

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.

ABAMECTIN

GROUP

6

INSECTICIDE

ABACUS® V6

SPECIMEN LABEL

ACTIVE INGREDIENT:

Abamectin (CAS: 65195-55-3 and 65195-56-4) 6.0%*

OTHER INGREDIENTS: 94.0%

TOTAL: 100.0%

*0.47 lb. Abamectin per gallon. Contains petroleum distillates (or contains heavy aromatic petroleum distillates).

BY WT.

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.)

See inside booklet for complete First Aid, Precautionary Statements, Directions for Use, and Storage and Disposal.

For 24-hour chemical spill, leak, fire, exposure or accident response information, call CHEMTREC toll free at 1-800-424-9300.

Escanee el
código QR para
la etiqueta en
Español.



DISTRIBUTED by:
ALBAUGH, LLC
- Rotam North America Division
1525 NE 36th Street
Ankeny, IA 50021

Product of China



INSECTICIDE

FIRST AID (Avermectin B1) / PRIMEROS AUXILIOS (Avermectina B1)**IF SWALLOWED**

- Immediately call a poison control center or doctor.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give any liquid to the person.
- 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 further treatment advice.

(Avermectin B1)

NOTE TO PHYSICIAN: Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

For non-emergency exposure information on this product, call 1-888-347-6732 (7 days/week, 24-hr). For medical emergencies, dial 911.

Nota al Médico: Contiene un destilado de petróleo; el vómito puede provocar neumonía por aspiración.

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

May be fatal if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

PERSONAL PROTECTIVE EQUIPMENT**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves made out of barrier laminate, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, Viton ≥ 14 mils

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow the 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**User should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately before pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target areas. Do not contaminate water when disposing of equipment 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 rainwater. 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.

RUNOFF PREVENTION

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

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

DIRECTIONS FOR USE

Restricted Use Pesticide

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements on 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 involves contact with anything that has been treated, such as plants, soil, or water is:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves made out of: barrier laminate, nitrile rubber $\geq$ 14 mils, neoprene rubber $\geq$ 14 mils, or viton $\geq$ 14 mils

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

PRODUCT INFORMATION

Thorough coverage is essential for good mite and insect control on crops.

Abacus® V6 is an emulsifiable concentrate that will control certain listed pests on the crops listed on this label when applied according to the **Directions For Use**.

Abacus® V6 has been tested for phytotoxicity and has a wide margin of safety on a variety of crops. **Abacus® V6** 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 to assure the physical compatibility and lack of phytotoxicity effect of any proposed mixtures **with Abacus® V6**.

RESTRICTIONS:

- Do not apply **Abacus® V6** by aerial application in New York State.
- Do not apply this product through any type of irritation system.

SPRAY DRIFT

Aerial Applications:

- Do not release spray at a height greater than 10 feet above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site. If the wind speed is greater than 10 mph, the boom length must not exceed 65% of the wingspan for fixed wing aircraft or 75% of the rotor diameter for helicopters. Otherwise, the boom length must not exceed 75% of the wingspan for fixed wing aircraft or 90% of the rotor diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Do not apply during temperature inversions.

Airblast Applications:

- Sprays must be directed into the canopy.
- Do not apply when wind speeds exceed 15 mph at the application site.
- User must turn off outward pointing nozzles at the row end and when spraying the outer row.
- Do not apply during temperature inversions.

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 4 ft. above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

Boomless Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- **Volume** - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- **Pressure** - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- **Spray Nozzle** - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- **Adjust Nozzles** - Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT – Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.** Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Boomless Ground Applications:

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications:

- Take precautions to minimize spray drift.

RESISTANCE MANAGEMENT

For resistance management, **Abacus® V6** contains a Group 6 insecticide. Any insect/mite population may contain individuals naturally resistant to **Abacus® V6** and other Group 6 insecticides/acaricides. The resistant individuals may dominate the insect/mite population if this group of insecticides/acaricides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide/acaricide resistance, take the following steps:

- Rotate the use of **Abacus® V6** or other Group 6 insecticides/acaricides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides/acaricides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
 - o Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
 - o Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
 - o When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
 - o Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
 - o The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide/acaricides use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological, and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

CROP USE DIRECTIONS

APPLES

For control of white apple leafhopper, tentiform leafminers, European red mites, two-spotted spider mites, and McDaniel spider mites.

Apples Application Rates

Pests	For Dilute Sprays ¹ Fl. Oz. Abacus® V6/100 Gals. (lb. a.i./100 gals.)	For Concentrate Sprays ² Fl. Oz. Abacus® V6/A (lb. a.i./A)
European red mite	0.79 - 1.61	3.19 - 6.37
McDaniel spider mite	(0.0029 - 0.0059)	(0.0117 - 0.0234)
Tentiform leafminers		
Two-spotted spider mite		
White apple leafhopper		

¹ The rate of **Abacus® V6** per 100 gals. is based on a volume of 400 gals./A dilute spray.

² To determine the amount **Abacus® V6** per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount **Abacus® V6** 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 3.33 fl. oz./A on small trees.

Application Instructions - Apples

For best results, use a Horticultural Spray Oil* with **Abacus® V6** at 0.25% or 1 gal./A in a minimum of 1 gal./A.

Abacus® V6, in combination with horticultural spray oil*, may cause fruit injury to certain varieties of apples, e.g., russetting on light-skinned varieties such as Golden Delicious, when used alone or when other products are applied sequentially. The Directions For Use and Precautions on horticultural spray oil labels, as well as precautions in official spray guides should be followed carefully when using **Abacus® V6** in combination with horticultural spray oil*

*Not a dormant oil

- Apply **Abacus® V6** using conventional dilute or concentrate ground sprayers calibrated to deliver sufficient water for thorough coverage. Gallonage of spray will vary with size and number of trees per acre and density of foliage. In any case, thorough coverage is essential for good spider mite and insect control.
- For best results, 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 residual control.
- For best results, use **Abacus® V6** in combination with a horticultural spray oil* approved for use on apples. Apply **Abacus® V6** when spider mite or insect thresholds are reached. A second application may be made if necessary, to maintain control.
- **White apple leafhopper (Not for use west of the Rocky Mountains):** Application of **Abacus® V6** is limited only to first generation white apple leafhopper. Apply soon after petals fall in combination with horticultural spray oil*.
- **Spider mites:** For best results, apply before a threshold of 5 spider mites per leaf is reached. Residual spider mite control with **Abacus® V6** in combination with Horticultural spray oil* is greater from spray deposits on newer leaves compared to older. Limit applications of **Abacus® V6** for spider mite control to a period extending from petal fall through six weeks following petal fall.
- **Tentiform leafminers:** For best results, apply against egg (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.

