15EC using listed application rate. Treat as a foliar spray and thoroughly cover both upper and lower leaves with Willowood Abamectin 0.15EC spray solution. Spray volume will depend on the number and size of plants in the treatment area and foliage density. For optimal control, complete coverage is essential. When applying this product as a concentrate spray, the volume in water in the application solution is reduced, but use the same amount of Willowood Abamectin 0.15EC per acre as a dilute spray application.

### Surfactants and Wetting Agents

A wetting agent is not required. This product may be combined with a non-ionic surfactant to smooth out spray deposits and to improve foliage wetting.



**Restrictions:**

- Treated hops yards must not be used for grazing.
- Observe a minimum treatment interval of 21 days between applications of this product.
- Only make a repeat application of Willowood Abamectin 0.15EC after applying another miticide with an alternative mode of action.
- Do not make more than 2 applications of this product or any other foliarly applied abamectin-containing product per calendar year.
- Do not exceed a maximum of 16 fl. oz. per acre of Willowood Abamectin 0.15EC (0.019 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Do not apply this product via aerial application. Apply via ground application only.
- Preharvest interval is 28 days.

**LEAFY VEGETABLES (EXCEPT BRASSICA) CROP GROUP (CROP GROUP 4)**

**(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); Florence fennel; Lettuce, head and leaf; New Zealand Spinach; Orach; Parsley; Purslane, garden and winter; Radicchio (red chicory); Rhubarb; Spinach; Vine spinach; and Swiss chard)**

Apply Willowood Abamectin 0.15EC to leafy vegetables via aerial application or via ground application equipment to control listed pests.

**Pests controlled:**

Carmine spider mite

Twospotted spider mite

*Liriomyza* leafminer**Application Rate**

- Low to Moderate infestations: 8 - 12 fl. oz per acre
- Severe Infestations: 16 fl. oz. per acre

**Application Instructions**

Apply Willowood Abamectin 0.15EC using listed application rate, when mites or leafminer adult flies are first seen. Application may be repeated to maintain control as required.

For best effectiveness, ensure the crop canopy is completely covered with the treatment solution. Reduced control may result if coverage is insufficient.

NOTE: Apply this product with ground application equipment for optimal pest control. Aerial application may result in reduced control of mites when compared with ground application. The user accepts sole responsibility for the length and effectiveness of treatment when this product is applied by air.

**Surfactants and Wetting Agents**

A wetting agent is not required. This product may be combined with a non-ionic surfactant to smooth out spray deposits and to improve foliage wetting. Do not combine this product with sticker-type/binder surfactants.

**Restrictions:**

- Willowood Abamectin 0.15EC must not be applied to leafy vegetables that are grown for transplanting.
- Ground application: Willowood Abamectin 0.15EC must be applied in a minimum of 20 gallons of water per acre. Ensure there is sufficient application spray volume for thorough coverage.
- Aerial application: This product must be applied in a minimum of 5 gallons of water per acre. Ensure there is sufficient application spray volume for thorough coverage.
- When there are extreme conditions, e.g. high temperatures, high pest populations or where foliage is dense, apply this product in a greater volume of water to ensure adequate coverage.
- Observe a minimum treatment interval of 7 days between applications of this product.
- Do not make more than 2 applications of this product or any other foliarly applied abamectin-containing product.
- Do not exceed a maximum of 16 fl. oz. per acre of Willowood Abamectin 0.15EC (0.019 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Do not exceed a maximum of 48 fl. oz. per acre of Willowood Abamectin 0.15EC (0.056 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year. This maximum applies to any other product containing abamectin that is applied foliarly.
- Preharvest interval is 7 days.

**MINT**  
**(peppermint and spearmint)**

Apply Willowood Abamectin 0.15EC to mint as a ground or air application to control Twospotted spider mite.

**Application Rate**

8 – 12 fl. oz. per acre

**Application Instructions**

Apply Willowood Abamectin 0.15EC when mites are first observed. For optimal control, complete coverage of the crop canopy is necessary. Reduced control may result if coverage is insufficient.

Application may be repeated to maintain control as required.

Surfactants and Wetting Agents

For best control of listed pests, combine Willowood Abamectin 0.15EC with an organosilicone-based or non-ionic surfactant at the rate directed by the manufacturer.

