



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

December 14, 2020

Chris Mason  
Senior Manager Registrations  
Nutrien  
3005 Rocky Mountain Avenue  
Loveland, CO 80538

Subject: Label Amendment – Adding state restrictions to recently added crops, updating as per PR Notice 2017-1 and updating per Abamectin ID  
Product Name: Reaper Clearform  
EPA Registration Number: 34704-1078  
Application Date: 6/5/18  
Decision Number: 541719

Dear Mr. Mason:

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

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

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

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

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with FIFRA section 6. If you have any questions, please contact Marianne Lewis by phone at (703) 308-8043 or via email at [lewis.marianne@epa.gov](mailto:lewis.marianne@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Gene Benbow".

Gene Benbow, Product Manager 7  
Invertebrate & Vertebrate Branch 3  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure

[Editor's Note for Reviewers: [Brackets] indicate optional passages or passages that depend on packaging. {Braces} indicate location of text.]

**RESTRICTED USE PESTICIDE**

**Due to toxicity to fish 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



# Reaper ClearForm

**ACTIVE INGREDIENT:**

	<b>By Wt.</b>
Abamectin* (CAS No. 65195-56-4 and No. 65195-55-3) .....	<b>2.0%</b>
<b>OTHER INGREDIENTS:</b> .....	<b>98.0%</b>
<b>TOTAL</b>	<b>100.0%</b>

\*1.0 gallon contains 0.15 pound abamectin.

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

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

[For Additional Precautionary Statements, Directions for Use, Storage and Disposal and Other Use Information, See Inside the Label Booklet.]

### FIRST AID

<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call poison control center or doctor immediately for treatment advice.</li> <li>• <b>DO NOT</b> give any liquid to the person.</li> <li>• <b>DO NOT</b> induce vomiting unless told to by a poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

**Note to Physician:** Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular tremors. Toxicity following accidental ingestion of this product can be minimized by early administration of chemical 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, avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic abamectin exposure.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.**

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EPA Est. No.: [nnnn-xx-nnn]

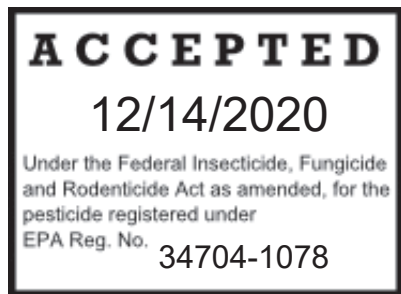
Net Contents: 1.0 GAL (3.78 L)

[Lot. No.]

[Print code]

[EPA MASTER LABEL—Label ID 01/20]

Formulated for  
Loveland Products Inc.,  
P.O. Box 1286, Greeley, CO 80632-1286



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

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

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants,
- Chemical-resistant gloves made out of barrier laminate or butyl rubber  $\geq 14$  mils,
- Shoes plus socks,
- Protective eyewear,

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables 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.
- 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 to your area.

**PHYSICAL/CHEMICAL HAZARDS**

Combustible. **DO NOT** use or store near heat or open flame. **DO NOT** mix or allow coming into contact with oxidizing agents. Hazardous chemical reaction may occur.

**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 State or Tribal 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 long-sleeved shirt and longpants,
- Chemical-resistant gloves including barrier laminate, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, or viton  $\geq$  14 mils,
- Chemical-resistant footwear plus socks,
- Protective eyewear,
- Chemical-resistant headgear for overhead exposure.

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**DO NOT reenter treated areas until sprays have dried.**

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

### APPLICATION INFORMATION

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

#### IMPORTANT:

- ② **Phytotoxicity:** Reaper ClearForm has been tested for phytotoxicity and has a wide margin of safety on a variety of crops. Reaper ClearForm has also been shown to be compatible with many commonly used pesticides, crop oils, and nutritional sprays. However, since it is not possible to test a large number of possible mixtures, the user should pre-test any proposed mixtures with Reaper ClearForm to ensure the physical compatibility and lack of phytotoxic effects.
- ② **New York State Restrictions:** **DO NOT** apply Reaper ClearForm with aircraft in New York State.

#### Chemigation

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

#### 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.

## SPRAY DRIFT

### Aerial Applications:

- **DO NOT** release spray at a height greater than 10 ft 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 mph 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 miles per hour 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 feet 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 miles per hour 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 miles per hour 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.

#### **Boom-less 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 Recommendations**

Some insect or mite pests are known to develop resistance to products after repeated use. Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies established for the crop and use area. Loveland Products, Inc. encourages responsible product stewardship to ensure effective long-term control of the insects or mites on this label.

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

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect or mite may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

To delay insecticide resistance, take the following steps:

- Rotate the use of this product or other Group 6 insecticides within a growing season, or among growing seasons, with different groups that control the same pests. Avoid application of more than the ~~prescribed~~ maximum number/consecutive sprays of this product or other insecticides in the same group in a season.
- Use tank mixtures with insecticides 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):
  - 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.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
  - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
  - 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 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.
- For further information or to report suspected resistance contact Loveland Products at 888-574-2878 or at [lovelandproducts.com](http://lovelandproducts.com).

## CROP USE DIRECTIONS

### AVOCADOS

#### For control of Avocado thrips.

**IMPORTANT:** Reaper ClearForm 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 Reaper ClearForm 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.

Pest	Fl oz/A	Instructions
Avocado thrips ( <i>Scirtothrips perseae</i> )	10.0 to 20.0 <b>DO NOT</b> use less than 10.0 fl oz of product/A	<ul style="list-style-type: none"> <li>• For best results, apply when immature Thrips are first observed but before numbers exceed 5 immature Thrips/leaf/fruit.</li> <li>• Use 10.0 to 15.0 fl oz product/A for low* to moderate* infestations and 15.0 to 20.0 fl oz product/A for severe* infestations. Add 1.0 to 4.0% of a horticultural spray oil (not a dormant oil) approved for use on avocados.</li> <li>• Make a second application, if needed, to maintain control, but wait at least 30 days after the first application to retreat. <b>(See Use Restrictions)</b></li> <li>• <b>For Ground Application:</b> If spray volume is greater than 400 gal/A apply Reaper ClearForm at a rate of 2.5 fl oz/100 gal water plus 1.0 to 4.0% of a horticultural spray oil (not a dormant oil) approved for use on avocados.</li> <li>• <b>Important:</b> To prevent crop injury, observe all precautions and restrictions on the oil label. When using oil concentrations above 2.0% treat a small test area before making a large-scale application.</li> </ul>

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

#### Use Restrictions:

- **PHI: DO NOT** apply within 14 days of harvest.
- **Application Method:** Ground and aerial application permitted.
- **Amount of Water: DO NOT** apply in less than 100 gallons of water with ground equipment or 50.0 gallons of water with aircraft.
- **Minimum Application Interval:** 30 days.
- **Number of Applications: DO NOT** make more than 2 applications of Reaper ClearForm or any other foliarly applied abamectin containing product per calendar year.
- **Maximum Amount per Calendar Year: DO NOT** apply more than 0.047 pound abamectin per acre (40.0 fluid ounces per acre of Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).
- **Maximum Amount per Application: DO NOT** apply more than 0.023 pound abamectin per acre (20.0 fluid ounces per



acre of Reaper ClearForm) per application.

- **Grazing: DO NOT** allow livestock to graze in treated orchards.