Use Restriction - Apples

- Do not apply from onset of flowering until after petal fall is complete.
- Do not apply by air.
- **PHI:** Do not apply within 28 days of harvest.
- **Amount of Water:** Do not apply in less than 40 gals. of water per acre.
- **Minimum Application Interval:** 21 days
- **Maximum Single Application Rate:** 6.37 fl. oz. **Abacus® V6** (0.0234 lb. a.i.)

- **Application per Season:** Do not make more than 2 sequential applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- **Maximum Annual Application Rate:** Do not apply more than 12.8 fl. oz./A (0.047 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.047 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- **Grazing:** Do not allow livestock to graze in treated orchards.

AVOCADOS

For control of Avocado thrips.

Avocados Application Rates

Pests	Fl. Oz. Abacus® V6/A (lb. a.i./A)
Avocado Thrips (<i>Scirtothrips perseae</i>)	3.19 - 6.37 (0.0117 - 0.0234) Do not use less than 3.19 fl. oz. (0.0117 lb. a.i.) of Abacus® V6/A

Application Instructions - Avocados

May be used with a Horticultural Spray Oil* in a minimum 1 to 4% v/v.

*Not a dormant oil.

Abacus® V6 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 **Abacus® V6** is aerially applied.

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

- For best results, apply when immature thrips are first observed but before numbers exceed 5 immature thrips per leaf/fruit. Use 3.19 - 4.79 fl. oz./A (0.0117 - 0.0176 lb. a.i./A) of **Abacus® V6** for low* to moderate* infestations and 4.79 - 6.37 fl. oz./A (0.0176 - 0.0234 lb. a.i./A) of **Abacus® V6** for high* or severe* infestations. Add a 1% - 4% NR (narrow range) 415 oil in combination with a horticultural spray oil (not a dormant oil) approved for use on avocados.
- Make a second application, if needed, to maintain control, but wait at least 30 days after the first application to retreat (see **Use Restrictions - Avocados**).
- **For Ground Application:** If spray volume is greater than 400 gals./A, apply **Abacus® V6** at a rate of 0.79 fl. oz. (0.0029 lb. a.i.) per 100 gals. of water plus 1% - 4% of an NR 415 oil.

Note: 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.

*Thrips Infestation Level	Number of Immature Thrips per Leaf/Fruit
Low	1 - 2
Moderate	3 - 4
High/Severe	More than 5

Use Restrictions - Avocados

- **PHI:** Do not apply within 14 days of harvest.
- **Amount of Water:** Do not apply in less than 100 gals. of water with ground equipment or 50 gals. of water with aircraft.
- **Minimum Application Interval:** 30 days
- **Maximum Single Application Rate:** 6.37 fl. oz. **Abacus® V6** (0.0234 lb. a.i.)
- **Application per Season:** Do not make more than 2 sequential applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- **Maximum Annual Application Rate:** Do not apply more than 12.8 fl. oz./A (0.047 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.047 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- **Grazing:** Do not allow livestock to graze in treated orchards.

CELERIAC (*Apium graveolens*)

For control of two-spotted spider mites.

Celeriac Application Rates

Pests	Fl. Oz. Abacus® V6/A (lb. a.i./A)
Two-spotted spider mites	5.12 (0.0188)

Application Instructions - Celeriac

- **Abacus® V6** may be applied using conventional or concentrate sprayers calibrated to deliver sufficient water for thorough coverage of the foliage.
- For best results, use in combination with a nonionic surfactant.
- Apply when mites first appear and repeat as necessary to maintain control.

Use Restrictions - Celeriac

- **PHI:** Do not apply within 7 days of harvest.
- **Amount of Water:** Do not apply in less than 20 gals. of water per acre.
- **Minimum Application Interval:** 7 days
- Do not apply more than 15.33 fl. oz./A (0.0563 lb. a.i./A) of **Abacus® V6**.
- **Application per season:** Do not make more than 2 sequential applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- **Maximum Annual Application Rate:** Do not apply more than 15.33 fl. oz./A (0.0563 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.0563 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).

CITRUS FRUIT CROPS (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

For control of Asian citrus psyllid, Broad mite, Citrus bud mite, Citrus leafminer, Citrus rust mite, Citrus thrips, and Two-spotted spider mite.

Citrus Fruit Group Application Rates

Pests	For Dilute Sprays ¹ Fl. Oz. Abacus® V6/100 Gals. (lb. a.i./100 gals.)	For Concentrate Sprays ² Fl. Oz. Abacus® V6/A (lb. a.i./A)
Asian citrus psyllid	--	3.19 - 6.37 (0.0117 - 0.0234) ³
Broad mite	0.33 - 0.63 (0.0012 - 0.0023)	3.19 - 6.37 (0.0117 - 0.0234) ³
Citrus bud mite	0.33 - 0.63 (0.0012 - 0.0023)	3.19 - 6.37 (0.0117 - 0.0234) ⁴
Citrus leafminer	--	1.61 - 6.37 (0.0059 - 0.0234) ³
Citrus rust mite	0.17 - 0.63 (0.0006 - 0.0023)	1.61 - 6.37 (0.0059 - 0.0234) ³
Citrus thrips	--	3.19 - 6.37 (0.0117 - 0.0234) ⁵
Two-spotted spider mite	0.33 - 0.63 (0.0012 - 0.0023)	3.19 - 6.37 (0.0117 - 0.0234)

¹ The rate of **Abacus® V6** per 100 gals. is based on a volume of 1,000 gals./A dilute spray.

