



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

EPA Reg. Number:

34704-1129

Date of Issuance:

1/9/20

NOTICE OF PESTICIDE:

Registration
 Reregistration
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

Roundhouse 1E

Name and Address of Registrant (include ZIP Code):

Solito Sumulong
Loveland Products Inc.
P.O. Box 1286
Greeley, CO 80632-1286

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
2. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. A one year study is required to satisfy these data requirements. You have 18 months from the date of registration to provide these data.

Signature of Approving Official:

Jackie Herrick, Product Manager 3
Invertebrate and Vertebrate Branch 1, Registration Division
(7505P)

Date:

1/9/20

3. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, “EPA Reg. No. 34704-1129.”
4. Submit one copy of the revised final printed label for the record before you release the product for shipment.

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.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 06/21/2019

If you have any questions, please contact Vanessa Emerson by phone at 703-347-0360, or via email at emerson.vanessa@epa.gov

Enclosure

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

{BEGIN Booklet Front Panel Language}

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.

LAMBDA-CYHALOTHRIN GROUP **3** INSECTICIDE



Roundhouse 1E

ACTIVE INGREDIENT:

By Wt.

*Lambda-cyhalothrin**

[1α(S*),3α(Z)]-(±)-cyano-(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate* 13.1%

OTHER INGREDIENTS** : 86.9%

TOTAL 100.0%

* Synthetic pyrethroid

** Contains petroleum distillate

Contains 1 pound *lambda*-cyhalothrin per gallon.

KEEP OUT OF REACH OF CHILDREN

DANGER

PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label find someone to explain it to you in detail.)

[See label booklet for additional Precautionary Statements and Directions for Use]

FIRST AID

| | |
|--------------------------------|---|
| If on skin or clothing: | <ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice. |
| If in eyes: | <ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. |
| If swallowed: | <ul style="list-style-type: none"> Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. |
| If inhaled: | <ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice. |

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

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical assistance, call 1-866-944-8565. For chemical emergency: spill, leak, fire, exposure or accident, call CHEMTREC: 1-800-424-9300.

Note To Physician: Contains petroleum distillates. Vomiting may cause aspiration pneumonia.

EPA Reg. No.: 34704-xxxx
EPA Est. No.: [nnnn-xx-nnn]
Net Contents: 1.0 GAL (3.78 L)
[Print code]

| |
|---|
| ACCEPTED |
| 01/09/2020 |
| Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 34704-1129 |

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

{END Booklet Front Panel Language}

{BEGIN Language inside booklet}

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER/PELIGRO

Corrosive. Causes skin burns. May be fatal if swallowed or inhaled. Causes substantial but temporary eye injury. Do not get in eyes on skin or clothing. Do not breathe vapor or spray mist. Harmful if absorbed through skin. Wear protective clothing, gloves, eyewear (goggles, face shield, or safety glasses) and respirator as indicated under **Personal Protective Equipment**. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Skin exposure may also result in a sensation described as a tingling, itching, burning, or prickly feeling. Onset may occur immediately to 4 hours after exposure and may last 2 to 30 hours, without damage. Wash exposed areas once with soap and water. Relief from the skin sensation may be obtained by applying an oil-based cream.

Personal Protective Equipment (PPE):

Applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants,
- Chemical-resistant gloves: barrier laminate, nitrile rubber, neoprene rubber or viton >14 mils,
- Chemical-resistant footwear plus socks,
- Protective eyewear,
- Chemical-resistant headgear for overhead exposure,
- Chemical-resistant apron when cleaning equipment, mixing, or loading,
- For exposures in enclosed areas, use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE prefilter.
- For exposures outdoors, use a NIOSH approved respirator with any R, P or HE filter.

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

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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 extremely toxic to fish and aquatic organisms and toxic to wildlife.

For terrestrial use: do not apply directly to water or 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 treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

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 foraging the treatment area.

PHYSICAL OR CHEMICAL HAZARDS

Combustible liquid. Do not use or store near heat or open flame. Do not mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur.

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.

This labeling must be in the possession of the user at the time of application.

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 24 hours.

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 long pants,
- Chemical-resistant gloves including barrier laminate, nitrile rubber, neoprene rubber or viton ≥ 14 mils,
- Chemical-resistant footwear plus socks,
- Protective eyewear,
- Chemical-resistant headgear for overhead exposure.

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

USE DIRECTIONS

Initial and residual control are contingent upon thorough crop coverage. Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. Apply in a minimum of 2 gallons per acre by air or 10 gallons per acre by ground unless otherwise specified in this label. When foliage is dense or pest pressure is high (heavier insect or egg pressure, larger larval stages), use of higher application volumes and/or higher use rates may improve initial and residual control.

For cutworm control, this product may be applied before, during or after planting. For soil incorporated applications, use higher rates for improved control.

RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, this product contains a Group 3 insecticide. Any insect population may contain individuals naturally resistant to this product and other Group 3 insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of this product or other Group 3 insecticides within a growing season, or among growing seasons, with different groups that control the same pests. Avoid application of more than the maximum number and consecutive sprays of this or other insecticides in the same group in a season.
- Use tank mixtures with insecticides/acaricides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
 - 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, Inc. at 888-574-2878 or at www.lovelandproducts.com.

SPRAY DRIFT REQUIREMENTS

Wind Direction and Speed

Only apply this product if the wind direction favors on-target deposition. Do not apply when the wind velocity exceeds 15 mph.

Temperature Inversion

Do not make aerial or ground applications into temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Droplet Size

Use only medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

Additional Requirements for Ground Applications

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application. For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy. For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

Additional Requirements for Aerial Applications:

The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter. Flight speed and nozzle orientation must be considered in determining drop size. Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. When applications are made with a cross-wind, the swath will be displaced downward. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

SPRAY DRIFT PRECAUTIONS

BUFFER ZONES:

Vegetative Buffer Strip

Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing *lambda*-cyhalothrin onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers: Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 21 pp. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_023819.pdf.

Buffer Zone for Ground Application (groundboom, overhead chemigation, or airstblast)

Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes; natural ponds; estuaries; and commercial fish ponds).

Buffer Zone for ULV Aerial Application

Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes; natural ponds; estuaries; and commercial fish ponds).

Buffer Zone for Non-ULV Aerial Application

Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes; natural ponds; estuaries; and commercial fish ponds).

CHEMIGATION

Sprinkler Irrigation Application

Apply this product at rates and timing described elsewhere in this label. As local recommendations differ, consult your local State Extension Service or other local experts for recommendations on adjuvant or diluent types, rates and mixing instructions. These recommendations should be proven, through university and extension field trials, to be effective with this product applied by chemigation.

Check the irrigation system to insure uniform application of water to all areas. Thorough coverage of foliage is required for good control. Good agitation in the pesticide supply tank should be maintained prior to and during the entire application period.

Apply by injecting the specified rate of this product into the irrigation system using a metering device that will introduce a constant flow and by distributing the product to the target area in 0.1 to 0.2 acre-inch of water. In general; use the least amount of water required for proper distribution and coverage. It is recommended that the product be injected into the main irrigation line ahead of a right angle turn in the line to insure adequate dispersion or mixing in the irrigation water. Once the application is completed, flush the entire irrigation and injection system with clean water before stopping the system.

In addition to the above recommendations, if application is being made during a normal irrigation set of a stationary sprinkler, the recommended rate of this product for the area covered should be injected into the system only during the end of the irrigation set for sufficient time to provide adequate coverage and product distribution.

It is not recommended that this product be applied through an irrigation system connected to a public water system. Public water system means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Use Precautions: Sprinkler Irrigation Application

- Apply this product only through (sprinkler including center pivot, lateral move, end tow, side [wheel] roll, traveler, big gun, solid set, or hand move) irrigation system(s). Do not apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- The system must contain a functional check valve. Vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Any alternatives to the above required safety devices must conform to the list of EPA-approved alternative devices.
- Do not apply when wind speed favors drift beyond the area intended for treatment or non-uniform distribution of treated water.
- Do not apply through chemigation systems connected to public water systems.