## BEAN, DRY AND SUCCULENT

**Crops:** Chickpea (garbanzo bean) (*Cicer arietinum*); *Lupinus* spp. (includes sweet lupine, white sweet lupine, white lupine, and grain lupine); *Phaseolus* spp. (includes kidney bean, lima bean, navy bean, pinto bean, snap bean, and waxbean); *broad bean (fava bean) (Vicia faba)*; *Vigna* spp. (including adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea\*, crowder pea, mung bean, moth bean, rice bean, southern pea, urd bean, and yardlong bean)

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

### For control of *Liriomyza* leafminers and Spider Mites.

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

#### Important:

- Apply Reaper ClearForm with ground application equipment or aircraft.
- For best control, apply Reaper ClearForm with ground application equipment. With aerial application, the resulting control of leafminers and spider mites could be less than with ground application.

Pest	Fl oz/A	Instructions
<i>Liriomyza</i> leafminers Spider mites	8.0 to 16.0	<ul style="list-style-type: none"> <li>• Use 8.0 to 12.0 fl oz/A for low to moderate infestations and 13.0 to 16.0 fl oz/A for high infestations.</li> <li>• <b>Leafminers and Spider Mites:</b> 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. <b>(See Use Restrictions.)</b></li> </ul>

#### Use Restrictions:

- **PHI: DO NOT** apply within 7 days of harvest.
- **Application Method:** Ground or aerial application is permitted; however, **DO NOT** apply with aircraft in New York State.
- **Amount of Water: DO NOT** apply in less than 10.0 gallons of water per acre with ground application equipment. **DO NOT** apply in less than 5.0 gallons 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.
- **Maximum Amount per Application: DO NOT** apply more than 0.019 pound abamectin per acre (16.0 fluid ounces per acre Reaper ClearForm) per application.
- **Minimum Application Interval:** ~~Wait at least 6 days before repeating application.~~
- **Number of Applications: DO NOT** make more than 2 sequential applications of Reaper ClearForm or any other foliarly applied abamectin-containing product.
- **Maximum Amount per Calendar Year: DO NOT** apply more than 0.056 pound abamectin per acre (48.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including application types (seed treatment, soil, foliar).

## CELERIAC (*Apium graveollens*)

### For control of Twospotted spider mite.

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

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

#### Use Restrictions:

- **PHI: DO NOT** apply within 7 days of harvest.
- **Application Method:** Apply with ground application equipment only.

- **Amount of Water: DO NOT** apply in less than 20.0 gallons of water per acre.
- **Minimum Application Interval:** 7 days .
- **Number of Applications: DO NOT** make more than 2 sequential applications of Reaper ClearForm or any other foliarly applied abamectin containing product.
- **Maximum Amount per Calendar Year:** After transplanting the celeriac, **DO NOT** apply more than 0.056 pound abamectin per acre (48.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).

## CITRUS FRUIT CROP GROUP 10-10

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

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

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.

### Ground Application

Apply using conventional dilute or concentrate ground application sprayers calibrated to deliver sufficient water for thorough coverage (or outside coverage for Asian citrus psyllid, Citrus leafminer, or Citrus thrips).

### Aerial Application

Aerial application is permitted only for control of Citrus leafminer. Aerial application to citrus is not approved in California.

Pest	Dilute Sprays <sup>a</sup> Fl Oz/100 Gal	Concentrate Sprays <sup>b</sup> Fl Oz/A	Instructions
Asian citrus psylla	--	10.0 to 20.0 <sup>c</sup>	<ul style="list-style-type: none"> <li>• Applications should be made with a minimum of 0.2% horticultural spray oil (not a dormant oil) in the spray mixture or not less than 1.0 gal of oil/A (except when specified differently below).</li> <li>• <b>Asian citrus psylla:</b> Apply to protect newly expanding foliage flush during the spring, summer or fall. Reaper ClearForm will only control adults and nymphs present at the time of application.</li> <li>• <b>Citrus bud mite:</b> For best results, time the spray at “budswell.”</li> <li>• <b>Citrus leafminer:</b> Apply to protect new growth during spring, summer, or fall. <b>(See Use Restrictions)</b></li> <li>• <b>Citrus thrips:</b> Application targeted for Citrus thrips will only control the current generation and must be correctly timed. Apply when economic thresholds have been reached (after egg hatch has begun - preferably early to mid-hatch). <b>(See Use Restrictions.)</b></li> <li>• <b>Mites:</b> Apply when Mites first appear during spring, summer, and/or fall.</li> </ul>
Broad mite	1.0 to 2.0	10.0 to 20.0 <sup>c</sup>	
Citrus bud mite	1.0 to 2.0	10.0 to 20.0 <sup>d</sup>	
Citrus leafminer	--	5.0 to 20.0 <sup>e</sup>	
Citrus rust mite	0.5 to 2.0	5.0 to 20.0 <sup>e</sup>	
Citrus thrips	--	10.0 to 20.0 <sup>e</sup>	
Twospotted spider mite	1.0 to 2.0	10.0 to 20.0	

<sup>a</sup> The rate of Reaper ClearForm per 100 gallons is based on a volume of 1000 gallons per acre dilute spray.

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

<sup>c</sup> Ground application: For best results, use 150 to 300 gallons per acre of spray mix with a minimum of 3.0 gallons per acre of horticultural oil (not a dormant oil) and apply at a ground speed of 1 to 1.5 mph.

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

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

### Use Restrictions:

- **PHI: DO NOT** apply within 7 days of harvest.
- **Application Method:**
  - **To control Citrus leafminer** - Ground or aerial application is permitted.- For aerial application use a minimum of 10.0 [Reaper Clearform Reg No 34704-1078 Page 8]

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.
- **DO NOT** apply with aircraft to citrus in California
- **Prohibited Use:** To manage resistance, **DO NOT** use in citrus nurseries.
- **Application Interval:** **DO NOT** apply Reaper ClearForm, or any other abamectin containing product, within 30 days of the last treatment.
- Application is not permitted from onset of flowering until after petal fall is complete.
- **Maximum Amount per Calendar Year:** **DO NOT** apply more than 0.047 pound abamectin per acre (40.0 fluid ounces per acre Reaper ClearForm), per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).
- **DO NOT** make more than 3 applications of Reaper ClearForm, or any other abamectin containing product, per calendar year.
- **Grazing:** **DO NOT** allow livestock to graze in treated grove/orchards.

## COTTON

### For the control of Spider mites.

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

Pest	Fl oz/A	Instructions
Spider mites (Carmine, Pacific, Strawberry and Twospotted)	<b>Lower rate:</b> 4.0 to 6.0 (For early season cotton <b>See Instructions</b> ) <b>Higher rate:</b> 8.0 to 16.0	Apply when Mites first appear. The use rate depends on the size of the plant and density of the foliage. Repeat application if needed to maintain control. <b>(See Use Restrictions.)</b> The lower use rates of 4.0 to 6.0 fl oz/A are only recommended if cotton is early season and under 10 inches in height. <b>DO NOT</b> use less than 4.0 fl oz/A. <b>West of the Rocky Mountains</b> – the lower use rates may only be used on cotton less than 10 inches in height and applied only with ground equipment. <b>Important:</b> Reaper ClearForm may be used without a wetting agent. Spreading and penetrating surfactants can improve Mite control. When necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended. <b>DO NOT</b> use binder or sticker-type surfactants.