² For concentrate sprays, adjust the dosage to apply an amount/A equal to that used in full cover dilute spray.

³ Ground Application: For best results, use 150 - 300 gals./A of spray mix with a minimum of 3 gals./A of horticultural spray oil* and apply at a ground speed of 1 to 1.5 mph.

⁴ For best results, use 500 gals./A of spray mix with a minimum of 0.5% horticultural spray oil*.

⁵ For best results, use 100 - 250 gals./A of spray mix applied to achieve outside coverage.

*Not a dormant oil.

Application Instructions - Citrus Fruit Group

- Apply **Abacus® V6** with a minimum of 0.20% horticultural spray oil* in the spray mixture or not less than 1 gal. of oil/A (except when specified differently below).
- **Asian citrus psyllid:** Apply **Abacus® V6** to protect newly expanding foliage flush during the spring, summer, or fall. **Abacus® V6** will only control adults and nymphs present at the time of application.
- **Mites:** Apply when mites first appear during spring, summer, and/or fall.
- **Citrus bud mite:** For best results, time the spray at “bud swell”.
- **Citrus leafminer:** Apply to protect new growth during spring, summer, or fall.
- **Citrus thrips:** 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).

Application Method:

- **To control citrus leafminer** - Ground or aerial application is permitted; however, 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) use a greater volume of water to insure adequate coverage.
- **All Other Pests** - Ground application only. Do not apply with aircraft.

Ground Instructions: Apply using conventional dilute or concentrate ground sprayers calibrated to deliver sufficient water for thorough coverage (or outside coverage for citrus leafminers and citrus thrips).

Aerial Application: Thorough spray coverage is essential for good mite and insect control. Spray gallonage may vary depending on size and number of trees per acre as well as density of foliage.

Use Restrictions - Citrus Fruit Crop Group

- **PHI:** Do not apply within 7 days of harvest.
- Do not apply by air to citrus in California.
- Do not apply by air except to control citrus leafminer.
- Do not use in citrus nurseries.
- Do not apply from onset of flowering until after petal fall is complete.
- **Maximum Single Application Rate:** 6.37 fl. oz. **Abacus® V6** (0.0234 lb. a.i./A).
- **Minimum Application Interval:** 30 days
- **Application per season:** Do not make more than 3 sequential applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- **Maximum Annual Application Rate:** Do not apply more than 12.8 fl. oz./A (0.047 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.047 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- **Grazing:** Do not allow livestock to graze in treated citrus groves.

COTTON

For control of Two-spotted spider mites, Carmine spider mites, Pacific spider mites, and Strawberry spider mites.

Cotton Application Rates

Spider Mites	Fl. Oz. Abacus® V6/A (lb. a.i./A)	
	Mid-Season/Lay-By	Early Season
Carmine	2.56 - 5.12	1.28 - 1.91
Pacific	(0.0094 - 0.0188)	(0.0047 - 0.0097)
Strawberry		
Two-spotted		

Application Instructions - Cotton

Abacus® V6 is an emulsifiable concentrate which, when mixed with water according to the **Directions For Use** will control spider mites (Carmine, Pacific, Strawberry, and Two-spotted) on cotton.

- Use 2.56 - 5.12 fl. oz. (0.0094 - 0.0188 lb. a.i.) of **Abacus® V6** per acre depending on size of the plant and density of the foliage.
- Apply with ground sprayers or aerially by fixed-wing aircraft or helicopter in a minimum of 5 gals. of water per acre to provide thorough coverage.
- Begin application when mites are first noticed and repeat if necessary.
- For use on early season cotton, apply when cotton is under 10 inches in height.
- Apply at a rate of 1.28 - 1.91 fl. oz. (0.0047 - 0.007 lb. a.i.) of **Abacus® V6** per acre by ground equipment only. Do not use less than 1.28 fl. oz./A.

Use Restrictions - Cotton

- **PHI:** Do not apply within 20 days of harvest.
- **Minimum Amount of Water:** Do not apply in fewer than 5 gallons of water per acre. Use sufficient volume to insure thorough coverage.
- **Maximum Single Application Rate:** 5.12 fl. oz. **Abacus® V6** (0.0188 lb. a.i.)
- **Minimum Application Interval:** 21 days
- **Application per Season:** Do not make more than 2 sequential applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- **Maximum Annual Application Rate:** Do not apply more than 10.21 fl. oz./A (0.0375 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.0375 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- **Grazing:** Do not allow livestock to graze in treated cotton.

CUCURBITS (CROP GROUP 9)

Chayote; Chinese Waxgourd; citron melon; cucumber; gherkin; edible gourds (includes hyotan, cucuzza, hechima, chinese okra); Momordica ssp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); muskmelon; cantaloupe; pumpkin; summer squash; winter squash (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash); watermelon

For control of Spider mites and Leafminers.

Cucurbits Application Rates

Pests	Fl. Oz. Abacus® V6/A (lb. a.i./A)
Leafminers	2.56 - 5.12
Spider mites	(0.0094 - 0.0188)

Application Instructions - Cucurbits

- Mix with water as indicated below and apply thoroughly by ground or air as a foliar spray to ensure good upper and lower leaf coverage.
- Use 2.56 fl. oz./A (0.0094 lb. a.i./A) of **Abacus® V6** for low to moderate infestations and 5.12 fl. oz./A (0.0188 lb. a.i.) of **Abacus® V6** for severe infestations.
- Apply when adult leafminer flies or spider mites are first observed.

Use Restrictions - Cucurbits

- **PHI:** Do not apply within 7 days of harvest.
- **Amount of Water:** Do not apply in less than 20 gals. of water per acre by ground or less than 5 gals. of water by air.
- **Maximum Single Application Rate:** 5.12 fl. oz. **Abacus® V6** (0.0188 lb. a.i.)
- **Minimum Application Interval:** 7 days
- **Application per Season:** Do not make more than 2 sequential applications and do not make more than 3 applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.