**SPECIFIC USE DIRECTIONS
AGRICULTURAL USES**

ALFALFA, ALFALFA GROWN FOR SEED

| Target Pests | Rate | |
|--|----------------|-----------------|
| | lb AI/A | fl oz product/A |
| Alfalfa Caterpillar Army Cutworm Cutworm species Green Cloverworm Leafhopper species Looper species Threecornered Alfalfa Hopper Velvetbean Caterpillar Webworm species | 0.015 to 0.025 | 1.92 to 3.20 |
| Alfalfa Seed Chalcid (Adult) Alfalfa Weevil Armyworm Bean Leaf Beetle (Adult) Blister Beetle species Blue Alfalfa Aphid Clover Leaf Weevil species Clover Root Borer (Adult) Clover Root Curculio species (Adult) Clover Stem Borer (Adult) Corn Earworm Cowpea Aphid Cowpea Curculio (Adult) Cowpea Weevil (Adult) Cucumber Beetle species (Adult) Egyptian Alfalfa Weevil Fall Armyworm ¹ Grape Colaspis (Adult) Grasshopper species Green June Beetle (Adult) Green Peach Aphid ² Japanese Beetle (Adult) Meadow Spittlebug Mexican Bean Beetle Pea Aphid Pea Weevil (Adult) Plant Bug species including Lygus species ² Spotted Alfalfa Aphid Stink Bug species Sweet Clover Weevil (Adult) Thrips species ³ Western Yellowstriped Armyworm Whitefringed Beetle species (Adult) Yellowstriped Armyworm | 0.02 to 0.03 | 2.56 to 3.84 |
| Beet Armyworm ² Blotch Leafminer ² Spider Mites ⁴ | 0.03 | 3.84 |

¹ Use higher rates for large larvae.

² See **Resistance** statement under **General Use Directions**.

³ Does not include Western Flower Thrips.

⁴ Suppression only.

Application Instructions for Alfalfa and Alfalfa Grown for Seed:

- Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. Apply in a minimum of 2 gal. per acre by air or 10 gal. per acre by ground. When foliage is dense and/or pest populations are high.
- 5 to 10 gal. per acre by air or 20 gal. per acre by ground and higher use rates are recommended. Use higher rates for increased residual control.
- Do not apply when bees are actively foraging by applying during the early morning *or* during the evening hours. Be aware of bee hazard resulting from a cool evening and/or morning dew. It may be advisable to remove bee shelters during and for 2 to 3 days following application. Do not apply directly to bee shelters.
- Do not apply more than 0.03 lb. a.i. (3.84 fl. oz. or 0.24 pt. of product) per acre per cutting.
- Do not apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pt. of product) per acre per season.
- Do not apply within 1 day of harvest for forage or within 7 days of harvest for hay.

CANOLA

| Target Pests | Rate | |
|---|---------------|-----------------|
| | lb AI/A | fl oz product/A |
| Armyworm species Cabbage Seedpod Weevil Cutworm species Diamondback Moth Flea Beetle Grasshoppers Looper species Lygus Bug | 0.015 to 0.03 | 1.92 to 3.84 |
| Cabbage Aphid | 0.03 | 3.84 |

Application Instructions for Canola:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply a minimum of 2 gal. of water per acre.
- Do not apply within 7 days of harvest.
- Do not apply more than 0.09 lb. a.i. (11.52 fl. oz. or 0.72 pt. of product) per acre per year.

CEREAL GRAINS:

Barley, Buckwheat, Oats, Rye, Triticale, Wheat, Wheat Hay

| Target Pests | Rate | |
|--|----------------|-----------------|
| | lb AI/A | fl oz product/A |
| Army Cutworm Cutworm species | 0.015 to 0.025 | 1.92 to 3.20 |
| Armyworm Bird Cherry-Oat Aphid ¹ Cereal Leaf Beetle English Grain Aphid ¹ Fall Armyworm Flea Beetle species Grasshopper species Hessian Fly ² Orange Blossom Wheat Midge Russian Wheat Aphid ¹ Stink Bug species Yellowstriped Armyworm | 0.02 to 0.03 | 2.56 to 3.84 |
| Grass Sawfly | 0.025 to 0.03 | 3.20 to 3.84 |
| Chinch Bug Corn Leaf Aphid ³ Greenbug ⁴ Mite species ³ | 0.03 | 3.84 |

¹ Best control is obtained before insects begin to roll leaves. Once crop has started to boot, this product may provide suppression only. Higher specified rates and increased coverage will be necessary.

² Make applications when adults emerge.

³ Suppression only.

⁴ See **Resistance** statement under **General Use Directions**.

Application Instructions for Barley, Buckwheat, Oats, Rye, Triticale, Wheat, Wheat Hay:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gal. of water per acre.
- For chinch bug control, repeat applications at 3 - 5-day intervals if needed. This product may only suppress heavy infestations and/or migrations.
- Greenbug is known to have many biotypes. This product may provide suppression only. In this situation, a second application using an alternative chemistry may be needed.
- Do not apply within 30 days of harvest.
- Do not allow livestock to graze in treated areas or harvest treated wheat forage as feed for meat or dairy animals within 7 days after treatment. Do not feed treated straw to meat or dairy animals within 30 days after the last treatment.
- Do not apply more than 0.06 lb. a.i. (7.68 fl. oz. or 0.48 pt. of product) per acre per season.

CEREAL GRAINS:

Corn (at Plant): Field Corn, Popcorn, Seed Corn, Sweet Corn

| Target Pests | Rate | |
|---|--------------------|----------------------------|
| | lb AI/1,000 row-ft | fl oz product/1,000 row-ft |
| Corn Rootworm Larvae: Mexican, Northern, Southern, Western Cutworm species Lesser Cornstalk Borer Seedcorn Beetle Seedcorn Maggot White Grub species Wireworm species | 0.005* | 0.66* |

| * lb AI and fl oz/A product Applied at 0.66 fl oz/1,000 ft of row for Various Row Spacings | | | | | | |
|---|------------|------------|------------|------------|------------|------------|
| Row Spacing | 40" | 38" | 36" | 34" | 32" | 30" |
| lin ft/A | 13,068 | 13,756 | 14,520 | 15,374 | 16,335 | 17,424 |
| lbs ai/A | 0.067 | 0.07 | 0.075 | 0.079 | 0.084 | 0.09 |
| fl oz/A | 8.6 | 9.1 | 9.6 | 10.1 | 10.8 | 11.5 |

Application Instructions for Corn (at Plant): Field Corn, Popcorn, Seed Corn, Sweet Corn:

- Banded Applications - Apply at planting as a 5- to 7-inch T-band sprayed across the open seed furrow between the furrow openers and the press wheels or as a band application behind the press wheel.
- In-Furrow Applications - Apply into the seed furrow through spray nozzles or microtubes, behind the planter furrow openers and in front of the press wheel.
- Apply a minimum of 3 gal. finished spray per acre.
- Do not harvest or graze livestock or cut treated crops for feed within 21 days of at plant application.
- Do not apply more than 0.09 lb. a.i. (11.52 fl. oz. or 0.72 pt. of product) per acre per crop at plant.
- For field corn, popcorn, and seed corn do not apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pt. of product) per acre per crop from at plant and foliar applications. For sweet corn do not apply more than 0.48 lb. a.i. (61.44 fl. oz. or 3.84 pt. of product) per acre per crop from at plant and foliar applications.

CEREAL GRAINS:

Corn (Foliar): Field Corn, Popcorn, Seed Corn

| Target Pests | Rate | |
|--|----------------|-----------------|
| | lb AI/A | fl oz product/A |
| Corn Earworm ¹ Cutworm species Green Cloverworm Meadow Spittlebug Western Bean Cutworm ¹ | 0.015 to 0.025 | 1.92 to 3.20 |
| Armyworm ² Bean Leaf Beetle Bird Cherry-Oat Aphid ³ Cereal Leaf Beetle Corn Leaf Aphid ³ Corn Rootworm Beetle (Adult): Mexican, Northern, Southern, Western English Grain Aphid ³ European Corn Borer ¹ Fall Armyworm ² Flea Beetle species Grasshopper species Hop Vine Borer ¹ Japanese Beetle (Adult) Lesser Cornstalk Borer Sap Beetle (Adult) Seed corn Beetle Southwestern Corn Borer ¹ Stalk Borer ¹ Stink Bug species Tobacco Budworm ^{1,4} Webworm species Yellowstriped Armyworm ² | 0.02 to 0.03 | 2.56 to 3.84 |
| Beet Armyworm ⁴ Chinch Bug Greenbug ^{3,4} Mexican Rice Borer ¹ Rice Stalk Borer ¹ Southern Corn Leaf Beetle ³ Sugarcane Borer ¹ | 0.03 | 3.84 |

¹ For control before the larva bores into the plant stalk or ear.