### Use Restrictions:

- **PHI:** **DO NOT** apply within **20** days of harvest.
- **Application Method:** Ground or aerial application is permitted.
- **Minimum Amount of Water:** **DO NOT** apply in fewer than 5.0 gallons of water per acre. Use sufficient volume to insure thorough coverage.
- **Maximum Amount per Application:** **DO NOT** apply more than 0.019 pound abamectin per acre (16.0 fluid ounces per acre Reaper ClearForm) per application.
- **Minimum Application Interval:** 21 days .
- **Maximum Amount per Calendar Year:** **DO NOT** apply more than 0.038 pound abamectin per acre (32.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).
- **Grazing Restriction:** **DO NOT** feed or allow livestock to graze treated cotton.

## CUCURBITS CROP GROUP 9

Crops in this group are: Chayote, Chinese waxgourd, Citron melon, Cucumbers, Edible gourds (includes Chinese okra, cucuzza, hechima, hyotan), Gherkin, *Momordica* spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of *Cucumis melo* include cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honey balls, honeydew melon, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon, and true cantaloupe), Pumpkin, Summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*), Winter squash, (includes acorn squash, butternut squash, calabaza, hubbard squash, spaghetti squash).

### For control of Spider mites and Leafminers.

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

**IMPORTANT:** Reaper ClearForm may be applied with ground application equipment or aircraft. For best control of Mites, apply

Reaper ClearForm with ground 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 Reaper ClearForm is aerially applied.

Pest	Fl oz/A	Instructions
Leafminers Spider mites	8.0 to 16.0	<ul style="list-style-type: none"> <li>Use 8.0 to 12.0 fl oz/A for low to moderate infestations and 16.0 fl oz/A for severe infestations.</li> <li>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. <b>(See Use Restrictions.)</b></li> </ul>

**Use Restrictions:**

- **PHI: DO NOT** apply within 7 days of harvest.
- **Application Method:** Ground or aerial application is permitted; however,
- **DO NOT** apply with aircraft in New York State.
- **Amount of Water: DO NOT** apply in less than 20.0 gallons of water per acre with ground application equipment. **DO NOT** apply in less than 5.0 gallons of water per acre with aircraft. Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures) use a greater volume of water to insure adequate coverage.
- **Maximum Amount per Application: DO NOT** apply more than 0.019 pound abamectin per acre (16.0 fluid ounces per acre Reaper ClearForm) per application.
- **Minimum Application Interval:** 7 days .
- **Number of Applications: DO NOT** make more than 2 sequential applications of Reaper ClearForm or any other foliarly applied abamectin containing product.
- **Maximum Amount per Calendar Year: DO NOT** apply more than 0.056 pound abamectin per acre (48.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).

**FRUITING VEGETABLES CROP GROUP 8-10**

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

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

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

**IMPORTANT:** Reaper ClearForm may be applied with ground application equipment or aircraft. For best control of Mites, apply Reaper ClearForm 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 Reaper ClearForm is aerially applied.

Pest	Fl oz/A	Instructions
Broad mite Colorado potato beetle <i>Liriomyza</i> leafminers Potato psyllid Spider mites <i>Thrips palmi</i> Tomato psyllid Tomato russet mite	8.0 to 16.0	<ul style="list-style-type: none"> <li><b>Broad, russet, and Spider mite:</b> Apply when Mites first appear.</li> <li><b>Colorado potato beetle, Leafminers, Mites, and <i>Thrips palmi</i>:</b> Use 8.0 fl oz/A for low to moderate infestations and 16.0 fl oz/A for severe infestations.</li> <li><b><i>Thrips palmi</i>:</b> Apply when Thrips are first observed.</li> <li><b>Tomato pinworm:</b> Application may be made from the time moth activity is detected up to, but no later than, the time when newly emerged larvae are present.</li> <li>Repeat application as necessary to maintain control. <b>(See Use Restrictions.)</b></li> <li><b>Important:</b> Reaper ClearForm 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 non-ionic surfactant is recommended. <b>DO NOT</b> use binder or sticker- type surfactants.</li> </ul>
Tomato pinworm	16.0	

**Use Restrictions:**

- **PHI: DO NOT** apply within 7 days of harvest.

- **Application Method:** Ground or aerial application permitted.
- **DO NOT** apply with aircraft in New York State.
- **Prohibited Use:** For resistance management, **DO NOT** use on fruiting vegetables grown for transplanting.
- **Amount of Water:** **DO NOT** apply in less than 20.0 gallons of water per acre with ground application equipment. **DO NOT** apply in less than 5.0 gallons 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, but **DO NOT** make more than 2 sequential applications of Reaper ClearForm or any other foliarly applied abamectin containing product.
- **Number of Applications:** **DO NOT** make more than 2 sequential applications of Reaper ClearForm or any other foliarly applied abamectin containing product.
- **Maximum Amount per Calendar Year:** **DO NOT** apply more than 0.056 pound abamectin per acre (48.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).
- **Maximum Amount per Application:** **DO NOT** apply more than 0.019 pound abamectin per acre (16.0 fluid ounces per acre Reaper ClearForm) per application.

### GRAPES AND SMALL FRUIT VINE CLIMBING SUBGROUP (EXCEPT FUZZY KIWIFRUIT) CROP SUBGROUP 13-07F

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

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

Reaper ClearForm may be applied 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. Reaper ClearForm must be applied to both sides of each row for maximum coverage.

Pest	Fl oz/A	Instructions
Pacific spider mite Twospotted spider mite Variegated leafhopper Western grape leafhopper Western grapeleaf skeletonizer Willamette spider mite	8.0 to 16.0 plus a nonionic surfactant	<ul style="list-style-type: none"> <li>• Use 8.0 to 12.0 fl oz/A for low to moderate infestations and 16.0 fl oz for severe infestations.</li> <li>• Repeat application, if needed. <b>(See Use Restrictions.)</b></li> <li>• <b>Important:</b> Reaper ClearForm 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. <b>DO NOT</b> use binder or sticker-type surfactants. Although Reaper ClearForm 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 Reaper ClearForm in combination with a non-ionic surfactant, carefully follow the <b>Directions for Use</b> and <b>Precautions</b> on the nonionic surfactant label and in official spray guides.</li> <li>• <b>Leafhoppers:</b> Apply Reaper ClearForm plus a nonionic surfactant using thorough spray coverage for contact knockdown only.</li> <li>• <b>Spider mites:</b> Apply when Mites first appear but before motiles exceed 5-leaf. <ul style="list-style-type: none"> <li>• <b>Western grapeleaf skeletonizer:</b> Apply Reaper ClearForm plus a nonionic surfactant when larvae are first observed. For optimum control, apply shortly after egg hatch.</li> </ul> </li> </ul>

#### Use Restrictions:

- **PHI:** **DO NOT** apply within **28** days of harvest.
- **Application Method:** Ground application only.
- **Amount of Water:** **DO NOT** apply in less than 50.0 gallons of water per acre with conventional ground application equipment. When using an electro-static sprayer, less than 50.0 gallons of water per acre may be used, however **DO NOT** use less than 5.0 gallons of water per acre.
- Application is not permitted from onset of flowering until after petal fall is complete.
- **Maximum Amount per Application:** **DO NOT** apply more than 0.019 pound abamectin per acre (16.0 fluid ounces per acre Reaper ClearForm) per application.
- **Minimum Application Interval:** 21 days, If a second application is necessary.
- **Number of Applications:** **DO NOT** make more than 2 applications of Reaper ClearForm or any other foliarly applied abamectin containing product per calendar year.
- **Maximum Amount per Calendar Year:** **DO NOT** apply more than 0.038 pound abamectin per acre (32.0 fluid ounces per [Reaper Clearform Reg No 34704-1078 Page 11]

acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).