**Restrictions:**

- Ground application: Willowood Abamectin 0.15EC must be applied in a minimum of 20 gallons of water per acre.
- Air application: Willowood Abamectin 0.15EC must be applied in a minimum of 5 gallons of water per acre. Ensure there is sufficient application spray volume for thorough coverage.
- When there are extreme conditions, e.g. high temperatures, high pest populations or where foliage is dense, apply this product in a greater volume of water to ensure adequate coverage.
- Treated foliage must not be used for grazing or feed.
- Observe a minimum treatment interval of 7 days between applications of this product.
- Do not make more than 2 sequential applications of this product or any other foliarly applied abamectin-containing product and do not make more than 3 applications of this product or any other foliarly applied abamectin-containing product per calendar year.
- Do not exceed a maximum of 12 fl. oz. per acre of Willowood Abamectin 0.15EC (0.014 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Do not exceed a maximum of 36 fl. oz. per acre of Willowood Abamectin 0.15EC (0.042 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Preharvest interval is 28 days.

**ONIONS, BULB (CROP SUBGROUP 3-07A)**

**(Onion, bulb including daylily, bulb; fritillaria, bulb; garlic, bulb; garlic, great-headed, bulb; garlic, serpent, bulb; lily, bulb; onion, Chinese, bulb; onion, pearl; onion, potato, bulb; shallot, bulb; cultivars, varieties, and/or hybrids of these)**

Apply Willowood Abamectin 0.15EC to bulb onions via aerial application or via ground application equipment to control *Liriomyza* leafminers and thrips.

**Application Rate**

- Low to Moderate infestations: 8 - 12 fl. oz. per acre
- Severe Infestations: 13 - 16 fl. oz. per acre

**Application Instructions**

Apply Willowood Abamectin 0.15EC using listed application rate, when mites or leafminer adult flies first appear or thrips reach the economic threshold (as part of a thrips management program).

Application may be repeated to maintain control as required. For optimal control, complete coverage of the crop canopy is necessary. Reduced control may result if coverage is insufficient.

NOTE: Apply this product with ground application equipment for optimal pest control. Aerial application may result in reduced control of listed pests when compared with ground application.

Surfactants and Wetting Agents

Combine this product with a non-ionic activator type wetting, penetrating and/or spreading adjuvant that is labeled for use in bulb onions. Combining this product with binder/sticker type adjuvants or products that contain them may decrease the effectiveness of treatment with Willowood Abamectin 0.15EC, so do not mix this product with binder/sticker type adjuvants or products containing binder sticker type adjuvants.

**Restrictions:**

- Do not apply Willowood Abamectin 0.15EC as a rescue treatment for control of thrips.
- Ground application: Willowood Abamectin 0.15EC must be applied in a minimum of 20 gallons of water per acre.
- Aerial application: This product must be applied in a minimum of 5 gallons of water per acre. Ensure there is sufficient application spray volume for thorough coverage.
- Where there are extreme conditions, e.g. high temperatures, high pest populations or where foliage is dense, apply this product in a greater volume of water to ensure adequate coverage.

- Observe a minimum treatment interval of 7 days between applications of this product.
- 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. Do not make more than 2 sequential applications of this product or any other foliarly applied abamectin-containing product.
- Do not exceed a maximum of 16 fl. oz. per acre of Willowood Abamectin 0.15EC (0.019 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Do not exceed a maximum of 48 fl. oz. per acre of Willowood Abamectin 0.15EC (0.056 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Preharvest interval is 30 days.

### PEARS (INCLUDING ORIENTAL PEAR TREES)

Apply Willowood Abamectin 0.15EC to pear trees by ground application (either conventional dilute or concentrate sprayers) to control listed pests.

#### Pests controlled:

European red mite	McDaniel spider mite	Twospotted spider mite
Pear rust mite	Yellow mite	Pear psylla

#### Application Rate

For use against listed species:

- **Dilute spray:** 2.5 – 5.0 fl. oz. / 100 gal – based on a volume of 400 gallons spray per acre
- **Concentrate spray:** 10 – 20 fl. oz. / A - or concentrate spray rate can also be determined by establishing the amount of product that would be used for a dilute spray. The same amount of product can be used in a concentrate spray to cover an equivalent pear orchard. A rate less than 10 fl oz/A could be determined for use on small trees.