² Use higher rates for large larvae.

³ Suppression only.

⁴ See **Resistance** statement under **General Use Directions**.

Application Instructions for Corn (Foliar): Field Corn, Popcorn, Seed Corn:

- Apply as required by scouting, or locally prescribed corn growth stages, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds or other locally recommended methods.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of target location. When applying by air, apply in a minimum of 2 gal. of water per acre.
- For chinch bug control, begin applications when bugs migrate from small grains or grass weeds to small corn. Direct spray to the base of corn plants. Repeat applications at 3-5-day intervals if needed. This product may only suppress heavy infestations and/or subsequent migrations.
- For control of adult corn rootworm beetles (*Diabrotica* species) as part of an aerial applied corn rootworm control program use a minimum of 0.03 lb. a.i. (3.84 fl. oz. of product) per acre.
- Do not apply within 21 days of harvest.
- Do not allow livestock to graze in treated areas or harvest treated corn forage as feed for meat or dairy animals within 1 day after last treatment. Do not feed treated corn fodder or silage to meat or dairy animals within 21 days after last treatment.

- Do not apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pt. of product) per acre per crop from at plant and foliar application.

Do not apply more than 0.06 lb. a.i. (7.68 fl. oz. or 0.48 pt. of product) per acre after silk initiation. Do not apply more than 0.03 lb. a.i. (3.84 fl. oz. or 0.24 pt. of product) per acre after corn has reached the milk stage (yellow kernels with milky fluid).

CEREAL GRAINS:

Corn (Foliar): Sweet Corn

| Target Pests | Rate | |
|--|--------------|-----------------|
| | lb AI/A | fl oz product/A |
| Aphid Species ^{1,2} | 0.02 to 0.03 | 2.56 to 3.84 |
| Armyworm ³ | | |
| Aster Leafhopper | | |
| Beet Armyworm ^{2,3} | | |
| Chinch Bug | | |
| Common Cornstalk Borer | | |
| Corn Earworm | | |
| Corn Rootworm Beetle (Adult): Mexican, Northern, Southern, Western | | |
| Cutworm species | | |
| European Corn Borer | | |
| Fall Armyworm ³ | | |
| Flea Beetle species | | |
| Grasshopper species | | |
| Japanese Beetle (Adult) | | |
| Sap Beetle (Adult) | | |
| Southern Armyworm ³ | | |
| Southwestern Corn Borer | | |
| Spider Mite species ¹ | | |
| Stink Bug species | | |
| Tarnished Plant Bug | | |
| Webworm species | | |
| Western Bean Cutworm | | |
| Yellowstriped Armyworm ³ | | |
| Corn Silkfly (Adult) ¹ | 0.03 | 3.84 |

¹ Suppression only.

² See **Resistance** statement under **General Use Directions**.

³ Use higher rates for large larvae.

Application Instructions for Corn (Foliar): Sweet Corn:

- Apply as required by scouting, or locally prescribed corn growth stages, usually at intervals of 4 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds or other locally recommended methods and should be targeted for control before insects enter the stalk or ear.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage and ears (if present). When applying by air, apply in a minimum of 2 gal. of water per acre.
- For control of adult corn rootworm beetles (*Diabrotica* species) as part of an aerial applied corn rootworm control program use a minimum of 0.025 lb. a.i. (3.2 fl. oz. of product) per acre.
- Do not apply within 1 day of harvest.
- Do not allow livestock to graze in treated areas or harvest treated corn forage as feed for meat or dairy animals within 1 day after last treatment. Do not feed treated corn fodder or silage to meat or dairy animal within 21 days after last treatment.
- Do not apply more than 0.48 lb. a.i. (61.44 fl. oz. or 3.84 pt. of product) per acre per crop from at plant and foliar applications.

CEREAL GRAINS:

Rice, Wild Rice

| Target Pests | Rate | |
|--|---------------|-----------------|
| | lb AI/A | fl oz product/A |
| Bird Cherry-Oat Aphid Cinch Bug Fall Armyworm Grasshopper species Greenbug Leafhopper species Rice Stink Bug Riceworm Rice Water Weevil (Adult) Sharpshooter species True Armyworm Yellow Sugarcane Aphid Yellowstriped Armyworm | 0.025 to 0.04 | 3.20 to 5.12 |
| European Corn Borer* Mexican Rice Borer* Rice Seed Midge* Rice Stalk Borer* Sugarcane Borer* | 0.03 to 0.04 | 3.84 to 5.12 |

* For control before the larvae bores into the plant stalk.

Application Instructions for Rice, Wild Rice:

- Apply as required by scouting. Timing and frequency of application should be based upon insect populations reaching locally determined economic thresholds. Determine the need for repeat applications, usually at intervals of 5-7 days, by scouting.
- This product can be safely used when propanil products are being used for weed control.
- Apply by air or by ground equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gal. of water (or a total carrier volume) per acre but ensure sufficient volume is used to provide adequate coverage. In addition, adding an emulsifiable crop oil (e.g., 1 pt. per acre) when lower aerial application volumes are used is recommended to help improve coverage, reduce evaporation, and improve efficacy.
- For control of rice water weevil in dry seeded rice, make a foliar application as indicated by scouting for the presence of adults and/or feeding scars, usually within a time-frame of 0-5 days after permanent flood establishment. Do not exceed 10 days from starting permanent flood until insecticide application unless scouting indicates weevils have not been previously present. Adults may also be treated at later stages of rice development to reduce overwintering populations.
- For control of rice water weevil in water seeded rice, make the first foliar application after pinpoint flood as indicated by scouting for the presence of adults and/or feeding scars usually when rice has emerged 0.5 inch above the waterline. Under conditions of prolonged migration into the field, start field scouting for rice water weevil adults and/or feeding scars 3-5 days after the initial treatment and, if needed, apply a second application within 7-10 days of the first application. Adults may also be treated at later stages of rice development to reduce overwintering populations.
- California: In addition to above directions for control of rice water weevil in water seeded rice, this product may be applied at the 1-3 leaf growth stage, with the majority at the 2-leaf growth stage. Adults are vulnerable on levees and in the water. Larvae are vulnerable while feeding on the leaf prior to entering the soil. Monitor for adults, based upon field history and density of population. Monitor field edges and levee areas for adults. Treat in the following manner: a) spray the inside perimeter of the field, or b) spray the entire field.
- Greenbug is known to have many biotypes. This product may only provide suppression. If satisfactory control is not achieved with the first application of this product, a resistant biotype may be present. Use alternate chemistry for control.
- For control of stem borers, scout fields, when rice growth is near panicle differentiation, for early symptoms of damaging populations exhibited as discoloration (orange-tan) around the junction of the leaf sheath and leaf blade which is caused by feeding of young larvae within the sheath. Applications must be made before larvae bore into rice stems. Make the first application at panicle differentiation to 2-inch panicle for partial control. Make the second application at boot to heading for maximum control. All rice varieties are susceptible to stem borer damage, but Cocodrie and Priscilla are particularly susceptible.
- Mixers/loaders supporting aerial applications to wild rice at a rate of 0.04 lb. ai per acre, and treating 1200 acres (or more) per day must wear dust-mist respirator.

- Do not release flood water within 7 days of an application.
- Do not apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pt. of product) per acre per season.
- Do not apply more than 0.04 lb. a.i. (5.12 fl. oz. or 0.32 pt. of product) per acre within 21 to 27 days of harvest.
- Do not apply within 21 days of harvest.
- Do not use treated rice fields for the aquaculture of edible fish and crustacea.
- Do not apply as an ultra-low volume (ULV) spray.