- **Grazing: DO NOT** allow livestock to graze in treated vineyards.

**GUAVA [(not for use in California)]**

**Crops in this group are: acerola, feijoa, guava, jaboticaba, passionfruit, starfruit, and wax jambu.**

**For control of Twospotted spider mite.**

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.

**Ground Application:** Apply using conventional dilute or concentrate ground application sprayers calibrated to deliver sufficient water for thorough coverage.

Pest	Dilute Sprays <sup>a</sup> Fl Oz/100 Gal	Concentrate Sprays <sup>b</sup> Fl Oz/A	Instructions
Twospotted spider mite	1.0 to 2.0	10.0 to 20.0 <sup>c</sup>	<ul style="list-style-type: none"> <li>• Apply Reaper ClearForm with a minimum of 0.20% horticultural spray oil (not a dormant oil) in the spray mixture or not less than 1.0 gal of oil/A (except when specified differently below).</li> <li>• Use 10.0 to 15.0 fl oz product/A for low to moderate infestations and 15.0 to 20.0 fl oz product/A for severe infestations.</li> <li>• <b>Mites:</b> Apply when mites first appear during spring, summer, and/or fall.</li> </ul>

<sup>a</sup> The rate of Reaper ClearForm per 100 gallons is based on a volume of 1,000 gallons per acre dilute spray.

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

<sup>c</sup> Ground application: For best results, use 150 to 300 gallons per acre of spray mix with a minimum of 3.0 gallons per acre of horticultural oil (not a dormant oil) and apply at a ground speed of 1 to 1.5 mph.

**Use Restrictions:**

- **PHI: DO NOT** apply within 7 days of harvest.
- **Application Method:** Ground application only.
- **Amount of Water: DO NOT** apply in less than 50.0 gallons of water per acre with conventional ground application equipment. When using an electro-static sprayer, less than 50.0 gallons of water per acre may be used; however, **DO NOT** use less than 5.0 gallons of water per acre.
- **Maximum Amount per Application: DO NOT** apply more than 0.023 pound abamectin per acre (20.0 fluid ounces per acre Reaper ClearForm) per application.
- **Minimum Application Interval:** 14 days. If a second application is necessary.
- **Number of Applications: DO NOT** make more than 3 applications of Reaper ClearForm or any other foliarly applied abamectin-containing product per calendar year.
- **Maximum Amount per Calendar Year: DO NOT** apply more than 0.07 pound abamectin per acre (60.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).

## HERB CROP SUBGROUP 19A

Crops in this subgroup are: Angelica; Balm; Basil; Borage; Burnet; Catnip; Chervil (dried); Chives; Chives, Chinese; Clary, Coriander (leaf), Costmary, Culantro (leaf), Curry (leaf), Dill weed, Horehound, Hyssop, Lavender, Lemongrass, Lovage (leaf), Marigold, Marjoram (*Origanum* species), Nasturtium, Parsley (dried), Penneyroyal, Rosemary, Rue; Sage; Savory, Summer and Winter; Sweet bay, Tansy, Tarragon, Thyme, Wintergreen, Woodruff, and Wormwood.

For control of *Liriomyza* leafminers and Spider mite.

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

Pest	Fl oz/A	Instructions
<i>Liriomyza</i> leafminers Spider mite	8.0 to 16.0	<ul style="list-style-type: none"> <li>Use 8.0 fl oz/A for low to moderate infestations and 16.0 fl oz/A for severe infestations.</li> <li>Apply when adult leafminer flies or spider mites are first observed and repeat application, as necessary to maintain control. <b>(See Use Restrictions.)</b></li> <li>Reaper ClearForm 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. <b>DO NOT</b> use a surfactant when applying this product to chives.</li> <li><b>Important:</b> Although Reaper ClearForm 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 Reaper ClearForm in combination with a nonionic surfactant, carefully follow the <b>Directions for Use</b> and <b>Precautions</b> on the nonionic surfactant label and in official spray guides.</li> </ul>

### Use Restrictions:

- 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 20.0 gallons of water per acre.
- Application is not permitted from onset of flowering until after petal fall is complete.
- Minimum Application Interval:** 7 days .
- Maximum Amount per Application: DO NOT** apply more than 0.019 pound abamectin per acre (16.0 fluid ounces per acre Reaper ClearForm) per application.
- Number of Applications: DO NOT** make more than 2 applications of Reaper ClearForm or any other foliarly applied abamectin containing product per single cutting (harvest)
- Maximum Amount per Calendar Year: DO NOT** apply more than 0.056 pound abamectin per acre (48.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).

## HOPS [(Not approved for use in California)]

For control of Twospotted spider mite.

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

Pest	Fl oz/A	Instructions
Twospotted spider mite	8.0 to 16.0	<ul style="list-style-type: none"> <li>Apply Reaper ClearForm when Twospotted spider mites reach treatment thresholds.</li> <li>For applications at 1/2 trellis growth (6 to 8 ft height) apply 8.0 to 16.0 fl oz/A in a minimum of 40.0 gal water/A.</li> <li>For applications beyond 1/2 trellis growth, <b>DO NOT</b> use less than 16.0 fl oz/A in a minimum of 100 gal water/A.</li> <li><b>Important:</b> Reaper ClearForm may be used without a wetting agent. When necessary to improve the wetting of foliage and to smooth out spray deposits, a nonionic surfactant is recommended.</li> </ul>

### Use Restrictions:

- PHI: DO NOT** apply within **28** days of harvest.

- **Application Method:** Ground application only. **DO NOT** apply with aircraft.
- **Minimum Application Interval: 21 days.** If a second application is necessary to maintain control and repeat application only after alternative miticide with a different mode of action has been used.
- **Maximum Amount per Application: DO NOT** apply more than 0.019 pound abamectin per acre (16.0 fluid ounces per acre Reaper ClearForm) per application.
- **Maximum Number of Applications: DO NOT** make more than 2 applications of Reaper ClearForm or any other foliarly applied abamectin containing product per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).
- **Grazing: DO NOT** allow livestock to graze in treated hops yards.

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

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

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

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

**IMPORTANT:** Reaper ClearForm may be applied with ground application equipment or aircraft. For best control of Mites, apply Reaper ClearForm 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 Reaper ClearForm is aerially applied.

Pest	Fl oz/A	Instructions
Carmine spider mite <i>Liriomyza</i> leafminers Twospotted spider mite	8.0 to 16.0 plus a nonionic surfactant	<ul style="list-style-type: none"> <li>• Use 8.0 to 12.0 fl oz/A for low to moderate infestations and 16.0 fl oz/A for severe infestation.</li> <li>• <b>Leafminers:</b> Apply when adult flies are first observed, and repeat applications as needed to maintain control. (<b>See Use Restrictions.</b>)</li> <li>• <b>Spider mites:</b> Apply when Mites first appear and repeat as needed to maintain control. (<b>See Use Restrictions.</b>)</li> <li>• <b>Important:</b> Reaper ClearForm 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. <b>DO NOT</b> use binder or sticker-type surfactants.</li> </ul>

#### Use Restrictions:

- **PHI: DO NOT** apply within 7 days of harvest.
- **Application Method:** Ground or aerial application permitted
- **DO NOT** apply with aircraft in New York State.
- **Prohibited Use:** For resistance management, **DO NOT** use on leafy vegetables grown for transplanting.
- **Amount of Water: DO NOT** apply in less than 20.0 gallons of water per acre with ground application equipment. **DO NOT** apply in less than 5.0 gallons of water per acre with aircraft. Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures) use a greater volume of water to insure adequate coverage.
- **Maximum Amount per Application: DO NOT** apply more than 0.019 pound abamectin per acre (16.0 fluid ounces per acre Reaper ClearForm) per application.
- **Minimum Application Interval:** 7 days .
- **Number of Applications: DO NOT** make more than 2 sequential applications of Reaper ClearForm or any other foliarly applied abamectin containing product.
- **Maximum Amount per Calendar Year: DO NOT** apply more than 0.056 pound abamectin per acre (48.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).



