



**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
 Office of Pesticide Programs  
 Registration Division (7505P)  
 1200 Pennsylvania Ave., N.W.  
 Washington, D.C. 20460

EPA Reg. Number:  
 769-574

Date of Issuance:  
 OCT 28 2009

Terms of Issuance:  
 Unconditional

Name of Pesticide Product:  
**Sureguard brand Sevin 80S**  
**Carbaryl Insecticide**

**NOTICE OF PESTICIDE:**

Registration  
 Reregistration  
 (under FIFRA, as amended)

**Name and Address of Registrant (include ZIP Code):**

Value Garden Supply  
 P.O. Box 585  
 St. Joseph, MO 64502

**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 reregistered 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.

Based on your response to the Reregistration Eligibility Documents, EPA has reregistered the product listed above. This action is taken under the authority of section 4(g)(2)(c) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended. Reregistration under this section does not eliminate the need for continual reassessment of pesticides. EPA may require submission of data at any time to maintain the registration of your product. Within 45 days from the date of this notice, two copies of a final printed label must be submitted with the following change:  
 Revise "Intended For Agricultural or Commercial Use Only" to read "Intended for Agricultural or Commercial Use"

Your Confidential Statement of Formula (CSF) dated November 2, 2005 is acceptable. This CSF supercedes all previous CSFs. You may distribute products bearing the old label for 12 months from receipt of this letter or your next printing of the label, whichever comes first.

A copy of the stamped label is enclosed for your records.

Signature of Approving Official:

Meredith Laws, Branch Chief  
 Registration Division, Insecticide-Rodenticide Branch

Date:

OCT 28 2009

# Sureguard Brand Sevin 80S Carbaryl Insecticide

Intended For Agricultural or Commercial Use Only

<b>ACTIVE INGREDIENT:</b>	
Carbaryl: (1-Naphthyl N-methylcarbamate).....	80.0%
Other Ingredients: .....	20.0%
<b>TOTAL</b> .....	<b>100.0%</b>

## KEEP OUT OF REACH OF CHILDREN WARNING AVISO

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

### FIRST AID

Carbaryl is an N-Methyl Carbamate Insecticide.

<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor for treatment advice.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

**NOTE TO PHYSICIAN:** Carbaryl is a carbamate insecticide, which is a cholinesterase inhibitor. Overexposure to this substance may cause toxic signs and symptoms due to stimulation of the cholinergic nervous system. These effects of overexposure are spontaneously and rapidly reversible. Specific treatment consists of parenteral atropine sulfate. Caution should be maintained to prevent over atropinization. Mild cases may be given 1 to 2 mg intramuscularly every 10 minutes until full atropinization has been achieved and repeated thereafter whenever symptoms reappear. Severe cases should be given 2 to 4 mg intravenously every 10 minutes until fully atropinized, then intramuscularly every 30 to 60 minutes to maintain the effect for at least 12 hours. Dosages for children should be appropriately reduced. Complete recovery from overexposure is to be expected within 24 hours. Narcotics and other sedatives should not be used. Further, drugs like 2-PAM (pyridine-2-aldoxime methiodide) are NOT recommended. See additional Precautionary Statements elsewhere on label.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For information on this product (including health concerns, medical emergencies or pesticide incidents) call the National Pesticide Information Center at 1-800-858-7378.

EPA Reg. No. 769-574

EPA Est. No. 44616-MO-1

Manufacturer By:  
Value Garden Supply  
PO Box 585  
St. Joseph, MO 64502

**ACCEPTED**  
**With COMMENTS**  
In EPA Letter Dated:  
*October 28, 2009*

Net Contents: 1-1/4 pounds

Under the Federal Insecticide, Fungicide  
and Rodenticide Act, As amended, for the  
pesticide Registered under EPA Reg. No:

769-574

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS & DOMESTIC ANIMALS

#### WARNING

May be fatal if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**OVEREXPOSURE MAY CAUSE:** Salivation, watery eyes, pinpoint eye pupils, blurred vision, muscle tremors, difficult breathing, excessive sweating, abdominal cramps, nausea, vomiting, diarrhea, weakness, headache. **IN SEVERE CASES CONVULSION, UNCONSCIOUSNESS AND RESPIRATORY FAILURE MAY OCCUR. SIGNS AND SYMPTOMS OCCUR RAPIDLY FOLLOWING OVEREXPOSURE TO THIS PRODUCT.**

#### PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some materials that are chemical-resistant to this product are made of any waterproof material. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

Handlers applying with open cab airblast equipment at application rates equal to or greater than 6 ¼ pounds of product per acre must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear, and
- A NIOSH-approved dust/mist filtering respirator with NIOSH/MSHA approval number prefix TC-21C or NIOSH-approved respirator with any N, R, P or HE filter.