CEREAL GRAINS:

Sorghum (Grain)

| Target Pests | Rate | |
|--|---------------|-----------------|
| | lb AI/A | fl oz product/A |
| Cutworm species Sorghum Midge | 0.015 to 0.02 | 1.92 to 2.56 |
| Armyworm Beet Armyworm ¹ Corn Earworm European Corn Borer ² Fall Armyworm ³ Flea Beetle species Grasshopper species Lesser Cornstalk Borer ² Southwestern Corn Borer ² Stink Bug species Webworm species Yellowstriped Armyworm ³ | 0.02 to 0.03 | 2.56 to 3.84 |
| Chinch Bug Mexican Rice Borer ² Rice Stalk Borer ² Sugarcane Borer ² | 0.03 | 3.84 |

¹ See **Resistance** statement under **General Use Directions**.

² For control before the larva bores into the plant stalk.

³ Use higher rates for large larvae.

Application Instructions for Sorghum (Grain):

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of target location. When applying by air, apply in a minimum of 2 gallons of water per acre.
- For sorghum midge control, begin applications when 25% of the sorghum heads have emerged and are in tip bloom. Repeat applications at 5-day intervals if needed.
- For chinch bug control, begin applications when bugs migrate from small grains or grass weeds to small sorghum. Direct spray to the base of sorghum plants. Repeat applications at 3- to 5-day intervals if needed. This product may only suppress heavy infestations and/or subsequent migrations.
- Do not apply more than 0.08 lb. a.i. (10.24 fl. oz. or 0.64 pt. of product) per acre per season.
- Do not apply more than 0.06 lb. a.i. (7.68 fl. oz. or 0.48 pt. of product) per acre per season after crop emergence.
- Do not apply more than 0.02 lb. a.i. (2.56 fl. oz. or 0.16 pt. of product) per acre per season once crop is in soft dough stage.
- Do not apply within 30 days of harvest.

COLE CROPS (HEAD AND STEM BRASSICA):

Broccoli; Brussels Sprouts; Cabbage; Cauliflower; Cavalo Broccolo; Chinese Broccoli (gai lon); Chinese Cabbage (napa); Chinese Mustard (gai choy); Kohlrabi

| Target Pests | Rate | |
|--|----------------|-----------------|
| | lb AI/A | fl oz product/A |
| Alfalfa Looper Cabbage Looper Cabbage Webworm Cutworm species Imported Cabbageworm Southern Cabbageworm | 0.015 to 0.025 | 1.92 to 3.20 |
| Aphid species ^{1,2} Armyworm Beet Armyworm ^{2,3} Corn Earworm Diamondback Moth ² Fall Armyworm ³ Flea Beetle species Grasshopper species Japanese Beetle (Adult) Leafhopper species Meadow Spittlebug Plant Bug species including Lygus species ² Spider Mite species ¹ Stink Bug species Thrips species ¹ Vegetable Weevil (Adult) Whitefly species ^{1,2} Yellowstriped Armyworm | 0.02 to 0.03 | 2.56 to 3.84 |

¹ Suppression only.

² See **Resistance** statement under **General Use Directions**.

³ For control of first and second instar only.

Application Instructions for COLE CROPS (HEAD AND STEM BRASSICA):

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gal. of water per acre.
- Do not apply within 1 day of harvest.
- Do not apply more than 0.24 lb. a.i. (30.72 fl. oz. or 1.92 pt. of product) per acre per season.

COTTON

| Target Pests | Rate | |
|--|---------------|-----------------|
| | lb AI/A | fl oz product/A |
| Cutworm species Soybean Thrips Tobacco Thrips | 0.015 to 0.02 | 1.92 to 2.56 |
| Cabbage Looper Cotton Fleahopper Cotton Leafperforator Cotton Leafworm Lygus Bug species ¹ Pink Bollworm Saltmarsh Caterpillar | 0.02 to 0.03 | 2.56 to 3.84 |
| Bandedwing Whitefly ^{1,3} Beet Armyworm ^{1,2} Boll Weevil Brown Stink Bug Cotton Aphid ^{1,3} Cotton Bollworm European Corn Borer Fall Armyworm Green Stink Bug Southern Green Stink Bug Sweetpotato Whitefly ^{1,3} Tobacco Budworm ¹ Twospotted Spider Mite ³ | 0.025 to 0.04 | 3.20 to 5.12 |

¹ See **Resistance** statement under **General Use Directions**.

² For control of first and second instar only.

³ Suppression only.

Application Instructions for COTTON:

- Apply as required by scouting, usually at intervals of 5 to 7 days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage.
- Applications may also be made with equipment adapted and calibrated for ULV sprays. This product may be mixed with once-refined vegetable oil and applied in a minimum of at least one qt. of finished spray /A.
- Under light bollworm/budworm infestation levels, 0.02 lb. a.i. (2.56 fl. oz. of product) per acre may be applied in conjunction with intense field monitoring.
- For boll weevil control spray on a 3- to 5-day schedule.
- When applied according to label directions for control of cotton bollworm and tobacco budworm, this product also provides ovicidal control of unhatched *Heliothine* species eggs.
- Do not apply within 21 days of harvest.
- Do not graze livestock in treated areas.
- Do not apply more than 0.2 lb. a.i (25.6 fl. oz. or 1.6 pt. of product) per acre per season.
- Do not make more than a total of 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season.

CUCURBIT VEGETABLES:

Chayote (fruit); Chinese Waxgourd (Chinese preserving melon); Citron Melon; Cucumber Gherkin; Gourd (edible), *Lagenaria* species - includes: hyotan, cucuzza, *Luffa acutangula*, *L. cylindrical* - includes: hechima, Chinese okra; *Momordica* species - includes: balsam apple, balsam pear, bitter melon, Chinese cucumber; Muskmelon (hybrids and/or cultivars of *Cucumis melo*)- includes: true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon; Pumpkin; Squash, summer (*Cucurbita pepo* var. *meloepo*)- includes: crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini; Squash, winter (*Cucurbita maxima*; *C. moschata*)- includes butternut squash, calabaza, hubbard squash (*C. mixta*; *C. pepo*) - includes: acorn squash, spaghetti squash; Watermelon - includes: hybrids and/or varieties of *Citrullus lanatus*

| Target Pests | Rate | |
|----------------------------------|--------------|-----------------|
| | lb AI/A | fl oz product/A |
| Armyworm species ¹ | 0.02 to 0.03 | 2.56 to 3.84 |
| Blister Beetle species | | |
| Cabbage Looper | | |
| Corn Earworm | | |
| Cricket species | | |
| Cucumber Beetle species (adults) | | |
| Cutworm species | | |
| Flea Beetle species | | |
| Grasshopper species | | |
| June Beetle species | | |
| Leaffooted Bug | | |
| Leafhopper species | | |
| Lygus Bug species ¹ | | |
| Melonworm | | |
| Pickleworm | | |
| Plant Bug species | | |
| Rindworm species complex | | |
| Saltmarsh Caterpillar | | |
| Squash Beetle | | |
| Squash Bug species | | |
| Squash Vine Borer species | | |
| Stink Bug species | | |
| Thrips species ^{1,2} | | |
| Tobacco Budworm ¹ | | |
| Webworm species | | |
| Aphid species ¹ | 0.03 | 3.84 |
| Leafminer species ^{1,3} | | |
| Spider Mite species ³ | | |
| Whitefly species ^{1,3} | | |

¹ See **Resistance** statement under **General Use Directions**.

² Does not include Western Flower Thrips.

³ Suppression only.

Application Instructions for CUCURBIT VEGETABLES:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of all plant parts. When applying by air, apply in a minimum of 2 gal. total solution per acre. When applying by ground, a minimum of 10 gal. total solution per acre is recommended.
- Use higher application volumes and/or rates when foliage is dense, pest populations are high, larvae are large, weather conditions are adverse and/or as plant size increases. Use higher rates for longer residual.
- Insects that bore or tunnel into leaves, vines, stems or fruit must be controlled before penetration. Only exposed insects (larvae and/or adults) can be controlled with foliar applications of this product.
- Do not apply more than 0.18 lb. a.i. (23 fl. oz. or 1.44 pt. of product) per acre per season. Do not apply within 1 day of harvest.