## LONGAN; LYCHEE; PULASAN; RAMBUTAN; AND SPANISH LIME. [(NOT FOR USE IN CALIFORNIA)]

### For control of *Liriomyza* leafminers, Thrips, Twospotted spider mites.

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.

**Ground Application:** Apply using conventional dilute or concentrate ground application sprayers calibrated to deliver sufficient water for thorough coverage.

Pest	Dilute Sprays <sup>a</sup> Fl Oz/100 Gal	Concentrate Sprays <sup>b</sup> Fl Oz/A	Instructions
<i>Liriomyza</i> leafminers Thrips Twospotted spider mite	1.0 to 2.0	10.0 to 20.0 <sup>c</sup>	<ul style="list-style-type: none"><li>Apply Reaper ClearForm with a minimum of 0.20% horticultural spray oil (not a dormant oil) in the spray mixture or not less than 1.0 gallon of oil/A (except when specified differently below).</li><li>Use 10.0 to 15.0 fl oz product /A for low to moderate infestations and 15.0 to 20.0 fl oz product/A for severe infestations.</li><li><b>Leafminers:</b> Apply to protect new growth during spring, summer, or fall.</li><li><b>Mites:</b> Apply when mites first appear during spring, summer, and/or fall.</li><li><b>Thrips:</b> Applications targeted for thrips will only control the current generation and must be correctly timed. Apply when economic thresholds have been reached (after egg hatch has begun – preferably early to mid-hatch).</li></ul>

<sup>a</sup>The rate of Reaper ClearForm per 100 gallons is based on a volume of 1,000 gallons per acre dilute spray.

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

<sup>c</sup>Ground application: For best results, use 150 to 300 gallons per acre of spray mix with a minimum of 3.0 gallons per acre of horticultural oil (not a dormant oil) and apply at a ground speed of 1 to 1.5 mph.

### Use Restrictions:

- PHI: DO NOT** apply within **14** days of harvest.
- Application Method:** Ground application only.
- Amount of Water: DO NOT** apply in less than 50.0 gallons of water per acre with conventional ground application equipment. When using an electro-static sprayer, less than 50.0 gallons of water per acre may be used; however, **DO NOT** use less than 5.0 gallons of water per acre.
- Maximum Amount per Application: DO NOT** apply more than 0.023 pound abamectin per acre (20.0 fluid ounces per acre Reaper ClearForm) per application.
- Minimum Application Interval: 30 days.** If a second application is necessary.
- Number of Applications: DO NOT** make more than 2 applications of Reaper ClearForm or any other foliarly applied abamectin-containing product per calendar year.
- Maximum Amount per Calendar Year: DO NOT** apply more than 0.046 pound abamectin per acre (40.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).

## MINT (Peppermint and Spearmint)

### For control of Twospotted spider mite.

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

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

### Use Restrictions:

- PHI: DO NOT** apply within **28** days of harvest.
- Application Method:** Ground or aerial application permitted.
- DO NOT** apply with aircraft in New York State.
- Amount of Water: DO NOT** apply in less than 20.0 gallons of water per acre with ground application equipment. **DO NOT** apply in less than 5.0 gallons of water per acre with aircraft. Under conditions such as high pest populations, dense foliage, or adverse application conditions such as high temperatures, use a greater volume of water to insure adequate coverage.

- **Maximum Amount per Application:** **DO NOT** apply more than 0.042 pound abamectin per acre (12.0 fluid ounces per acre Reaper ClearForm) per application.
- **Minimum Application Interval:** 7 days .
- **Number of Applications:** **DO NOT** make more than 2 sequential applications of Reaper ClearForm or any other foliarly applied abamectin containing product and **DO NOT** apply more than 3 applications of Reaper ClearForm or any other foliarly applied abamectin containing product per calendaryear.
- **Maximum Amount per Calendar Year:** **DO NOT** apply more than 0.042 pound abamectin per acre (36.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).
- **Grazing:** **DO NOT** allow livestock to graze or feed treated foliage to livestock.

### ONION, BULB CROP SUBGROUP 3-07A [(not for use in California)]

Crops in this subgroup are: Daylily, bulb;Fritillaria, bulb; Garlic, bulb; Garlic, great-headed, bulb; Garlic, serpent, bulb; Lily, bulb; Onion, bulb, Onion, Chinese, bulb; Onion, pearl; Onion, potato, bulb; Shallot, bulb; Cultivars, varieties, and/or hybrids of these. For control of *Liriomyza* Leafminers and Thrips.

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

**IMPORTANT:** Apply Reaper ClearForm with ground application equipment or aircraft. For best control, apply Reaper ClearForm with ground application equipment. With aerial application, the resulting control of Leafminers and Thrips could be less than with ground application.

Pest	Fl oz/A	Instructions
<i>Liriomyza</i> leafminers Thrips	8.0 to 16.0	<ul style="list-style-type: none"> <li>• Use 8.0 to 12.0 fl oz/A for low to moderate infestations and 13.0 to 16.0 fl oz/A for high infestations.</li> <li>• <b>Leafminers:</b> Apply when adult Leafminer flies are first observed and repeat application, as needed, to maintain control within constraints of a sound resistance management program. <b>(See Use Restrictions)</b></li> <li>• <b>Thrips:</b> Apply in a Thrips management program and when Thrips are at economic threshold.</li> <li>• Repeat application, as needed, to maintain control within constraints of a sound resistance management program. <b>(See Use Restrictions.)</b></li> <li>• <b>DO NOT</b> use Reaper ClearForm as a rescue treatment for Thripscontrol.</li> <li>• <b>Important:</b> Add a non-ionic activator type wetting, spreading and/or penetrating adjuvant approved for use on bulb onion. <b>DO NOT</b> use binder sticker type adjuvants. Tank mixing with products that have binder sticker type formulations can reduce Reaper ClearForm performance.</li> </ul>

#### Use Restrictions:

- **PHI:** **DO NOT** apply within 30 days of harvest.
- **Application Method:** Ground or aerial application permitted.
- **DO NOT** apply with aircraft in New York State.
- **Amount of Water:** **DO NOT** apply in less than 20.0 gallons of water per acre with ground application equipment. **DO NOT** apply in less than 5.0 gallons 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.
- **Maximum Amount per Application:** **DO NOT** apply more than 0.019 pound abamectin per acre (16.0 fluid ounces per acre Reaper ClearForm) per application.
- **Minimum Application Interval:** 7 days .
- **Number of Applications:** Make 2 consecutive applications of Reaper ClearForm, 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 Reaper ClearForm applications. **DO NOT** make more than 2 sequential applications of Reaper ClearForm or any other foliarly applied abamectin containing product.
- **Maximum Amount per Calendar Year:** **DO NOT** apply more than 0.056 pound abamectin per acre (48.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).