#### Application Instructions

Apply Willowood Abamectin 0.15EC to pear orchards via ground application in a dilute or concentrate spray, using listed application rate, with sprayers calculated to deliver an adequate volume of water to completely cover foliage. Commence application when mite or insect thresholds are attained. If needed for control of pests, a second application of Willowood Abamectin 0.15EC can be made. Complete coverage of foliage is necessary for adequate pest control. Note that the size of trees per acre, number of trees per acre and foliage density will affect the amount of spray volume that is used.

#### Horticultural Spray Oil

Applying Willowood Abamectin 0.15EC with horticultural spray oil (not a dormant oil) gives optimum results. Without horticultural spray oil (not a dormant oil), user could experience decreased effectiveness and/or reduced residual activity.

- For dilute applications, apply 0.25% or 1 gal / A horticultural spray oil to spray mixture.
- For concentrate applications, apply a minimum of 1 gal / A.

#### Precaution:

- When mixing with a horticultural spray oil, closely follow precautions and directions on the spray oil's label, as well as precautions and directions on Willowood Abamectin 0.15EC label, to avoid injury to crops [as an example, apply Willowood Abamectin 0.15EC plus horticultural oil more than 14 days before or after application of a product containing Captan to avoid injury and possible loss of crops].

#### Restrictions:

- Willowood Abamectin 0.15EC must be applied in a minimum of 40 gallons of water per acre.
- Do not allow livestock to graze in treated orchards.
- A second application may be made, if needed to maintain control, but observe a minimum treatment interval of 21 days between applications.
- Do not make more than 2 applications of this product or any other foliarly applied abamectin-containing product per calendar year.
- Do not exceed a maximum of 20 fl. oz. per acre of Willowood Abamectin 0.15EC (0.023 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Do not exceed a maximum of 40 fl. oz. per acre of Willowood Abamectin 0.15EC (0.047 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Do not apply Willowood Abamectin 0.15EC via aerial application. Apply via ground application only.
- Preharvest interval is 28 days.

## STONE FRUIT CROP GROUP (CROP GROUP 12)

**Apricot; cherry (sweet and tart); nectarine; peach; plum; plum (chickasaw, damson, and Japanese); plumcot, and prune (fresh)**

Apply Willowood Abamectin 0.15EC to stone fruits by ground application (either conventional dilute or concentrate sprayers) to control listed pests.

### **Pests controlled:**

European red mite                      Pacific spider mite                      Twospotted spider mite

### **Application Rate**

For use against listed species:

- **Dilute spray:** 2.5 – 5.0 fl. oz. / 100 gal – based on a volume of 400 gallons spray per acre
- **Concentrate spray:** 10 – 20 fl. oz. / A - or concentrate spray rate can also be determined by establishing the amount of product that would be used for a dilute spray . The same amount of product can be used in a concentrate spray to cover an equivalent stone fruit orchard. A rate less than 10 fl oz/A could be determined for use on small trees.

### **Application Instructions**

Apply Willowood Abamectin 0.15EC to stone fruit orchards via ground application in a dilute or concentrate spray, using listed application rate, with sprayers calculated to deliver an adequate volume of water to completely cover foliage. Application should begin when mites are first observed. If needed for control of pests, a second application of Willowood Abamectin 0.15EC can be made. For optimal control, thorough coverage is essential for adequate pest control. Note that the size of trees per acre, number of trees per acre and foliage density will affect the amount of spray volume that is used.

Always apply this product with a non-ionic surfactant to spread the application and facilitate penetration of the leaf cuticle, or apply this product in combination with a horticultural oil (not a dormant oil).

### Horticultural Spray Oil

Applying Willowood Abamectin 0.15EC with horticultural spray oil (not a dormant oil) may enhance performance, however, it may also raise the possibility of a phytotoxic reaction in fruit and/or foliage.

- For dilute applications, apply 0.25% or 1 gal / A horticultural spray oil to spray mixture.
- For Concentrate applications, apply a minimum of 1 gal / A.

### Surfactants

Combining this product with surfactant that facilitates penetration of the leaf cuticle and spreading may enhance control of listed pests.