FRUITING VEGETABLES:

Eggplant; Ground cherry; Pepino; Peppers (bell and nonbell); Tomatillo; Tomato

| Target Pests | Rate | |
|---|----------------|-----------------|
| | lb AI/A | fl oz product/A |
| Cabbage Looper Cutworm species Hornworm species | 0.015 to 0.025 | 1.92 to 3.20 |
| Aphid species ^{1,2} Beet Armyworm ^{2,3} Blister Beetle species Colorado Potato Beetle ² Cucumber Beetle species (Adult) European Corn Borer ⁴ Fall Armyworm ³ Flea Beetle species Grasshopper species Japanese Beetle (Adult) Leafhopper species Leafminer species ¹ Meadow Spittlebug Pepper Weevil (Adult) Plant Bug species Southern Armyworm ³ Spider Mite species ¹ Stalk Borer ⁴ Stink Bug species Thrips ⁵ Tobacco Budworm ² Tomato Fruitworm Tomato Pinworm Tomato Psyllid ^{1,2} Vegetable Weevil (Adult) Whitefly species ^{1,2} Yellowstriped Armyworm ³ | 0.02 to 0.03 | 2.56 to 3.84 |

¹ Suppression only.

² See **Resistance** statement under **General Use Directions**.

³ For control of first and second instar only.

⁴ For control before the larva bores into the plant stalk or fruit.

⁵ Does not include Western Flower Thrips.

Application Instructions for FRUITING VEGETABLES:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gal. of water per acre.
- Do not apply within 5 days of harvest.
- Do not apply more than 0.36 lb. a.i. (46.08 fl. oz. or 2.88 pt. of product) per acre per season.

GRASS FORAGE, FODDER AND HAY:

Grass; Grass Grown for Hay or Silage and Grass Grown for Seed; Pasture and Rangeland

| Target Pests | Rate | |
|--|----------------|-----------------|
| | lb AI/A | fl oz product/A |
| Army Cutworm Cutworm species Essex Skipper Range Caterpillar Striped Grass Looper | 0.015 to 0.025 | 1.92 to 3.20 |
| Beet Armyworm Billbug species ¹ Bird Cherry-Oat Aphid ² Black Grass Bug Black Turfgrass Beetle (adult) Blue Stem Midge Cereal Leaf Beetle Chinch Bug Crane Fly species Cricket species English Grain Aphid ² Fall Armyworm Flea Beetle species Grass Mealybug Grass Sawfly (adult) Grasshopper species Green June Beetle (adult) Greenbug ^{2,3} Japanese Beetle (adult) Katydid species Leafhopper species Mite species ¹ Russian Wheat Aphid ² Southern Armyworm Spittlebug species Stink Bug species Sugarcane Aphid Thrips species Tick species True Armyworm Webworm species Yellowstriped Armyworm | 0.02 to 0.03 | 2.56 to 3.84 |

¹ Suppression only.

² Best control is obtained before insects begin to roll leaves.

³ See **Resistance** statement under **General Use Directions**.

Application Instructions for GRASS FORAGE, FODDER AND HAY:

- Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gal. total solution per acre. When applying by ground, a minimum of 7 gal. total solution per acre is recommended.
- Use higher application volumes and rates when foliage is dense, pest populations are high, larvae are large and/or weather conditions are adverse. Use higher rates for longer residual.
- For chinch bug control, this product may only suppress heavy infestations and/or migrations. In this situation, a second application using an alternative chemistry may be needed.
- Greenbug is known to have many biotypes. This product may provide suppression only. In this situation, a second application using an alternative chemistry may be needed.

- Pasture and rangeland grass may be used for grazing or cut for forage 0 days after application. Do not cut grass to be dried and harvested for hay until 7 days after the last application.
Grass grown for seed:
 - Straw and mature seed (seed screenings) may be used as feed 7 days after the last application. Regrowth of grass grown for seed may be used for grazing, cut for forage or cut to be dried and harvested for hay.
- Do not apply more than 0.03 lb. a.i. (3.84 fl. oz. or 0.24 pt. of product) per acre per cutting for pastures, rangeland and grasses grown for seed. A minimum re-treatment interval (RTI) of 30 days is required for pastures and rangeland receiving 0.03 lb. ai. per acre which have not been cut between applications.
- Do not apply more than 0.09 lb. a.i. (11.52 fl. oz. or 0.72 pt. of product) per acre per season.

LEGUME VEGETABLES (BEANS AND PEAS):

Edible Podded (Only) including: *Canavalia ensiformis* – jackbean; *Canavalia gladiata* - sword bean; *Glycine max* – soybean (immature seed); **Edible Podded Succulent Shelled or Dried Shelled including:-** *Cajanus cajan* - Pigeon pea; *Phaseolus* species - includes: field, kidney, lima, navy, pinto, runner, snap, tepary and wax beans; *Pisum* species including: dwarf, edible-pod, English, field, garden, green, snow and sugar snap peas; *Vigna* species - includes: adzuki, asparagus, moth, mung, rice, urd and yard long beans, black- eye pea, catjang, Chinese longbean, cowpea, Crowder pea, and Southern pea; **Succulent Shelled or Dried Shelled including:** *Vicia faba*. - broadbean (favabean); **Dried Shelled (Only) including:** *Cicer arietinum* - chickpea (garbanzo bean), *Cyamopsis tetragonoloba* – guar, *Lablab purpureus* - Lablab bean (hyacinth bean), *Lupinus* species - includes: grain, sweet, white and sweet white lupines, *Lens esculata* - Lentils

| Target Pests | Rate | |
|--|----------------|-----------------|
| | lb AI/A | fl oz product/A |
| Cutworm species Green Cloverworm Imported Cabbageworm Mexican Bean Beetle Saltmarsh Caterpillar Velvetleaf Caterpillar | 0.015 to 0.025 | 1.92 to 3.20 |
| Alfalfa Caterpillar Aphid species ¹ Armyworm ² Bean Leaf Beetle Bean Leaf Skeletonizer Blister Beetle species Corn Earworm Corn Rootworm Beetle species (Adult) Cucumber Beetle species (Adult) Curculio and Weevil species ³ (foliage and pod feeding adults and larvae) European Corn Borer Fall Armyworm ² Flea Beetle species (Adult) Flea Hopper species Grasshopper species Japanese Beetle (Adult) Leafhopper species Leaftier species Looper Species Meadow Spittlebug Painted Lady Butterfly (larvae) Plant Bug species Including Lygus species ¹ Stalk Borer ³ Stink Bug species Threecornered Alfalfa Hopper Thrips species ^{1,4} Tobacco Budworm Webworm species Western Bean Cutworm ² Western Yellowstriped Armyworm Yellowstriped Armyworm ² | 0.02 to 0.03 | 2.56 to 3.84 |

| | | |
|-------------------------------------|------|------|
| Beet Armyworm ^{1,5} | 0.03 | 3.84 |
| Leafminer species ^{1,5} | | |
| Lesser Cornstalk Borer ⁵ | | |
| Soybean Looper ^{1,5} | | |
| Spider Mite species ⁵ | | |
| Whitefly species ^{1,5} | | |

¹ See **Resistance** statement under **General Use Directions**.

² Use higher rates for large larvae.

³ For control before the larva bores into the plant stalk or pods.

⁴ Does not include Western Flower Thrips.

⁵ For suppression only.

Application Instructions for LEGUME VEGETABLES (BEANS AND PEAS):

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gals. of water per acre.
- For edible podded and succulent shelled legume, vegetables, do not apply within 7 days of harvest.
- For dried shelled legume vegetables, do not apply within 21 days of harvest.
- Do not apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pt. of product) per acre per season.
- For succulent and dried shelled peas and beans, do not graze livestock in treated areas or harvest vines for forage or hay.