## ONION, GREEN CROP SUBGROUP 3-07B

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

### For control of *Liriomyza* leafminers and Thrips.

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

#### Important:

- Apply Reaper ClearForm with ground application equipment or aircraft.
- For best control apply Reaper ClearForm with ground application equipment. With aerial application, the resulting control of leafminers and thrips could be less than with ground application.

Pest	Fl oz/A	Instructions
<i>Liriomyza</i> leafminers Thrips	8.0 to 16.0	<ul style="list-style-type: none"><li>• Use 8.0 to 12.0 fl oz/A for low to moderate infestations and 13.0 to 16.0 fl oz/A for high infestations.</li><li>• <b>Leafminers:</b> Apply when adult leafminer flies are first observed and repeat application, as needed, to maintain control within constraints of a sound resistance management program. <b>(See Use Restrictions.)</b></li><li>• <b>Thrips:</b> 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. <b>(See Use Restrictions.)</b> <b>DO NOT</b> use Reaper ClearForm as a rescue treatment for thrips control.</li><li>• <b>Important:</b> Add a non-ionic activator type wetting, spreading and/or penetrating adjuvant approved for use on bulb onion. <b>DO NOT</b> use binder or sticker type adjuvants. Tank-mixing with products that have binder or sticker type formulations can reduce Reaper ClearForm performance. <b>(See Use Information and Use Restrictions.)</b></li></ul>

#### Use Restrictions:

- **PHI: DO NOT** apply within 7 days of harvest.
- **Application Method:** Ground or aerial application permitted.
- **DO NOT** apply with aircraft in New York State or California.
- Amount of Water: **DO NOT** apply in less than 20.0 gallons of water per acre with ground application equipment. **DO NOT** apply in less than 5.0 gallons 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.
- **Maximum Amount per Application: DO NOT** apply more than 0.019 pound abamectin per acre (16.0 fluid ounces per acre Reaper ClearForm) per application.
- **Minimum Application Interval:** 7 days .
- **Number of Applications:** Make 2 consecutive applications of Reaper ClearForm 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 Reaper ClearForm applications. **DO NOT** make more than 2 sequential applications of Reaper ClearForm or any other foliarly applied abamectin-containing product.
- **Maximum Amount per Calendar Year: DO NOT** apply more than 0.076 pound abamectin per acre (64.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).

## PAPAYA [(not for use in California)]

Black Sapote; Canistel; Mamey Sapote; Papaya; Sapodilla; Star Apple.

For control of Twospotted spider mites.

Pest	Dilute Sprays <sup>a</sup> Fl Oz/100 Gal	Concentrate Sprays <sup>b</sup> Fl Oz/A	Instructions
Twospotted spider mite	1.0 to 2.0	10.0 to 20.0 <sup>c</sup>	<ul style="list-style-type: none"><li>Apply Reaper ClearForm with a minimum of 0.20% horticultural spray oil (not a dormant oil) in the spray mixture or not less than 1.0 gal oil/A (except when specified differently below).</li><li>Use 10.0 to 15.0 fl oz product /A for low to moderate infestations and 15.0 to 20.0 fl oz product/A for severe infestations.</li><li><b>Mites:</b> Apply when mites first appear during spring, summer, and/or fall.</li></ul>

<sup>a</sup> The rate of Reaper ClearForm per 100 gallons is based on a volume of 1,000 gallons per acre dilute spray.

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

<sup>c</sup> Ground application: For best results, use 150 to 300 gallons per acre of spray mix with a minimum of 3.0 gallons per acre of horticultural oil (not a dormant oil) and apply at a ground speed of 1 to 1.5 mph.

### Use Restrictions:

- **DO NOT** apply to mango.
- **PHI: DO NOT** apply within **3** days of harvest.
- **Application Method:** Ground application only.
- **Amount of Water: DO NOT** apply in less than 50.0 gallons of water per acre with conventional ground application equipment. When using an electro-static sprayer, less than 50.0 gallons of water per acre may be used; however, **DO NOT** use less than 5.0 gallons of water per acre.
- **Maximum Amount per Application: DO NOT** apply more than 0.023 pound abamectin per acre (20.0 fluid ounces per acre Reaper ClearForm) per application.
- **Application Interval: 14 days.** If a second application is necessary .
- **Number of Applications: DO NOT** make more than 3 applications of Reaper ClearForm or any other foliarly applied abamectin-containing product per calendar year.
- **Maximum Amount per Calendar Year: DO NOT** apply more than 0.070 pound abamectin per acre (60.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).

## PINEAPPLE [(not for use in California)]

For control of Twospotted spider mite.

Pest	Fl oz/A	Instructions
Twospotted spider mite	10.0 to 20.0	Use 10.0 to 15.0 fl oz/A for low to moderate infestations and 15.0 to 20.0 fl oz/A for high infestations.

### Use Restrictions:

- **PHI: DO NOT** apply within **16 weeks** of harvest.
- **Application Method:** Ground application only.
- **Amount of Water: DO NOT** apply in less than 50.0 gallons of water per acre with conventional ground application equipment. When using an electro-static sprayer, less than 50.0 gallons of water per acre may be used; however, **DO NOT** use less than 5.0 gallons of water per acre.
- **Maximum Amount per Application: DO NOT** apply more than 0.023 pound abamectin per acre (20.0 fluid ounces per acre Reaper ClearForm) per application.
- **Minimum Application Interval: 7 days.** If a second application is necessary.
- **Number of Applications: DO NOT** make more than 2 applications of Reaper ClearForm or any other foliarly applied abamectin-containing product per calendar year.
- **Maximum Amount per Calendar Year: DO NOT** apply more than 0.046 pound abamectin per acre (40.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).

**POME FRUIT CROP GROUP 11-10 [(not for use in California, except where noted)]**

Crops in this group are: apple[\*]; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; quince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or hybrids of these.

For control of European red mite, McDaniel spider mite, Pear psylla, Pear rust mite, Tentiform leafminer, Twospotted spider mite, White apple leafhopper, and Yellow mite.

[\* Use allowed in California]

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

**IMPORTANT:**

- 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.
- When using Reaper ClearForm plus horticultural spray oil, carefully follow the Directions for Use and Precautions on the horticultural spray oil label as well as the precautions in official spray guides or on product labels. For example, applying Reaper ClearForm plus horticultural spray oil fewer than 14 days before or after applying Captan® can result in phytotoxicity and crop loss.

Pest	Dilute Sprays <sup>a</sup> Fl Oz/100 Gal	Concentrate Sprays <sup>b</sup> Fl Oz/A	Instructions
European red mite McDaniel spider mite Pear psylla Pear rust mite Tentiform leafminer Twospotted spider mite White apple leafhopper Yellow mite	2.5 to 5.0	10.0 to 20.0	<ul style="list-style-type: none"> <li>• Apply Reaper ClearForm when spider mite or insect thresholds are reached.</li> <li>• A second application may be made if needed to maintain control. <b>(See Use Restrictions.)</b></li> <li>• Use a minimum of 0.25% horticultural spray oil (not a dormant oil) in the dilute spray mixture and not less than 1.0 gal horticultural spray oil/A in the final finished spray.</li> </ul>

<sup>a</sup> The rate of Reaper ClearForm per 100 gallons is based on a volume of 400 gallons per acre dilute spray.