- **Maximum Annual Application Rate:** Do not apply more than 15.33 fl. oz./A (0.0563 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.0563 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- Do not apply by aircraft in New York State.

DRY BEANS

Chickpea (garbanzo bean), bean (*Lupinus* spp. includes grain lupin, sweet lupin, white lupin, and white sweet lupin), bean (*Phaseolus* spp. includes kidney bean, lima bean, navy bean, pinto bean, snap bean, and waxbean), broad bean (fava bean), bean (*Vigna* spp. includes adzuki bean, asparagus bean, blackeye pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean and yardlong bean)

For control of *Liriomyza* leafminers and Spider mites.

Dry Beans Application Rates

Pest	Fl. Oz. Abacus® V6/A (lb. a.i./A)
<i>Liriomyza</i> leafminers	2.56 - 5.12 (0.0094 - 0.0188)
Spider mites	

Application Instructions - Dry Beans

- Mix with water as indicated below. Thorough coverage of the crop canopy is essential for optimum results. Inadequate coverage can result in reduced control.
- Apply **Abacus® V6** with ground equipment or aircraft.
- For best control, apply **Abacus® V6** with ground application equipment. With aerial application, the resulting control of leafminers and spider mites could be less than with ground application.
- Use 2.56 - 3.84 fl. oz./A (0.0094 - 0.0141 lb. a.i./A) of **Abacus® V6** for low to moderate infestations and 4.14 - 5.12 fl. oz./A (0.0152 - 0.0188 lb. a.i./A) of **Abacus® V6** for high infestations.
- **Leafminers and Spider mites:** Apply when adult leafminer flies or spider mites are first observed and repeat application, as needed, to maintain control within constraints of a sound resistance management program.

Use Restrictions - Dry Beans

- **PHI:** Do not apply within 7 days of harvest.
- Do not apply with air in New York State.
- **Amount of Water:** Do not apply in less than 10 gal. of water per acre with ground application equipment. Do not apply in less than 5 gal. 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 ensure adequate coverage.
- **Minimum Application Interval:** 6 days
- **Maximum Single Application Rate:** 5.12 fl. oz. **Abacus® V6** (0.0188 lb. a.i.)
- **Application per Season:** Do not make more than 2 sequential applications and do not make more than 3 applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- **Maximum Annual Application Rate:** Do not apply more than 15.33 fl. oz./A (0.0563 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.0563 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- Do not allow livestock to graze pea or bean forage.
- Do not harvest pea or bean forage or hay for use as livestock feed. For use on cowpeas that are grown only for dry seed.

FRUITING VEGETABLES CROPS (CROP GROUP 8)

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

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

Fruiting Vegetables Application Rates

Pests	Fl. Oz. Abacus® V6/A (lb. a.i./A)
Broad mite Colorado potato beetle <i>Liriomyza</i> leafminers Spider mites <i>Thrips palmi</i> Tomato Psyllid Tomato Russet mite	2.56 - 5.12 (0.0094 - 0.0188)
Tomato pinworm	5.12 (0.0188)

Application Instructions - Fruiting Vegetables

- Mix with water as indicated below. Thorough coverage of the crop canopy is essential for optimum results. Inadequate coverage may result in reduced control.
- Apply **Abacus® V6** with ground application equipment or aircraft.
- For best control of mites, apply **Abacus® V6** 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 **Abacus® V6** is aerially applied.
- Broad, russet, and spider mites:** Apply when mites first appear.
- Thrips palmi*:** Apply when thrips are first observed.
- Tomato pinworm:** 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.
- Leafminers:** Apply when adult flies are first observed.
- Mites, leafminers, *Thrips palmi*, and Colorado potato beetle:** Use 2.56 fl. oz./A of **Abacus® V6** for low to moderate infestations and 5.12 fl. oz./A of **Abacus® V6** for severe infestations.
- Abacus® V6** 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.

Use Restrictions - Fruiting Vegetables

- PHI:** Do not apply within 7 days of harvest.
- Do not apply by air in New York State.
- Prohibited Use:** Do not use on fruiting vegetables grown for transplanting.
- Amount of Water:** Do not apply in less than 20 gals. of water per 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.
- Minimum Application Interval:** 7 days
- Maximum Single Application Rate:** 5.12 fl. oz. **Abacus® V6** (0.0188 lb. a.i.)
- Application per Season:** Do not make more than 2 sequential applications and do not make more than 3 applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- Maximum Annual Application Rate:** Do not apply more than 15.33 fl. oz./A (0.0563 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.0563 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).

GRAPES

For control of Pacific spider mite, Two-spotted spider mite, Variegated leafhopper, Western grape leafhopper, Western grapeleaf skeletonizer, and Willamette spider mite.

Grapes Application Rates

Pests	Fl. Oz. Abacus® V6/A (lb. a.i./A)
Pacific spider mite Two-spotted spider mite Variegated leafhoppers Western grape leafhopper Western grapeleaf skeletonizer Willamette spider mite	2.56 - 5.12 (0.0094 - 0.0188) Plus a nonionic surfactant

Application Instructions - Grapes

- Apply **Abacus® V6** using conventional 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. **Abacus® V6** must be applied to both sides of each row for maximum coverage.
- Use 2.56 - 3.84 fl. oz./A (0.0094 - 0.0141 lb. a.i./A) of **Abacus® V6** for low to moderate infestations and 5.12 fl. oz./A (0.0188 lb. a.i./A) of **Abacus® V6** for severe infestations.
- Repeat application, if needed (see **Use Restrictions - Grapes**).
- **Spider mites:** Apply when mites first appear but before motiles exceed 5 per leaf.
- **Western grapeleaf skeletonizer:** Apply **Abacus® V6** plus a nonionic surfactant. For optimum control, apply shortly after egg hatch.
- **Leafhoppers:** Apply **Abacus® V6** plus a nonionic surfactant using thorough spray coverage for contact knock-down only.
- **Abacus® V6** 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 **Abacus® V6** 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 **Abacus® V6** in combination with a nonionic surfactant, carefully follow the Directions For Use and Precautions on the nonionic surfactant label and in official spray guides.