LEGUME VEGETABLES (SOYBEANS)

| Target Pests | Rate | |
|--|----------------|-----------------|
| | lb AI/A | fl oz product/A |
| Bean Leaf Beetle Cabbage Looper Corn Earworm Corn Rootworm Beetle (Adult): Mexican, Northern, Southern, Western Cutworm Species Green Cloverworm Mexican Bean Beetle Painted Lady (Thistle) Caterpillar Potato Leafhopper Saltmarsh Caterpillar Soybean Aphid ¹ Threecornered Alfalfa Hopper Thrips species ² Velvetbean Caterpillar Woollybear Caterpillar | 0.015 to 0.025 | 1.92 to 3.20 |
| Armyworm ³ Blister Beetle species European Corn Borer Fall Armyworm ³ Grasshopper species Japanese Beetle (Adult) Plant Bug species Silverspotted Skipper Stink Bug species Tobacco Budworm ⁴ Webworm species Yellowstriped Armyworm ³ | 0.025 to 0.03 | 3.20 to 3.84 |
| Beet Armyworm ^{4,5} Lesser Cornstalk Borer ⁵ Soybean Looper ^{4,5} Spider Mite species ⁵ | 0.03 | 3.84 |

¹ Use lower rates for early season applications and/or lighter populations.

² Does not include Western Flower Thrips.

³ Use higher rates for large larvae.

⁴ See **Resistance** statement under **General Use Directions**.

⁵ Suppression only.

Application Instructions for LEGUME VEGETABLES (SOYBEANS):

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Do not graze or harvest treated soybean forage, straw or hay for livestock feed.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gal. of water per acre.
- For control of adult corn rootworm beetles (*Diabrotica* species) as part of an aerial applied corn rootworm control program use a minimum of 0.02 lb. a.i. (2.56 fl. oz. of product) per acre.
- Do not apply within 30 days of harvest.
- Do not apply more than 0.06 lb. a.i. (7.68 fl. oz. or 0.48 pt. of product) per acre per season.

LETTUCE (HEAD AND LEAF)

| Target Pests | Rate | |
|--|----------------|-----------------|
| | lb AI/A | fl oz product/A |
| Alfalfa Looper Cabbage Looper Cutworm species Green Cloverworm Imported Cabbageworm Saltmarsh Caterpillar | 0.015 to 0.025 | 1.92 to 3.20 |
| Aphid species ^{1,2} Armyworm Beet Armyworm ^{2,3} Corn Earworm Diamondback Moth ² European Corn Borer Fall Armyworm ³ Flea Beetle species Grasshopper species Japanese Beetle (Adult) Leafhopper species Meadow Spittlebug Plant Bug species including <i>Lygus</i> species ² Southern Armyworm Spider Mite species ¹ Stink Bug species Tobacco Budworm ² Vegetable Weevil (Adult) Whitefly species ^{1,2} | 0.02 to 0.03 | 2.56 to 3.84 |

¹ Suppression only.

² See **Resistance** statement under **General Use Directions**.

³ For control of first and second instar only.

Application Instructions for LETTUCE (HEAD AND LEAF):

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gal. of water per acre.
- Do not apply within 1 day of harvest.
- Do not apply more than 0.3 lb. a.i. (38.4 fl. oz. or 2.4 pt. of product) per acre per season.

ONION (BULB) AND GARLIC

| Target Pests | Rate | |
|---|----------------|-----------------|
| | lb AI/A | fl oz product/A |
| Cutworm species Leafminer species (Adult) Onion Maggot (Adult) Seedcorn Maggot (Adult) | 0.015 to 0.025 | 1.92 to 3.20 |
| Aphid species ¹ Armyworm species ² Flower Thrips ^{1,3} Onion Thrips ³ Plant Bug species Stink Bug species Tobacco Thrips ³ Western Flower Thrips ³ | 0.02 to 0.03 | 2.56 to 3.84 |

¹ Suppression only.

² For control of the first and second instar only.

³ See **Resistance** statement under **General Use Directions**.

Application Instructions for ONION (BULB) AND GARLIC:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Use the higher label rates as thrips population increases and avoid rescue situations.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gal. of water per acre.
- For thrips control by aerial application, the addition of 1% COC v/v, 1/4% NIS v/v or a silicone adjuvant (follow manufacturer's use directions) may enhance the deposition of the spray and increase plant coverage.
- Do not apply within 14 days of harvest.
- Do not apply more than 0.24 lb. a.i. (30.72 fl. oz. or 1.92 pt. of product) per acre per season.

PEANUTS

| Target Pests | Rate | |
|---|----------------|-----------------|
| | lb AI/A | fl oz product/A |
| Cutworm species Green Cloverworm Potato Leafhopper Red-necked Peanut Worm Threecornered Alfalfa Hopper Velvetbean Caterpillar | 0.015 to 0.025 | 1.92 to 3.20 |
| Bean Leaf Beetle Corn Earworm Fall Armyworm ¹ Grasshopper species Southern Corn Rootworm (Adult) Stink Bug Species Tobacco Thrips Vegetable Weevil Whitefringed Beetle (Adult) | 0.02 to 0.03 | 2.56 to 3.84 |
| Aphid species ² Beet Armyworm ^{2,3} Lesser Cornstalk Borer ² Soybean Looper ^{2,3} Spider Mite species ² | 0.03 | 3.84 |

¹ Use higher rates for large larvae.

² Suppression only.

³ See Resistance statement under General Use Directions.

Application Instructions for PEANUTS:

- Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gal. of water per acre.
- Do not apply within 14 days of harvest.
- Do not apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pt. of product) per acre per season.

POME FRUITS:**Apple, Crabapple, Loquat, Mayhaw, Oriental Pear, Pear, Quince**

| Target Pests | Rate | |
|--|--------------|-----------------|
| | lb AI/A | fl oz product/A |
| Apple Aphid | 0.02 to 0.04 | 2.56 to 5.12 |
| Apple Maggot (Adult) | | |
| Cherry Fruit Fly species (Adult) | | |
| Codling Moth | | |
| Green Fruitworm | | |
| Japanese Beetle | | |
| Leafhopper species | | |
| Leafroller species | | |
| Lesser Appleworm | | |
| Omnivorous Leafroller | | |
| Orange Tortrix | | |
| Oriental Fruit Moth | | |
| Pear Psylla * | | |
| Pear Sawfly | | |
| Periodical Cicada | | |
| Plant Bug species | | |
| Plum Curculio | | |
| Rosy Apple Aphid | | |
| San Jose Scale (fruit infestations only) | | |
| Spirea Aphid * | | |
| Stink Bug species | | |
| Tent Caterpillar species | | |
| Tentiform Leaf Miner species | | |
| Tree Borer species | | |
| Tufted Apple Budworm | | |
| Webworm species | | |

* Suppression only

Application Instructions for POME FRUITS:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds and IPM recommendations.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply in a minimum of 5 gal. of water per acre, but use higher volumes as appropriate for thorough coverage.
- Do not apply within 21 days of harvest.
- Do not apply more than 0.2 lb. a.i. (25.6 fl. oz. or 1.6 pt. of product) per acre per year. Do not apply more than 0.16 lb. a.i. (20.48 fl. oz. or 1.28 pt. of product) per acre per year post bloom.

STONE FRUITS:

Apricot, Chickasaw Plum, Damson Plum, Japanese Plum, Nectarine, Peach, Plum, Plumcot, Prune, Sweet and Tart Cherry

| Target Pests | Rate | |
|----------------------------------|--------------|-----------------|
| | lb AI/A | fl oz product/A |
| American Plum Borer | 0.02 to 0.04 | 2.56 to 5.12 |
| Apple Maggot (Adult) | | |
| Black Cherry Aphid | | |
| Cherry Fruit Fly species (Adult) | | |
| Codling Moth | | |
| Green Fruitworm | | |
| Japanese Beetle | | |
| June Beetle | | |
| Leafhopper species | | |
| Leafroller species | | |
| Oriental Fruit Moth | | |
| Peach Twig Borer | | |
| Peachtree Borer species | | |
| Pear Sawfly | | |
| Periodical Cicada | | |
| Plant Bug species | | |
| Plum Curculio | | |
| Rose Chafer | | |
| Stink Bug species | | |
| Tent Caterpillar species | | |
| Thrips species | | |

Application Instructions for STONE FRUITS:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold and IPM recommendations.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply a minimum of 5 gals. of water per acre, but use higher volumes as appropriate for thorough coverage.
- Do not apply within 14 days of harvest.
- Do not apply more than 0.2 lb. a.i. (25.6 fl. oz. or 1.6 pt. of product) per acre per year. Do not apply more than 0.16 lb. a.i. (20.48 fl. oz. or 1.28 pt. of product) per acre per year post bloom.