<sup>b</sup> To determine the amount of product per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of product per acre in concentrate sprays as would be required for the dilute sprays to the same orchard/grove. This may result in use of less than 10.0 fluid ounces per acre on small trees.

**Use Restrictions:**

- **PHI: DO NOT** apply within **28** days of harvest.
- **Application Method:** Ground application only. **DO NOT** apply with aircraft.
- **Amount of Water: DO NOT** apply in less than 40.0 gallons of water per acre.
- Application is not permitted from onset of flowering until after petal fall is complete.
- **Maximum Amount per Application: DO NOT** apply more than 0.023 pound abamectin per acre (20.0 fluid ounces per acre Reaper ClearForm) per application.
- **Minimum Application Interval: 21 days.** If a second application is necessary.
- **Number of Applications: DO NOT** make more than 2 applications of Reaper ClearForm or any other foliarly applied abamectin-containing product per calendar year.
- **Maximum Amount per Calendar Year: DO NOT** apply more than 0.047 pound abamectin per acre (40.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).
- **Grazing: DO NOT** allow livestock to graze in treated orchards.

## STONE FRUIT CROP GROUP 12-12

Crops in this group are: apricot; apricot, Japanese; capulin[\*]; cherry, black[\*]; cherry, Nanking[\*]; cherry, sweet; cherry, tart; Jujube[\*], Chinese; nectarine; peach; plum; plum, American; plum, beach; plum, Canada; plum, cherry; plum, Chickasaw; plum, Damson; plum, Japanese; plum, Klamath; plum, prune; plumcot; sloe[\*]; cultivars, varieties, and/or hybrids of these.

[\* Not for this use in California.]For control of European spider mite, Pacific spider mite, and Twospotted spider mite.

Reaper ClearForm 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.

Pest	Dilute Sprays <sup>a</sup> Fl Oz/100 Gal	Concentrate Sprays <sup>b</sup> Fl Oz/A	Instructions
European red mite Pacific spider mite Twospotted spider mite	2.5 to 5.0	10.0 to 20.0	<ul style="list-style-type: none"> <li>• Apply when Mites first appear.</li> <li>• A second application may be made, if needed, to maintain control. (See Use Restrictions)</li> <li>• Always apply Reaper ClearForm in combination with a non-ionic surfactant that spreads on and/or penetrates the leaf cuticle, or apply with horticultural spray oil (not a dormant oil).</li> <li>• <b>IMPORTANT:</b> 1) A nonionic surfactant that spreads on and/or penetrates the leaf cuticle can improve insect control. Although Reaper ClearForm has been tested in combination with non-ionic surfactants for safety to stone fruit, it is impossible to test on all 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 Reaper ClearForm in combination with a nonionic surfactant, carefully follow the Directions for Use and Precautions on the surfactant label and in official spray guides. 2) A horticultural oil (not a dormant oil) may improve efficacy and can be used but it may increase the possibility of phytotoxicity to foliage and fruit.</li> <li>• Use nonionic surfactants at the manufacturer's recommended rate.</li> <li>• Use a minimum of 0.25% horticultural spray oil (not a dormant oil) in the dilute spray mixture and not less than 1.0 gal horticultural spray oil/A in the final finished spray.</li> </ul>

<sup>a</sup> The rate of Reaper ClearForm per 100 gallons is based on the volume of 400 gallons per acre dilute spray.

<sup>b</sup> To determine the amount of product per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of product per acre in concentrate spray as would be required for the dilute sprays to the same orchard/grove. This may result in use of less than 10.0 fluid ounces per acre on small trees.

### Use Restrictions:

- **PHI: DO NOT** apply within **21** days of harvest.
- **Application Method:** Ground application only. **DO NOT** apply with aircraft.
- **Amount of Water: DO NOT** apply in less than 40.0 gallons of water per acre.
- **Maximum Amount per Application: DO NOT** apply more than 0.023 pound abamectin per acre (20.0 fluid ounces per acre Reaper ClearForm) per acre per application.
- **Minimum Application Interval: 21 days.** If a second application is needed.
- Application is not permitted from onset of flowering until after petal fall is complete.
- **Number of Applications: DO NOT** make more than 2 applications of Reaper ClearForm or any other foliarly applied abamectin containing product per calendar year.
- **Maximum Amount per Calendar Year: DO NOT** apply more than 0.047 pound abamectin per acre (40.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).
- **Grazing: DO NOT** allow livestock to graze in treated orchards.

## TREE NUTS CROP GROUP 14-12

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

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

Reaper ClearForm 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.

Pest	Dilute Sprays <sup>a</sup> Fl Oz/100 Gal	Concentrate Sprays <sup>b</sup> Fl Oz/A	Instructions
European red mite Pacific spider mite Strawberry spider mite Twospotted spider mite	2.5 to 5.0	10.0 to 20.0	<ul style="list-style-type: none"> <li>Always use Reaper ClearForm in combination with a horticultural spray oil (not a dormant oil) approved for use on tree nuts. Use a minimum of 0.25% horticultural spray oil (not a dormant oil) in the dilute spray mixture and not less than 1.0 gal horticultural spray oil/A in the final finished spray.</li> <li>Apply Reaper ClearForm when Spider mites first appear. Residual Spider mite control is greater from spray deposits on newer leaves compared to older leaves.</li> <li>A second application may be made, if needed, to maintain control. (<b>See Use Restrictions.</b>)</li> </ul>

<sup>a</sup>The rate of Reaper ClearForm per 100 gallons based on a volume of 400 gallons per acre dilute spray.

<sup>b</sup>To determine the amount of product per acre for concentrate sprays, first determine the amount that would be required in a full cover dilute spray. Use the same amount of product per acre in concentrate sprays that would be required for the dilute sprays to the same orchard/grove. This may result in use of less than 10.0 fluid ounces per acre on small trees.

### Use Restrictions:

- **PHI: DO NOT** apply within **21** days of harvest.
- **Application Method:** Ground application only. **DO NOT** apply with aircraft.
- **Amount of Water: DO NOT** apply in less than 40.0 gallons of water per acre.
- Application is not permitted from onset of flowering until after petal fall is complete.
- **Minimum Application Interval: 21 days.** If a second application is necessary.
- **Maximum Amount per Application: DO NOT** apply more than 0.023 pound abamectin per acre (20.0 fluid ounces per acre Reaper ClearForm) per application.
- **Applications per Calendar Year: DO NOT** make more than 2 applications of Reaper ClearForm or any other foliarly applied abamectin containing product per calendar year.
- **Maximum Amount per Calendar Year: DO NOT** apply more than 0.047 pound abamectin per acre (40.0 fluid ounces per acre Reaper ClearForm) per calendar year of this and other abamectin-containing products including all application types (seed treatment, soil, foliar).
- **Grazing: DO NOT** allow livestock to graze in treated groves/orchards.

## TUBEROUS AND CORM VEGETABLES CROP SUBGROUP 1C

Crops in this subgroup are: Arracacha; Arrowroot; Artichoke, Chinese; Artichoke, Jerusalem; Canna, edible; Cassava, bitter and sweet; Chayote root; Chufa; Dasheen; Ginger; Leren; Potato; Sweet Potato; Tanier; Tumeric; Yam bean; and Yam, true  
**For control of Colorado potato beetle, *Liriomyza* leafminers, Potato psyllid, and Spider mites.**

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

**Important:** Reaper ClearForm may be applied using ground application equipment or aircraft. For best control of Mites, apply Reaper ClearForm 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 Reaper ClearForm is aerially applied.