This product has been tested for use in stone fruits in combination with a non-ionic surfactant. Be advised, though, that testing all crop varieties under all conditions that could cause crop injury is not possible. Read and follow all directions and restrictions in this label and in the non-ionic surfactant label.

### **Restrictions:**

- Willowood Abamectin 0.15EC must be applied in a minimum of 40 gallons of water per acre.
- Do not allow livestock to graze in treated orchards.
- A second application may be made, if needed to maintain control, but observe a minimum treatment interval of 21 days between applications.
- Do not make more than 2 applications of this product or any other foliarly applied abamectin-containing product per calendar year.
- Do not exceed a maximum of 20 fl. oz. per acre of Willowood Abamectin 0.15EC (0.023 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Do not exceed a maximum of 40 fl. oz. per acre of Willowood Abamectin 0.15EC (0.047 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Do not apply Willowood Abamectin 0.15EC via aerial application. Apply via ground application only.
- Preharvest interval is 21 days.

## STRAWBERRIES

Apply Willowood Abamectin 0.15EC to strawberries as a ground application to control Strawberry or Twospotted spider mite.

### Application Rate

16 fl. oz. per acre

### Application Instructions

Apply Willowood Abamectin 0.15EC as a foliar spray. For an effective application, calibrate spray nozzle and volume to thoroughly cover both upper and lower leaves with Willowood Abamectin 0.15EC spray solution.

Make two applications as follows

1. First treatment when listed pests are first observed.
2. Second treatment 7-10 days later.

This application sequence may be repeated to maintain control as necessary.

### Surfactants and Wetting Agents

A wetting agent is not required. Where it is necessary to smooth out spray deposits and/or to improve foliage wetting, use a non-ionic surfactant.

### Restrictions:

- Do not apply Willowood Abamectin 0.15EC in strawberry nurseries.
- Ground application: Willowood Abamectin 0.15EC must be applied in a minimum of 50 gallons of water per acre, unless application is with an electro-static sprayer, where a minimum of 10 gallons of water per acre must be used.
- Observe a minimum interval of 21 days after second application before repeating application.
- Do not exceed a maximum of 16 fl. oz. per acre of Willowood Abamectin 0.15EC (0.019 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Do not exceed a maximum of 64 fl. oz. per acre of Willowood Abamectin 0.15EC (or 0.075 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Do not apply Willowood Abamectin 0.15EC via aerial application. Apply via ground application only.
- Preharvest interval is 3 days.

## TREE NUTS CROP GROUP (CROP GROUP 14) AND PISTACHIO

**Almond, beech nut, Brazil nut, butternut, cashew, chestnut, chinquapin, filbert (hazelnut), hickory nut, macadamia nut, pecan, and walnuts (black and English)**

Apply Willowood Abamectin 0.15EC by ground application (either conventional dilute or concentrate sprayers) to control listed pests.

### Pests controlled:

European red mite

Pacific spider mite

Strawberry spider mite

Twospotted spider mite

### Application Rate

For use against listed species:

- Dilute spray: 2.5 – 5.0 fl. oz. / 100 gal – based on a volume of 400 gallons spray per acre
- Concentrate spray: 10 – 20 fl. oz. / A - or concentrate spray rate can also be determined by establishing the amount of product that would be used for a dilute spray. The same amount of product can be used in a concentrate spray to cover an equivalent tree nut orchard. A rate less than 10 fl oz/A could be determined for use on small trees.

### Application Instructions

Apply Willowood Abamectin 0.15EC to tree nuts via ground application in a dilute or concentrate spray, using listed application rate, with sprayers calculated to deliver an adequate volume of water to completely cover foliage. Application should begin when mites are first observed. If needed for control of pests, a second application of Willowood Abamectin 0.15EC can be made. For optimal results, thorough coverage is essential for adequate pest control. Note that the size of trees per acre, number of trees per acre and foliage density will affect the amount of spray volume that is used.

Residual mite control is more effective with spray deposits on new leaves vs. old leaves.

### Horticultural Spray Oil

Apply Willowood Abamectin 0.15EC with horticultural spray oil (not a dormant oil) labeled for use on tree nuts.

- For dilute applications, apply 0.25% or 1 gal / A horticultural spray oil to spray mixture.
- For concentrate applications, apply a minimum of 1 gal / A.