Use Restrictions - Grapes

- **PHI:** Do not apply within 28 days of harvest.
- Do not apply from onset of flowering until after petal fall is complete.
- Do not apply by air.
- **Amount of Water:** Do not apply in less than 50 gals. of water per acre with conventional ground application equipment. When using an electro-static sprayer, less than 50 gals. of water per acre may be used, however do not use less than 5 gals. of water per acre.
- **Minimum Application Interval:** 21 days
- **Maximum Single Application Rate:** 5.12 fl. oz. **Abacus® V6** (0.0188 lb. a.i.)
- **Application per Season:** Do not make more than 2 sequential applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per growing season.
- **Maximum Annual Application Rate:** Do not apply more than 10.21 fl. oz./A (0.0375 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.0375 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- **Grazing:** Do not allow livestock to graze in treated vineyards.

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 savory, Sweet bay, Tansy, Tarragon, Thyme, Winter savory, Wintergreen, Woodruff, and Wormwood.

For control of *Liriomyza* leafminers and Spider mites.

Herb Application Rates

Pest	Fl. Oz. Abacus® V6/A (lb. a.i./A)
<i>Liriomyza</i> leafminers	2.56 - 5.12 (0.0094 - 0.0188)
Spider mites	

Application Instructions - Herbs

- Mix with water as indicated below. Apply thoroughly with ground application equipment as a foliar spray and ensure good upper and lower leaf coverage.
- Use 2.56 fl. oz./A (0.0094 lb. a.i./A) of **Abacus® V6** for low to moderate infestations and 5.12 fl. oz./A (0.0188 lb. a.i./A) of **Abacus® V6** for severe infestations.
- Apply when adult leafminer flies or spider mites are first observed and repeat application, as necessary to maintain control (see **Use Restrictions - Herbs**).
- **Abacus® V6** 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 for all crops in the Herb Crop Subgroup except chives. Do not use a surfactant when applying **Abacus® V6** to chives.
- Although **Abacus® V6** 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 **Abacus® V6** in combination with a nonionic surfactant, carefully follow the Directions For Use and Precautions on the nonionic surfactant label and in official spray guides.

Use Restrictions - Herbs

- **PHI:** Do not apply within 14 days of harvest. For chives, do not apply within 7 days of harvest.
- **Application Method:** Apply with ground application equipment.
- **Amount of Water:** Use a minimum of 20 gals. of water per acre.
- **Minimum Application Interval:** 7 days
- **Maximum Single Application Rate:** 5.12 fl. oz. **Abacus® V6** (0.0188 lb. a.i.)
- **Number of Applications:** Do not make more than 2 sequential applications and do not make more than 3 applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per single cutting (harvest).
- **Maximum Annual Application Rate:** Do not apply more than 15.33 fl. oz./A (0.0563 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.0563 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).

HOPS

For control of Two-spotted spider mites.

Hops Application Rates

Pests	Fl. Oz. Abacus® V6/A (lb. a.i./A)
Two-spotted spider mites	2.56 - 5.12 (0.0094 - 0.0188)

Application Instructions - Hops

- Apply **Abacus® V6** when two-spotted spider mites reach treatment thresholds.
- Mix with water as indicated below and apply by ground equipment as a foliar spray to assure good upper and lower coverage.

- Gallonage of spray may vary with the size of plants and density of foliage. In any case, thorough coverage is essential for good control of two-spotted mites. When using concentrate sprays, the amount of water is reduced, but the amount of **Abacus® V6** per acre should remain the same as for dilute sprays.
- If a second application is necessary for control, do not retreat within 21 days of the first application and only after an alternative miticide with a different mode of action has been used.
- **Abacus® V6** may be used without any wetting agent. When necessary to improve the wetting of foliage and to smooth out spray deposits, use a nonionic surfactant.

Use Restriction - Hops

- **PHI:** Do not apply within 28 days of harvest.
- Do not apply by air.
- **Amount of Water:** Do not apply in less than 40 gals. of water per acre.
- **Minimum Application Interval:** 21 days
- **Maximum Single Application Rate:** 5.12 fl. oz. **Abacus® V6** (0.0188 lb. a.i.)
- **Application per Season:** Do not make more than 2 sequential applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- **Maximum Annual Application Rate:** Do not apply more than 10.21 fl. oz./A (0.0375 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.0375 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- **Grazing:** Do not allow livestock to graze in treated hop yards.
- Do not use on hops in California

LEAFY VEGETABLES (EXCEPT BRASSICA VEGETABLES) CROP GROUP 4

Amaranth (leafy amaranth, Chinese spinach, tampala); Arugula (Rocket); Cardoon; Celery; Celtuce; Chervil; Chinese celery; Chrysanthemum, edible leaved; Chrysanthemum, garland; Corn salad; Cress, garden; Cress, upland (yellow rocket and winter cress); Dandelion; Dock (Sorrel); Endive (escarole); Florence fennel; Lettuce, head and leaf; New Zealand Spinach; Orach; Parsley; Purslane, garden; Purslane, winter; Radicchio (red chicory); Rhubarb; Spinach, vine; and Swiss chard

For control of Carmine spider mite, *Liriomyza* leafminers, and Two-spotted spider mite.