SUGARCANE

| Target Pests | Rate | |
|---------------------------------------|---------------|-----------------|
| | lb AI/A | fl oz product/A |
| Mexican Rice Borer ¹ | 0.025 to 0.04 | 3.20 to 5.12 |
| Pygmy Mole Cricket | | |
| Rice Stalk Borer ¹ | | |
| Sugarcane Aphid ² | | |
| Sugarcane Beetle (Adult) ³ | | |
| Sugarcane Borer ¹ | | |
| West Indian Crane fly | | |
| Yellow Sugarcane Aphid ² | | |

¹ For control before the larva bores into the plant stalk.

² See **Resistance** statement under **General Use Directions**.

³ Suppression only of beetles active above ground.

Application Instructions for SUGARCANE:

- Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply a minimum of 2 gal. of water per acre.
- Do not apply within 21 days of harvest.
- Do not apply more than 0.16 lb. a.i. (20.48 fl. oz. or 1.28 pt. of product) per acre per season.

SUNFLOWER

| Target Pests | Rate | |
|--|----------------|-----------------|
| | lb AI/A | fl oz product/A |
| Cutworm species Sunflower Beetle | 0.015 to 0.025 | 1.92 to 3.20 |
| Banded Sunflower Moth Fall Armyworm ¹ Grasshopper species Head-Clipper Weevil (Adult) Japanese Beetle (Adult) Leafhopper species Meadow Spittlebug Painted Lady (Thistle) Caterpillar Seed Weevil (Adult) Spotted Cabbage Looper Stem Weevil (Adult) Stink Bug species Sunflower Maggot (Adult) Sunflower Moth Woollybear Caterpillar | 0.02 to 0.03 | 2.56 to 3.84 |
| Beet Armyworm ^{2,3} Spider Mite species ² | 0.03 | 3.84 |

¹ Use higher rates for large larvae.

² Suppression only.

³ See **Resistance** statement under **General Use Directions**.

Application Instructions for SUNFLOWERS:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water to obtain full coverage of sunflower heads and/or foliage. When applying by air, apply in a minimum of 2 gal. of water per acre.
- Do not apply within 45 days of harvest.
- Do not apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pt. of product) per acre per season. Do not apply more than 0.09 lb. a.i. (0.72 pt.) /A per season after bloom initiation.
- Do not apply as an ultra-low volume (ULV) spray.

TOBACCO

| Target Pests | Rate | |
|--------------------------------------|---------------|-----------------|
| | lb AI/A | fl oz product/A |
| Armyworm species ¹ | 0.015 to 0.03 | 1.92 to 3.84 |
| Blister Beetle species | | |
| Cabbage Looper | | |
| Corn Earworm | | |
| Cucumber Beetle species (Adult) | | |
| Cutworm species | | |
| Grasshopper species | | |
| Japanese Beetle (Adult) | | |
| Katydid species | | |
| Plant Bug species ² | | |
| Potato Tuberworm | | |
| Salt Marsh Caterpillar | | |
| Stinkbug species | | |
| Tobacco Aphid species ^{2,3} | | |
| Tobacco Budworm ² | | |
| Tobacco Flea Beetle (Adult) | | |
| Tobacco Hornworm | | |
| Tobacco Thrips species ³ | | |
| Tomato Hornworm | | |
| Tree Cricket species | | |
| Vegetable Weevil (Adult) | | |
| Webworm species | | |

¹ For control of first and second instars only.

² See **Resistance** statement under **General Use Directions**.

³ Suppression only.

Application Instructions for TOBACCO:

- Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage. When applying by air, apply in a minimum of 2 gal. of water per acre.
- Do not apply within 40 days of harvest.
- Do not apply more than 0.09 lb. a.i. (11.52 fl. oz. or 0.72 pt. of product) per acre per year.

TREE NUTS:

Almond; Beech Nut; Brazil Nut; Butternut; Cashew; Chestnut; Chinquapin; Filbert (Hazelnut); Hickory Nut; Macadamia Nut (Bush Nut); Pistachio; Walnut, Black Walnut, English (Persian) Walnut

| Target Pests | Rate | |
|---------------------------------|--------------|-----------------|
| | lb AI/A | fl oz product/A |
| Ants | 0.02 to 0.04 | 2.56 to 5.12 |
| Chinch Bug | | |
| Codling Moth | | |
| Filbertworm | | |
| Leaffooted Bug | | |
| Leafroller species | | |
| Navel Orangeworm | | |
| Peach Twig Borer | | |
| Plant Bug species | | |
| Stink Bug species | | |
| Walnut Aphid | | |
| Walnut Husk Fly species (Adult) | | |

Pecans

| Target Pests | Rate | |
|--------------------------|--------------|-----------------|
| | lb AI/A | fl oz product/A |
| Hickory Shuckworm | 0.02 to 0.04 | 2.56 to 5.12 |
| Pecan Aphid species | | |
| Pecan Casebearer species | | |
| Pecan Phylloxera species | | |
| Pecan Spittlebug | | |
| Pecan Weevil | | |
| Stink Bug species | | |

Application Instructions for TREE NUTS:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply in a minimum of 5 gal. of water per acre, but use higher rates as appropriate for thorough coverage.
- Do not apply within 14 days of harvest.
- Do not apply more than 0.16 lb. a.i. (20.48 fl. oz. or 1.28 pt. of product) per acre per year. Do not apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pt. of product) per acre per year post bloom.

TUBEROUS AND CORM VEGETABLES (Potato, Sweet Potato, Yams and Related):

Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem only), Canna (edible), Cassava (bitter and sweet), Chayote (root), Chufa, Dasheen, Ginger, Leren, Potato, Sweet Potato, Tanier, Turmeric, Yam (bean and true)

| Target Pests | Rate | |
|--|----------------|-----------------|
| | lb AI/A | fl oz product/A |
| Cutworm species Leafhopper species Saltmarsh Caterpillar Sweet Potato Hornworm Woollybear Caterpillar species | 0.015 to 0.025 | 1.92 to 3.20 |
| Aphid species ¹ Armyworm species ¹ Blister Beetle species Colorado Potato Beetle ¹ Corn Earworm Cricket species Cucumber Beetle species (adults) European Corn Borer Flea Beetle species (adults) Grasshopper species Looper species ¹ Lygus Bug species ¹ Plant Bug species Potato Psyllid Potato Tuberworm Stink Bug species Sweet Potato Leaf Beetle (adults) Sweet Potato Vine Borer Thrips species ^{1,2} Tortoise Beetle species Webworm species Weevil species (adults) | 0.02 to 0.03 | 2.56 to 3.84 |
| Leafminer species ^{1,3} Whitefly species ^{1,3} Spider Mite species ³ | 0.03 | 3.84 |

¹ See Resistance statement under General Use Directions.

² Does not include Western Flower Thrips.

³ Suppression only.

Application Instructions for TUBEROUS AND CORM VEGETABLES:

- Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of all above ground plant parts. When applying by air, apply in a minimum of 2 gal. total solution per acre. When applying by ground, a minimum of 10 gal. total solution per acre is recommended.
- Use higher application volumes and/or rates when foliage is dense, pest populations are high, larvae are large, weather conditions are adverse and/or as plant size increases. Use higher rates for longer residual.
- Insects that bore or tunnel into leaves, vines, stems, tubers or corms must be controlled before penetration. Only exposed insects (larvae and/or adults) can be controlled with foliar applications of this product.
- Do not apply more than 0.12 lb. a.i. (15.36 fl. oz. or 0.96 pt. of product) per acre per season. Do not apply within 7 days of harvest.