All other mixers, loaders, applicators, and handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves, and
- Chemical-resistant apron, when mixing, loading, or cleaning up spills or equipment.

**Aerial and chemigation applications are prohibited.**

**See engineering controls for additional requirements and exceptions.**

#### USER SAFETY REQUIREMENTS

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

#### ENGINEERING CONTROLS

Applicators using airblast equipment for application to citrus in California must use an enclosed cab that meets the definition in the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240(d)(5)] for dermal protection. In addition, such applicators must:

- wear long-sleeve shirt, long pants, shoes, and socks;
- either wear a NIOSH-approved dust/mist filtering respirator with NIOSH/MSHA approval number prefix TC-21C or a NIOSH-approved respirator with any N, R, P or HE filter or use an enclosed cab that is declared in writing by the manufacturer or by a government agency to provide at least as much respiratory protection as this type of respirator;
- be provided, have immediately available for use, and wear in an emergency when they must exit the cab in the treated area coveralls, chemical-resistant gloves, chemical-resistant footwear, and chemical-resistant headgear (if overhead exposure) plus – if not already using one – the respirator specified above—take off any PPE that was worn in the treated area before reentering the cab, and

- store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab.

Water-soluble packaging when used correctly qualifies as a closed mixing/loading system under the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240(d)(4)]. Mixers and loaders using water soluble packets must:

- wear the personal protective equipment on this labeling for mixers/loaders, and
- be provided, have immediately available, and use in an emergency, such as a broken package, spill, or equipment breakdown, chemical-resistant footwear and a NIOSH-approved dust/mist filtering respirator with NIOSH/MSHA approval number prefix TC-21C or a NIOSH-approved respirator with any N, R, P or HE filter.

When applicators use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(5), the handler PPE requirements may be reduced or modified as specified in the WPS.

#### User Safety Recommendations

Users should

- Wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE 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 product is extremely toxic to aquatic invertebrates. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Discharge from rice fields may kill aquatic and estuarine invertebrates. Do not apply when weather conditions favor drift from area treated. Drift and runoff may kill aquatic invertebrates in water adjacent to treated areas. Do not contaminate water by cleaning equipment or disposal of wastes. Do not contaminate water when disposing of equipment washwaters.

**BEE CAUTION: MAY KILL HONEYBEES AND OTHER BEES IN SUBSTANTIAL NUMBERS.** This product is highly toxic to bees exposed to direct treatment or residues on crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

Notifying beekeepers within 1 mile of treatment area at least 48 hours before product is applied will allow them to take additional steps to protect their bees. Limiting application to times when bees are least active, e.g., within 2 hours of sunrise or sunset, will minimize risk to bees.

*For crops in bloom (except soybean and corn):* Do not apply this product to target crops or weeds in bloom.

*For soybean and corn:* If application cannot be avoided when target crop or weeds are in bloom, limiting applications to times when bees are least active, e.g. within 2 hours of sunrise or sunset, will minimize risk to bees.

#### DIRECTIONS FOR USE

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

**Read the entire label before using this product.**

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

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the Restricted-entry interval (REI). The REI for carbaryl is 12 hours unless otherwise specified in the directions for use associated with each crop.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeve shirt and short-pants,
- Chemical-resistant footwear plus socks,
- Chemical-resistant gloves made of any waterproof material, and
- Chemical-resistant headgear if overhead exposure.

When the Restricted-Entry interval for a crop is 7 days or longer, you must notify workers of the application by warning them orally and by posting warning signs at entrances to treated area.

#### NON-AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow others to enter the treated area until sprays have dried.

#### STORAGE AND DISPOSAL

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

##### STORAGE

Store unused product in original container only, in cool, dry area out of reach of children and animals. Do not store in areas where temperatures frequently exceed 100° F.

If container is damaged, before cleaning up, put on Personal Protective Equipment.

##### PESTICIDE DISPOSAL

Open dumping is prohibited. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

##### CONTAINER DISPOSAL

Non-refillable container. Do not reuse or refill this container. Once outer bag of water soluble packets is empty, offer for recycling, if available, or dispose of in the trash as long as water soluble packets are unbroken, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If bag is burned, stay out of smoke.

#### INFORMATION AND RESTRICTIONS

Suregard Brand Seven 80S Carbaryl Insecticide is a dry powder formulation and is packaged in water soluble packets. Each packet contains 1.25 lbs of formulated product. Do not sell individual water soluble packets. Do not handle packets with wet hands or gloves. Do not allow packets to become wet prior to adding to the spray tank. Handle outer container (over wrap bag) carefully to avoid breakage of inner soluble packets. Always reseal outer container (over wrap bag) in a manner that protects remaining packets from moisture. Do not remove the water soluble packets from the container except for immediate use. Use the entire contents of a water soluble packet. Do not break open to use partial contents of a water soluble packet.