Pest	Fl oz/A	Instructions
Colorado potato beetle <i>Liriomyza</i> leafminers Potato psyllid Spider mites	8.0 to 16.0	<ul style="list-style-type: none"> <li>• Use 8.0 to 12.0 fl oz/A for low to moderate infestations and 16.0 fl oz/A for severe infestations.</li> <li>• 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.</li> <li>• Insect and Spider mite control may be reduced if Reaper ClearForm is used in combination with a sticker or binder type product such as Initiate® 720 Flowable Fungicide.</li> <li>• <b>Colorado potato beetle:</b> Make the first application after approximately 50% of the egg masses have hatched and larvae are present. If 2 applications are needed, limit them to a single Colorado potato beetle generation/crop. <b>DO NOT</b> make more than 2 applications/crop. (See Use Restrictions)</li> <li>• <b><i>Liriomyza</i> leafminers:</b> Make the first application when adult flies are first observed. Repeat applications as needed to maintain control. (See Use Restrictions.)</li> <li>• <b>Spider mites:</b> Make the first application when Mites first appear. Repeat application as needed to maintain control. (See Use Restrictions.)</li> </ul>

### Use Restrictions:

- **PHI: DO NOT** apply within **14** days of harvest.
- **Application Method:** Ground or aerial application permitted.
- **DO NOT** apply with aircraft in New York State.
- **Amount of Water: DO NOT** apply in less than 20.0 gallons of water per acre with ground application equipment. **DO NOT** apply in less than 5.0 gallons of water per acre with aircraft. Under conditions such as high pest populations, dense foliage, or adverse application conditions (such as high temperatures) use a greater volume of water to insure adequate coverage.
- **Maximum Amount per Application: DO NOT** apply more than 0.019 pound abamectin per acre (16.0 fluid ounces per acre) per application.
- **Minimum Application Interval:** 7 days .
- **Number of Applications: DO NOT** make more than 2 sequential applications of Reaper ClearForm or any other foliarly applied abamectin containing product.
- **Maximum Amount per Crop: DO NOT** apply more than 0.038 pound abamectin per acre (32.0 fluid ounces per acre Reaper ClearForm) of this and other abamectin-containing products including all application types (seed treatment, soil, foliar) per crop for Spider mite or Colorado potato beetle control. **DO NOT** apply more than 0.056 pound abamectin per acre (48.0 fluid ounces per acre Reaper ClearForm) of this and other abamectin-containing products including all application types (seed treatment, soil, foliar) per crop for Leafminer control.
- **Maximum Amount per Calendar Year: DO NOT** apply more than 0.056 pound abamectin per acre (48.0 fluid ounces per acre Reaper ClearForm) of this and other abamectin-containing products including all application types (seed treatment, soil, foliar) per calendar year.
- **Grazing: DO NOT** allow livestock to graze or feed treated foliage to livestock.



## ORNAMENTALS

### Shadehouse, Greenhouse, Field-grown ornamentals, Christmas trees, and Other woody ornamentals

Pest	Fl oz/A	Special Instructions
Mites: Carmine spider mite Eriophyid mites: Bud mites Rust European red mite Southern red mite Spruce spider mite Tarsonemid mites Broad mites Cyclamen Twospotted spider mite	4.0	Apply, for example, in 200 to 400 gallons of water per acre. In volumes of water below 200 gallons, use a minimum of 8.0 fluid ounces per acre. If more than 400 gallons of water per acre are required for good plant coverage, apply a maximum rate of 16.0 fluid ounces per acre. For example, if 650 gallons of water are required, use 2.5 fluid ounces per 100 gallons.  For Tarsonemid mites, repeat applications to newly developing tissue may be necessary to maintain control.
<i>Liriomyza</i> leafminers	8.0	Repeat at 7-day intervals or as necessary to maintain control. Apply, for example, in 100 to 200 gallons of water per acre. In volumes of water below 100 gallons, use a minimum of 8.0 fluid ounces per acre. If more than 200 gallons of water per acre are required for good plant coverage, apply a maximum rate of 16.0 fluid ounces per acre. For example, if 400 gallons of water are required, use 4.0 fluid ounces per 100 gallons.
Boxwood leafminer	8.0	For control of Mining larvae, make the application when adults are beginning to lay eggs in the new foliage.
Aphids Thrips Whiteflies	8.0	For suppression of pest populations, young immatures must be contacted by the spray.

**Product Information:** Residual control of pests may be enhanced with the addition of a horticultural spray oil at 0.5 to 1.0% of the spray volume on field-grown Woody ornamentals, landscape plants, and Christmas trees. Some plants are sensitive to oils and so without prior experience, the user should spray a small number of plants and observe plants for 2 weeks before spraying the remaining plants. Excessive cold or warm temperatures may increase the chance of plant damage following application with oils. Carefully read and follow directions on the oil label and **DO NOT** exceed maximum rates listed on either label.

Time applications to allow product to dry on the treated surface prior to a rain event.

To limit unwanted surface runoff in outdoor ornamental uses, **DO NOT** apply when growth media is saturated.

**Product Information Per Application:** Use sufficient water to obtain uniform plant coverage. Refer to the **Resistance Management** section and the **Use Restrictions** section for additional information.

#### Use Restrictions:

- **Maximum single application rate:** 8.0 fl oz Reaper/A (0.0095 lb ai/A)
- **Minimum application interval:** 7 days
- **Maximum Yearly rate:** **DO NOT** exceed 16.0 fl oz Reaper/A/calendar yr (0.019 lb ai/A/yr) of this and other abamectin- containing products including all application types (seed treatment, soil, foliar).
- **DO NOT** make more than 2 sequential applications of Reaper or any other foliarly applied abamectin-containing product.
- **DO NOT** use Reaper ClearForm for suppression of Aphids, Whiteflies, and Thrips on roses, chrysanthemums, and gerbera. These ornamentals are primary hosts of Mites and *Liriomyza* leafminers for which Reaper ClearForm applications should be targeted. Additional applications of Reaper ClearForm to suppress Aphids, Thrips, and Whiteflies on these plants will increase the selection pressure on Mites and *Liriomyza* leafminers which may result in greater tolerance to Reaper ClearForm among these pests.
- **DO NOT** apply Reaper ClearForm through any type of irrigation system.
- **DO NOT** apply with aircraft
- **DO NOT** use in citrus nurseries.
- Reaper ClearForm has been evaluated for phytotoxicity on a wide range of ornamental plants. However, since all combinations or sequences of pesticide sprays including surfactants and adjuvants have not been tested, it is recommended that a small area be sprayed first to make certain that no phytotoxicity occurs. Phytotoxicity has been observed following the use of Reaper ClearForm on certain species of ferns (e.g., *Adiantum* spp.) and Shasta daisy (*L. eucanthemum* spp.). It is therefore recommended that Reaper ClearForm not be used on ferns or Shasta daisy.

## 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 instruction, contact your State Pesticide or Environmental Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING: Nonrefillable container. DO NOT** reuse or refill this container. 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. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrcycle.org](http://www.acrcycle.org). If not recycled, then puncture and dispose of in a sanitary landfill, or incineration.

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 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.

**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 help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC - 1-800-424-9300.**

## CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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