NON-AGRICULTURAL USES

CONIFER AND DECIDUOUS TREES at Plantations and Nurseries

| Target Pests | Rate | |
|--------------------------|--------------|-----------------|
| | lb AI/A | fl oz product/A |
| Bagworm | 0.02 to 0.04 | 2.56 to 5.12 |
| Balsam Twig Aphid | | |
| Balsam Woolly Aphid | | |
| Birch Leafminer | | |
| Black Pine Weevil | | |
| Elm Leaf Beetle | | |
| European Elm Bark Beetle | | |
| Gypsy Moth | | |
| Japanese Beetle | | |
| June Beetle species | | |
| Leaf Beetle species | | |
| Leafroller species | | |
| May Beetle species | | |
| Mealybug species * | | |
| Pales Weevil | | |
| Pine Chafer | | |
| Pine Colaspis Beetle | | |
| Pine Conelet Bug | | |
| Pine Leaf Chermid | | |
| Pine Needle Scale | | |
| Pine Sawfly species | | |
| Pine Tip Moth species | | |
| Pine Tortoise Scale | | |
| Pine Weevil species | | |
| Poplar Aphid species | | |
| Sawfly species | | |
| Spittlebug species | | |
| Spruce Budworm | | |
| Tent Caterpillar species | | |
| Tussock Moth species | | |
| Webworm species | | |

* Suppression only.

Application Instructions for CONIFER AND DECIDUOUS TREES at Plantations and Nurseries:

- To control exposed foliage, flower, cone, seed and bark feeding insects, apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground equipment using sufficient water to obtain full coverage of target site. When applying by air, apply a minimum of 2 gal. of water per acre.
- Do not apply more than 0.24 lb. a.i. (30.72 fl. oz. or 1.92 pt. of product) per acre per year.

CONIFER AND DECIDUOUS TREES at Seed Orchards

| Target Pests | Rate |
|------------------|---|
| Coneworm species | <ul style="list-style-type: none"> • For high volume sprayers, dilute 5.12 fl. oz. per 100 gal. of water and apply 5-10 gal. of finished spray per tree. |
| Seed Bug species | <ul style="list-style-type: none"> • For low volume sprayers, dilute 20 fl. oz. per 100 gal. of water and apply 100 gal. of finished spray per acre. |
| Thrips species | <ul style="list-style-type: none"> • For aerial applications, apply 15 fl. oz. per acre in a minimum of 10 gal. finish spray per acre. |

Application Restriction for CONIFER AND DECIDUOUS TREES at Seed Orchards:

- Do not apply more than 0.5 lb. a.i. (64 fl. oz. or 4 pt. of product) per acre per year.

**NON-CROPLAND (Crop Outlets, including buffer zones, field borders, hedge rows, turn rows, and wind rows)
(EXCLUDING PUBLIC LAND)**

| Target Pests | Rate | |
|---|------------------|------------------|
| | lb AI/A | fl oz product/A |
| See Crop Outlets on this label for target pest and rates. | See Crop Outlets | See Crop Outlets |

Application Instructions for NON-CROPLAND (EXCLUDING PUBLIC LAND):

- Spray non-cropland adjacent to agricultural areas to control migratory insects, which may threaten crops.
- Follow General Use Directions, rates and spray recommendations found elsewhere in this label for the adjacent crop outlet and target pests.
- Use highest labeled rates for dense/large foliage, high insect populations and larger larval stages.
- Repeat as necessary to maintain control.
- Do not exceed 0.2 lb. a.i. (25.6 fl. oz. or 1.6 pt. of product) per acre per year.
- Do not graze livestock in treated areas.

Rate Conversion Chart

| Lb AI/A | Fl oz product/A | Pt/A | Treated A/Gal |
|---------|-----------------|------|---------------|
| 0.015 | 1.92 | 0.12 | 66 |
| 0.020 | 2.56 | 0.16 | 50 |
| 0.025 | 3.20 | 0.20 | 40 |
| 0.030 | 3.84 | 0.24 | 33 |
| 0.040 | 5.12 | 0.32 | 25 |

STORAGE AND DISPOSAL

Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Do not store below 10 °F, (- 12 °C). Do not use or store near heat, open flame or hot surfaces. Keep out of reach of children and animals. Store in original containers only. Store in a cool dry place and avoid excess heat.

Carefully open containers. After partial use replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. Place damaged package in a holding container. Identify contents.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

CONTAINER HANDLING: [Nonrefillable container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Do not reuse this 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.acrecycle.org. If not recycled, then puncture and dispose of in a sanitary landfill.]

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 refillable containers: Refill this container with Roundhouse 1E pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling or reconditioning, if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.]

[Container Disposal – Returnable/Refillable Sealed Container: Do not rinse container. Do not break seals. Replace the dust cover/cap and return container, intact to point of purchase.]

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

BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

{END Language inside booklet}

{BEGIN Attached Panel Language}

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.

| | | | |
|--------------------|-------|----------|-------------|
| LAMBDA-CYHALOTHRIN | GROUP | 3 | INSECTICIDE |
|--------------------|-------|----------|-------------|



Roundhouse 1E

ACTIVE INGREDIENT:

| | By Wt. |
|---|---------------|
| <i>Lambda-cyhalothrin</i> * | |
| [1 α (S*),3 α (Z)]-(\pm)-cyano-(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate* | 13.1% |
| OTHER INGREDIENTS**: | 86.9% |
| TOTAL | 100.0% |

* Synthetic pyrethroid

**** Contains petroleum distillate**

Contains 1 pound *lambda*-cyhalothrin per gallon.

KEEP OUT OF REACH OF CHILDREN

DANGER

PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label find someone to explain it to you in detail.)

See label booklet for additional Precautionary Statements and Directions for Use.

| FIRST AID | |
|---|--|
| If on skin or clothing: | <ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15 to 20 minutes.• Call a poison control center or doctor for treatment advice. |
| If in eyes: | <ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice. |
| If swallowed: | <ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Do not give any liquid to the person.• Do not induce vomiting unless told to do so by a poison control center or doctor.• Do not give anything by mouth to an unconscious person. |
| If inhaled: | <ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.• Call a poison control center or doctor for further treatment advice. |
| Have the product container or label with you when calling a poison control center or doctor, or going for treatment. | |
| HOT LINE NUMBER | |
| Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical assistance, call 1-866-944-8565. For chemical emergency: spill, leak, fire, exposure or accident, call CHEMTREC: 1-800-424-9300. | |
| Note To Physician: Contains petroleum distillates. Vomiting may cause aspiration pneumonia. | |

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

PELIGRO

Corrosive. Causes skin burns. May be fatal if swallowed or inhaled. Causes substantial but temporary eye injury. Do not get in eyes on skin or clothing. Do not breathe vapor or spray mist. Harmful if absorbed through skin. Wear protective clothing, gloves, eyewear (goggles, face shield, or safety glasses) and respirator as indicated under **Personal Protective Equipment**. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Skin exposure may also result in a sensation described as a tingling, itching, burning, or prickly feeling. Onset may occur immediately to 4 hours after exposure and may last 2 to 30 hours, without damage. Wash exposed areas once with soap and water. Relief from the skin sensation may be obtained by applying an oil-based cream.

STORAGE AND DISPOSAL

Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Do not store below 10 °F, (- 12 °C). Do not use or store near heat, open flame or hot surfaces. Keep out of reach of children and animals. Store in original containers only. Store in a cool dry place and avoid excess heat.

Carefully open containers. After partial use replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. Place damaged package in a holding container. Identify contents.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

CONTAINER HANDLING: [Nonrefillable container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Do not reuse this 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.acrecycle.org. If not recycled, then puncture and dispose of in a sanitary landfill.]

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 refillable containers: Refill this container with Roundhouse 1E pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling or reconditioning, if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.]

[Container Disposal – Returnable/Refillable Sealed Container: Do not rinse container. Do not break seals. Replace the dust cover/cap and return container, intact to point of purchase.]

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

EPA Reg. No.

EPA Est. No.

Net Contents: 1.0 GAL (3.78 L)

[Insert print code here]

[EPA Approval Date]

[Batch code]

FORMULATED FOR:

LOVELAND PRODUCTS, INC.

PO BOX 1286, GREELEY COLORADO 80632-1286

{END Attached Panel Language}