This product readily disperses in water to form a spray that may be applied by ground equipment.

Aerial and chemigation applications are prohibited.

##### PLANT RESPONSE PRECAUTIONS

Application to wet foliage or during periods of high humidity may cause injury to tender foliage.

Do not use on Boston Ivy, Virginia creeper and maidenhair fern as injury may result. Carbaryl may also injure Virginia and sand pines.

The use of adjuvants may increase the potential for crop injury to sensitive crops.

##### PREHARVEST AND GRAZING RESTRICTIONS AND LIMITATIONS

For all listed crops and uses, do not apply at greater rates or at more frequent intervals than stated on the label. If forage is grazed or used as feed for dairy and meat animals, follow all use restrictions in order to avoid illegal residues in crops, meat or milk.

Do not use reclaimed irrigation water from crops treated with carbaryl on crops for which carbaryl tolerances are not established.

### APPLICATION STATEMENTS

Calibrate and adjust application equipment to insure proper rate and accurate placement. To clean spray system after use, drain and flush with a water and detergent mixture. Rinse thoroughly with clean water. Refer to the Storage and Disposal section for disposal instructions.

**NOTE:** Staining may occur on certain surfaces such as stucco, brick, cinder block, and wood. Spray deposits on painted or stained surfaces or finishes (i.e., cars, houses, trailers, boats, etc.) should be immediately removed by washing to prevent discoloration. Avoid applications to surfaces where visible spray residues are objectionable. For outdoor use only.

### RESISTANT SPECIES NOTICE

All references to armyworm on the crops listed below refer to the species, *Pseudaletia unipuncta*, often called the "true armyworm". Except where indicated otherwise, this product is not registered for the protection against other armyworm species. Regional differences have been noted in the susceptibility of certain strains of fall armyworm, diamondback moth, Colorado potato beetle and Southern green stink bug to carbaryl. If local experience indicates inadequate product performance, use an alternative pesticide.

### MIXING, LOADING AND HANDLING INSTRUCTIONS

Remove oil, rust, scale, pesticide residues and other foreign matter from mix tanks and entire spray system. Flush with clean water. Consult the Specific Use Directions section of this label to determine the number of packets and spray volume required. Fill the mixing tank partially (1/2 to 3/4) with water. With the agitator on, slowly add the required number of unopened packets of Suregard Brand Seven 80S Carbaryl Insecticide into the mixing tank. Allow all the water soluble packets to dissolve and completely disperse. Depending upon the water temperature and the degree of agitation, the water soluble packets should be completely dissolved within 3 - 5 minutes. Continue agitation while adding the remainder of the water. Do not put water soluble packets close to the recirculating inlet and outlet, as they may block the line before completely dissolved. Prepare only as much spray mixture as can be applied on the day of mixing. Do not use partial water soluble packets. MAINTAIN CONTINUOUS AGITATION DURING MIXING AND APPLICATION TO ASSURE A UNIFORM SUSPENSION. DO NOT STORE SPRAY MIXTURE FOR PROLONGED PERIODS OR DEGRADATION OF CARBARYL MAY OCCUR. Local water conditions may also accelerate the degradation of spray mixtures containing carbaryl. See COMPATIBILITY STATEMENT below.

### TANK MIXING INSTRUCTIONS

Once the water soluble packets have completely dissolved, add other products in the following order: wettable powder, dry flowable (wettable granules), liquid flowable, liquids, and EC's. Always allow each tank mix partner to disperse fully before adding the next product.

### COMPATIBILITY INFORMATION

Suregard Brand Seven 80S Carbaryl Insecticide when diluted with at least an equal volume of water, is compatible with a wide range of pesticides. It is not compatible with diesel fuel, kerosene, fuel oil or aromatic solvents. If compatibility with another product and the resulting crop response is unknown, the mixture should be tested on a small scale. Curdling, precipitation, greasing, layer formation or increased viscosity are symptoms of incompatibility. Incompatibility will reduce product performance and may cause application and handling difficulties or plant injury. Observe all cautions and limitations on labeling of all products used in mixtures. WHEN PREPARING COMBINATION SPRAYS, FIRST ADD SEVIN® 80 SOLUPACKET TO AT LEAST AN EQUAL VOLUME OF WATER, MIX THOROUGHLY, AND THEN ADD COMBINATION PRODUCTS TO THE MIXTURE. DO NOT APPLY TANK MIX COMBINATIONS UNLESS YOUR PREVIOUS EXPERIENCE INDICATES THE MIXTURE IS EFFECTIVE AND WILL NOT RESULT IN APPLICATION PROBLEMS OR PLANT INJURY.