Leafy Vegetables Application Rate

Pests	Fl. Oz. Abacus® V6/A (lb. a.i./A)
Carmine spider mite <i>Liriomyza</i> leafminers Two-spotted spider mite	2.56 - 5.12 (0.0094 - 0.0188) Plus a nonionic surfactant

Application Instructions - Leafy Vegetables

- Mix with water as indicated below. Thorough coverage of the crop canopy is essential for optimum results. Inadequate coverage may result in reduced control.
- **Abacus® V6** may be applied with ground application equipment or aircraft. For best control of mites, apply **Abacus® V6** 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 **Abacus® V6** is aerially applied.
- Use 2.56 - 3.84 fl. oz./A (0.0094 - 0.0141 lb. a.i./A) of **Abacus® V6** for low to moderate infestations and 5.12 fl. oz./A (0.0188 lb. a.i./A) of **Abacus® V6** for severe infestations.
- **Spider mites:** Apply when mites first appear, and repeat as needed to maintain control (see **Use Restrictions - Leafy Vegetables**).
- **Leafminers:** Apply when adult flies are first observed and repeat applications as needed to maintain control (see **Use Restrictions - Leafy Vegetables**).
- **Abacus® V6** 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, use a nonionic surfactant. Do not use binder or sticker-type surfactants.

Use Restrictions - Leafy Vegetables

- **PHI:** Do not apply within 7 days of harvest.
- Do not apply by air in New York State.
- **Amount of Water:** Do not apply in less than 20 gals. of water per 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.
- **Minimum Application Interval:** 7 days
- **Maximum Single Application Rate:** 5.12 fl. oz. **Abacus® V6** (0.0188 lb. a.i.)
- **Application per Season:** Do not make more than 2 sequential applications and do not make more than 3 applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- **Maximum Annual Application Rate:** Do not apply more than 15.33 fl. oz./A (0.0563 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.0563 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- Do not use on leafy vegetables grown for transplanting.

MINT (PEPPERMINT AND SPEARMINT)

For control of Two-spotted spider mite.

Mint Application Rates

Pests	Fl. Oz. Abacus® V6/A (lb. a.i./A)
Two-spotted spider mites	2.56 - 3.84 (0.0094 - 0.0141)

Application Instructions - Mint

- Mix with water as indicated below. Thorough coverage of the crop canopy is essential for optimum results. Inadequate coverage may result in reduced control.
- Treat when mites first appear.
- For optimum control, a nonionic surfactant or organosilicone-based surfactant should be used at the manufacturer's specified rate.

Use Restrictions - Mint

- **PHI:** Do not apply within 28 days of harvest.
- Do not apply by air in New York State.
- **Amount of Water:** Do not apply in less than 20 gals. of water per 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.
- **Minimum Application Interval:** 7 days
- **Maximum Single Application Rate:** 3.84 fl. oz. **Abacus® V6** (0.0141 lb. a.i.)
- **Application per Season:** Do not make more than 2 sequential applications and do not apply more than 3 applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- **Maximum Annual Application Rate:** Do not apply more than 11.49 fl. oz./A (0.0422 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.0422 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- **Grazing:** Do not allow livestock to graze or feed treated foliage to livestock.

ONION, BULB (CROP SUBGROUP 3-07A)

Onion, bulb; Daylily, bulb; Fritillaria, Bulb; Garlic, Bulb; Garlic, Great-Headed, Bulb; Garlic, Serpent, Bulb; Lily, Bulb; Onion, Chinese, Bulb; Onion, Pear; Onion, Potato, Bulb; Shallot, Bulb; Cultivars, Varieties, and/or hybrids of these

For control of *Liriomyza* leafminers and Thrips.

Onion, Bulb Application Rates

Pest	Fl. Oz. Abacus® V6/A (lb. a.i./A)
<i>Liriomyza</i> leafminers Thrips	2.56 - 5.12 (0.0094 - 0.0188)

Application Instructions - Onion, Bulb

- Mix with water as indicated below. Thorough coverage of the crop canopy is essential for optimum results. Inadequate coverage can result in reduced control.
- Apply **Abacus® V6** with ground application equipment or aircraft.
- For best control, apply **Abacus® V6** with ground application equipment. With aerial application, the resulting control of leafminers and thrips could be less than with ground application.
- Use 2.56 - 3.84 fl. oz./A (0.0094 - 0.0141 lb. a.i./A) of **Abacus® V6** for low to moderate infestations and 4.14 - 5.12 fl. oz./A (0.0152 - 0.0188 lb. a.i.) of **Abacus® V6** for high infestations.
- Leafminers:** Apply when adult leafminer flies are first observed and repeat application, as needed, to maintain control within constraints of a sound resistance management program.
- Thrips:** Apply in a thrips management program and when thrips are at economic threshold. Repeat application, as needed, to maintain control within constraints of a sound resistance management program (see **Use Restrictions - Onion, Bulb**). Do not use **Abacus® V6** as a rescue treatment for thrips control.
- Add a nonionic activator type wetting, spreading and/or penetrating adjuvant approved for use on bulb onion. Do not use binder sticker type adjuvants. Tank mixing with products that have binder sticker type formulations can reduce **Abacus® V6** performance.

Use Restrictions - Onion, Bulb

- PHI:** Do not apply within 30 days of harvest.
- Do not apply by air in New York State.
- Amount of Water:** Do not apply in less than 20 gals. of water per acre with ground application equipment. Do not apply in less than 5 gal. 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 ensure adequate coverage.
- Minimum Application Interval:** 7 days
- Maximum Single Application Rate:** 5.12 fl. oz. **Abacus® V6** (0.0188 lb. a.i.)
- Application per Season:** Do not make more than 2 sequential applications and do not apply more than 3 applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- Maximum Annual Application Rate:** Do not apply more than 15.33 fl. oz./A (0.0563 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.0563 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- Do not use **Abacus® V6** as a rescue treatment for thrips control.
- Do not use binder sticker type adjuvants.

PEARS

(including oriental pear trees)

For control of two-spotted spider mites, McDaniel spider mites, European red mites, pear rust mites, yellow mites, and pear psylla

Pears Application Rates

Pests	For Dilute Sprays ¹ Fl. Oz. Abacus® V6/100 Gals. (lb. a.i./100 gals.)	For Concentrate Sprays ² Fl. Oz. Abacus® V6/A (lb. a.i./A)
European red mite	0.79 - 1.61	3.19 - 6.37
McDaniel spider mite	(0.0029 - 0.0059)	(0.0117 - 0.0234)
Pear rust mite		
Two-spotted spider mite		
Yellow mite		
Pear psylla	0.79 - 1.61 (0.0029 - 0.0059)	3.19 - 6.37 (0.0117 - 0.0234)

¹ The rate of **Abacus® V6** per 100 gals. is based on a volume of 400 gals./A dilute spray.