**Restrictions:**

- Willowood Abamectin 0.15EC must be applied in a minimum of 40 gallons of water per acre.
- Do not allow livestock to graze in treated groves/orchards.
- If a second application is necessary, wait at least 21 days before repeating application.
- Do not make more than 2 applications of this product or any other foliarly applied abamectin-containing product per calendar year.
- Do not exceed a maximum of 20 fl. oz. per acre of Willowood Abamectin 0.15EC (0.023 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Do not exceed a maximum of 40 fl. oz. per acre of Willowood Abamectin 0.15EC (or 0.047 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Do not apply Willowood Abamectin 0.15EC via aerial application to tree nuts.
- Preharvest interval is 21 days.

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

**Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible; cassava (bitter and sweet); chayote (root); chufa; dasheen; ginger; leren; potato; sweet potato; taniar; turmeric; yam bean; and yam (true)**

Apply Willowood Abamectin 0.15EC to tuberous and corm vegetables via aerial application or via ground application equipment to control listed pests.

**Pests controlled:**

Colorado potato beetle      *Liriomyza* leafminer      Spider mite      Potato psyllid

**Application Rate**

- **Low to Moderate infestations:** 8 - 12 fl. oz. per acre
- **Severe Infestations:** 16 fl. oz. per acre

**Application Instructions**

Apply Willowood Abamectin 0.15EC using listed application rate. For best effectiveness, calibrate sprayers to ensure sufficient water is dispensed and the crop canopy is completely covered with the treatment solution. Reduced control may result if coverage is insufficient.

NOTE: For optimal effectiveness, apply Willowood Abamectin 0.15EC as a ground application. Aerial application is less effective than ground application in controlling mites. If Willowood Abamectin 0.15EC is applied by air, the user is solely responsible for any reduced control of mites or any reduction in the length of control of mites.

Colorado potato beetle:

- Apply Willowood Abamectin 0.15EC when larvae are present after 50% of eggs have hatched.
- If a further application is required, limit treatment to a single generation of Colorado potato beetles per crop.
- Do not exceed a maximum of 2 applications per crop. See Restrictions below.

*Liriomyza* leafminers, Spider mites

- Apply Willowood Abamectin 0.15EC when mites or leafminer adult flies are first seen.
- Repeat treatment may be carried out as required to maintain control.

Potato psyllid

- Repeat treatment may be carried out as required to maintain control.

Surfactants and Wetting Agents

For best control of listed insects and spider mites, combine Willowood Abamectin 0.15EC with an organosilicone-based or non-ionic surfactant at the rate directed by the manufacturer. Do not combine this product with sticker-type/binder surfactants as control of spider mite and insects may be reduced.

**Restrictions:**

- Ground application: Willowood Abamectin 0.15EC must be applied in a minimum of 20 gallons of water per acre.
- Aerial application: This product must be applied in a minimum of 5 gallons of water per acre.
- When there are extreme conditions, e.g. high temperatures, high pest populations or where foliage is dense, apply this product in a greater volume of water to ensure adequate coverage.
- Do not allow livestock to graze or feed treated foliage to livestock.
- Observe a minimum treatment interval of 7 days between applications of this product.
- Do not make more than 2 sequential applications of this product or any other foliarly applied abamectin-containing product.
- Do not exceed a maximum of 16 fl. oz. per acre of Willowood Abamectin 0.15EC (0.019 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product in a single application.
- Spider mite and Colorado potato beetle: Do not exceed a maximum of 32 fl. oz. per acre of Willowood Abamectin 0.15EC (or 0.038 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per

calendar year.

- Leafminer: Do not exceed a maximum of 48 fl. oz. per acre of Willowood Abamectin 0.15EC (0.056 lb. of active ingredient per acre) or any other foliarly applied abamectin-containing product per calendar year.
- Preharvest interval is 14 days.

### 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 may be disposed of on site or at an approved waste disposal facility.

#### **CONTAINER HANDLING:**

**Nonrefillable Container (five gallons or less):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. 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 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

### CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Willowood, LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Willowood, LLC and Seller harmless for any claims relating to such factors.

Willowood, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Willowood, LLC, and Buyer and User assume the risk of any such use. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, WILLOWOOD, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

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