² To determine the amount of **Abacus® V6** per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of **Abacus® V6** 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 3.33 fl. oz./A (0.0117 lb. a.i./A) on small trees.

Application Instructions – Pears

May be used with a Horticultural Spray Oil* at 0.25% in a minimum of 1 gal./A.

*Not a dormant oil.

- **Abacus® V6** may be applied using conventional dilute or concentrate ground sprayers calibrated to deliver sufficient water for thorough coverage. Gallonage of spray will vary with size and number of trees per acre and density of foliage. In any case, thorough coverage is essential for good spider mite and insect control.
- Always apply in combination with horticultural spray oil (not a dormant oil) as directed.
- Use **Abacus® V6** with a minimum of 0.25% horticultural spray oil (not a dormant oil) in the dilute spray mixture and not less than 1 gal. of horticultural spray oil (not a dormant oil) per acre in the final finished spray.

Use Restrictions - Pears

- **PHI:** Do not apply within 28 days of harvest.
- Do not apply by air.
- **Amount of Water:** Do not apply less than 40 gals. of water per acre.
- **Minimum Application Interval:** 21 days
- **Maximum Single Application Rate:** 6.37 fl. oz. **Abacus® V6** (0.0234 lb. a.i.)
- **Application per Season:** Do not make more than 2 sequential applications per growing season of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- **Maximum Annual Application Rate:** Do not apply more than 12.8 fl. oz./A (0.047 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.047 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- **Grazing:** Do not allow livestock to graze in treated orchards.
- Do not apply from onset of flowering until after petal fall is complete.

STONE FRUIT CROP GROUP 12

Apricot; Cherry, Sweet; Cherry, Tart; Nectarine; Peach; Plum, Chickasaw; Plum, Damson; Plum, Japanese; Plumcot; and Prune (fresh)

For control of European spider mite, Pacific spider mite, and Two-spotted spider mite.

Stone Fruit Application Rates

Pests	For Dilute Sprays ¹ Fl. Oz. Abacus® V6/100 Gals. (lb. a.i./100 gals.)	For Concentrate Sprays ² Fl. Oz. Abacus® V6/A (lb. a.i./A)
European red mite	0.79 - 1.61	3.19 - 6.37
Pacific Spider mite	(0.0029 - 0.0059)	(0.0117 - 0.0234)
Two-spotted spider mite		

¹ The rate of **Abacus® V6** per 100 gals. is based on a volume of 400 gals./A dilute spray.

² To determine the amount of **Abacus® V6** per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of **Abacus® V6** 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 3.19 fl. oz./A (0.0117 lb. a.i./A) on small trees.

*Not a dormant oil.

Application Instructions - Stone Fruit

May be used with a Horticultural Spray Oil* at 0.25% or 1 gal./A in a minimum 1 gal/A or nonionic surfactant at specified label rate.

*Not a dormant oil.

- **Abacus® V6** 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 any case, thorough coverage is essential for good spider mite control.
- Apply when mites first appear.
- A second application may be made, if needed, to maintain control (see **Use Restrictions - Stone Fruit**).

- Always apply **Abacus® V6** 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).
 - A nonionic surfactant that spreads on and/or penetrates the leaf cuticle can improve insect control. Although **Abacus® V6** 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. Therefore, when using **Abacus® V6** in combination with a nonionic surfactant, carefully follow the Directions For Use and Precautions on the surfactant label and in official spray guides.
 - A horticultural spray oil (not a dormant oil) may improve efficacy and can be used but it may increase the possibility of phytotoxicity to foliage and fruit.
- Use nonionic surfactants at the manufacturer's recommended rate.
- Use a minimum of 0.25% horticultural spray oil (not a dormant oil) in the dilute spray mixture and not less than 1 gal. of horticultural spray oil per acre in the final finished spray.

Use Restrictions - Stone Fruit

- PHI:** Do not apply within 21 days of harvest.
- Do not apply by air.
- Amount of Water:** Do not apply in less than 40 gals. of water per acre.
- Minimum Application Interval:** 21 days.
- Maximum Single Application Rate:** 6.37 fl. oz. **Abacus® V6** (0.0234 lb. a.i.)
- Application per Season:** Do not make more than 2 sequential applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- Maximum Annual Application Rate:** Do not apply more than 12.8 fl. oz./A (0.047 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.047 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- Grazing:** Do not allow livestock to graze in treated groves/orchards.

STRAWBERRIES

For control of Two-spotted spider mites.

Strawberries Application Rates

Pests	Fl. Oz. Abacus® V6/A (lb. a.i./A)
Two-spotted spider mites	5.12 (0.0188)

Application Instructions - Strawberries

- Adjust spray volume and nozzle placement to assure maximum coverage of tops and undersides of leaves.
- Use 5.12 fl. oz./A (0.0188 lb. a.i./A) of **Abacus® V6** per acre. Make 2 applications 7-10 days apart when mites first appear.
- Repeat this sequence of application if necessary to maintain control.
- Abacus® V6** may be used without any wetting agent. When necessary to improve the wetting of foliage and to smooth out spray deposits, use a nonionic surfactant.

Use Restrictions - Strawberries

- PHI:** Do not apply within 3 days of harvest.
- Application Method:** Do not apply by aircraft.
- Amount of Water:** Do not apply in less than 100 gals. of water per acre.
- Minimum Application Interval:** 21 days
- Application per Season:** Do not make more than 2 sequential applications of **Abacus® V6** and do not make more than 4 applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- Maximum Single Application Rate:** 5.12 fl. oz. **Abacus® V6** (0.0188 lb. a.i.)
- Maximum Annual Application Rate:** Do not apply more than 20.43 fl. oz./A (0.075 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.075 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- For resistance management purposes, do not use in strawberry nurseries.

TREE NUTS 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)

For control of Two-spotted spider mite, Strawberry spider mite, Pacific spider mite, and European red mite (Ground Application Only).

Tree Nuts and Pistachio Application Rates

Pests	For Dilute Sprays ¹ Fl. Oz. Abacus® V6/100 Gals. (lb. a.i./100 gals.)	For Concentrate Sprays ² Fl. Oz. Abacus® V6/A (lb. a.i./A)
European red mite	0.79 - 1.61	3.19 - 6.37
Pacific spider mite	(0.0029 - 0.0059)	(0.0117 - 0.0234)
Strawberry spider mite		
Two-spotted spider mite		
Horticultural Spray Oil*	0.25% or 1 gal./A	Minimum of 1 gal./A

¹ The rate of **Abacus® V6** per 100 gals. is based on a volume of 400 gals./A dilute spray.

² To determine the amount of **Abacus® V6** per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of **Abacus® V6** 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 3.19 fl. oz./A (0.0117 lb. a.i./A) on small trees.

Application Instructions Tree Nuts and Pistachio

May be used with a Horticultural Spray Oil* 0.25% or 1 gal./A in a minimum of 1 gal./A.

*Not a dormant oil.

- **Abacus® V6** 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 any case, thorough coverage is essential for good spider mite and insect control.
- Always use **Abacus® V6** in combination with a horticultural spray oil (not a dormant oil) approved for use on tree nuts.
- Apply **Abacus® V6** when spider mites first appear. Residual spider mite control is greater from spray deposits on newer leaves compared to older leaves.
- A second application may be made, if needed, to maintain control (see **Use Restrictions - Tree Nuts and Pistachio**).

Use Restrictions - Tree Nuts and Pistachio

- **PHI:** Do not apply within 21 days of harvest.
- Do not apply with air.
- **Amount of Water:** Do not apply in less than 40 gals. of water per acre.
- **Minimum Application Interval:** 21 days
- **Maximum Single Application Rate:** 6.37 fl. oz. **Abacus® V6** (0.0234 lb. a.i.)
- **Application per Season:** Do not make more than 2 sequential applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- **Maximum Annual Application Rate:** Do not apply more than 12.8 fl. oz./A (0.047 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.047 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- **Grazing:** Do not allow livestock to graze in treated groves/orchards.
- Do not apply from onset of flowering until after petal fall is complete.

TUBEROUS AND CORM VEGETABLES CROP GROUP 1C

Arracacha; Arrowroot; Artichoke, Chinese; Artichoke, Jerusalem; Canna, Edible; Cassava (Bitter and Sweet); Chayote (Root); Chufa; Dasheen; Ginger; Leren; Potato; Sweet Potato; Tanier; Tumeric; Yam Bean; and Yam (True)

For control of Colorado potato beetle, *Liriomyza* leafminers, Potato psyllid, and Spider mites.

Tuberous and Corm Vegetables Application Rates

Pests	Fl. Oz. Abacus® V6/A (lb. a.i./A)
Colorado potato beetles	2.56 - 5.12
<i>Liriomyza</i> leafminers	(0.0094 - 0.0188)
Potato psyllid	
Spider mites	

Application Instructions - Tuberous and Corm Vegetables

- Mix with water as indicated below. Thorough coverage of the crop canopy is essential for optimum results. Inadequate coverage may result in reduced control.
- Abacus® V6** may be applied using ground application equipment or aircraft. For best control of mites, apply **Abacus® V6** 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 **Abacus® V6** is aerially applied.
- Use 2.56 - 3.84 fl. oz./A (0.0094 - 0.0141 lb. a.i./A) of **Abacus® V6** for low to moderate infestations and 5.12 fl. oz./A (0.0188 lb. a.i./A) of **Abacus® V6** for severe infestations.
- The addition of a nonionic surfactant or organosilicone-based surfactant, at the manufacturer's recommended rate, is suggested for optimum spider mite and insect control.
- Insect and spider mite control may be reduced if **Abacus® V6** is used in combination with a sticker or binder type product such as Bravo® Weather Stike®.
- Colorado potato beetle:** 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 (see **Use Restrictions - Tuberous and Corm Vegetables**).
- Liriomyza* leafminers:** Make the first application when adult flies are first observed. Repeat applications as needed to maintain control (see **Use Restrictions - Tuberous and Corm Vegetables**).
- Spider mites:** Make the first application when mites first appear. Repeat application as needed to maintain control (see **Use Restrictions - Tuberous and Corm Vegetables**).

Use Restrictions - Tuberous and Corm Vegetables

- PHI:** Do not apply within 14 days of harvest.
- Do not apply by air in New York State.
- Amount of Water:** Do not apply in less than 20 gals. of water 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.
- Minimum Application Interval:** 7 days
- Maximum Single Application Rate:** 5.12 fl. oz. **Abacus® V6** (0.0188 lb. a.i.)
- Application per Season:** Do not make more than 2 sequential applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season. For leafminer control, do not make more than 3 applications of **Abacus® V6** or any other foliarly-applied abamectin-containing product per season.
- Maximum Annual Application Rate:**
 - For spider mite or Colorado potato beetle control, do not apply more than 10.21 fl. oz./A (0.0375 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.0375 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
 - For leafminer control, do not apply more than 15.12 fl. oz./A (0.0563 lb. a.i./A) of **Abacus® V6** per calendar year. Do not exceed 0.0563 lb. a.i./A/calendar year of abamectin-containing products regardless of application type (seed treatment, soil, foliar).
- Grazing:** Do not allow livestock to graze in treated field or feed treated foliage to livestock.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a tightly closed container in a cool, dry place.

Pesticide Disposal: Pesticide spray mixture or rinsate that cannot be used should be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal (Nonrefillable Container): Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your State regulatory agency to determine allowable practices in your State. Offer for recycling, if available. If not, dispose of in a sanitary landfill.

Residue Removal: Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC AT 1-800-424-9300.

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