Carbaryl is unstable under highly alkaline conditions and mixtures with strong bases, such as Bordeaux, lime-sulfur and casein-lime spreaders, will result in chemical degradation of the insecticide. Do not use this product in water with pH values above 8.0 unless a buffer is added. If necessary, water should be buffered to neutral (pH = 7.0) before adding this product to the spray tank. Overhead irrigation with alkaline or muddy water after application will also accelerate chemical degradation and may result in reduced product performance.

### APPLICATION PROCEDURES

On all crops use sufficient gallonage to obtain thorough and uniform coverage. Observe crop label instructions for specific directions regarding spray volume where they occur. Calibrate spray equipment to deliver the required volume. Use of 50 mesh slotted strainers in spray system and 25 mesh slotted strainers behind nozzles is recommended.

### GROUND APPLICATION

Apply in sufficient volume for adequate coverage on all crops and sites.

**SPECIFIC USE DIRECTIONS****USE SITES:**

Asparagus

Brassica Leafy Vegetables

Cereal Grain Crops (Field and Pop Corn; Grain Sorghum; Rice; Sweet Corn)

Cucurbit Vegetables

Forage Crops (Alfalfa, Clovers, Pasture and Grown for Hay and/or Seed; Rangeland)

Fruiting Vegetables

Leafy Vegetables (Dandelion, Endive, Lettuce, Parsley, Spinach; Leaf Petiole Subgroup 4B)

Legume Vegetables (Edible Podded Legume Vegetables; Dried Shelled Peas and Beans (except Soybean); Soybeans;

Foliage of Legume Vegetables)

Noncropland (Wasteland; Rights-of-Way; Hedgerows; Ditchbanks; Roadsides)

Okra

Peanuts

Root and Tuber Crops (Root and Tuber Crops except Sugar Beets and Sweet Potatoes)

Small Fruits and Berries (Cranberries, Grapes, Strawberries)

Sugar Beets

Sunflower

Sweet Potatoes

Tobacco

Tree Fruit Crops (Citrus Fruits; Olives; Pome Fruits; Stone Fruits)

Tree Nut Crops (Pistachios; Tree Nuts)

Forested Areas and Rangeland Trees

Ornamental Trees and Plants

**Specific Pests Across Multiple Sites**

Grasshoppers

Imported Fire Ants

Nuisance Pests

**APPLICATION TIMING AND DIRECTIONS**

Begin application when insect populations reach recognized economic threshold levels. Consult the Cooperative Extension Service, Consultants, or other qualified authorities to determine appropriate threshold levels and timing for treatment in your area. Where a dosage range is indicated, use the lower rate on light to moderate infestations, young plants and early instars and use the higher rate on heavy infestations, mature plants, advanced instars and adults. Thorough and uniform spray coverage is essential for effective product performance.

**EACH WATER SOLUBLE PACKET CONTAINS 1.25 POUNDS OF FORMULATED PRODUCT.**

ASPARAGUS			
PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Apache cicada Asparagus beetle	1 1/4	1.0	Repeat applications as necessary up to a total of 3 times prior to harvest or a total of 5 applications per year to spears and ferns combined. Do not apply more than once every 3 days.
	2 1/2	0.5	Application to ferns or brush growth following harvest of spears. Repeat applications as necessary but not more often than once every 7 days. Do not make more than a total of 5 applications per year to spears and ferns combined.

**RESTRICTIONS: ASPARAGUS**

- Do not apply within 1 day of harvest.
- Do not apply more than a total of 3 3/4 pounds (3 water soluble packets) per acre per year before harvest of spears.
- Do not apply more than a total of 6 1/4 pounds (5 water soluble packets) per acre per year.

- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**BRASSICA LEAFY VEGETABLES CROPS**

All members of the Brassica Leafy Vegetable Group 5 including: Broccoli, Broccoli raab (rapini), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccolo, Chinese broccoli (gai lon), Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens, Turnip greens

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Flea beetles Harlequin bug Leafhoppers	5/8 to 1 1/4	2.0 to 1.0	Repeat applications as needed up to a total of 4 times per year but not more often than once every 7 days.
Armyworm Aster leafhopper Corn earworm Fall armyworm Imported cabbageworm Stink bugs Tarnished plant bug	1 1/4 to 2 1/2	1.0 to 0.5	

**RESTRICTIONS: BRASSICA LEAFY VEGETABLES**

- For Head and Stem Brassica subgroup 5A [including Broccoli, Chinese broccoli (*gai lon*), Brussels sprouts, Cabbage, Chinese cabbage (*napa*), Chinese mustard cabbage (*gai choy*), Cauliflower, Cavalo broccolo, and Kohlrabi], do not apply within 3 days of harvest.
- For Leafy Brassica Greens subgroup 5B [Broccoli raab (*rapini*), Chinese cabbage (*bok choy*), Collards, Kale, Mizuna, Mustard greens, Mustard spinach, Rape greens, and Turnip greens], do not apply within 14 days of harvest.
- Do not apply more than a total of 7 1/2 pounds (6 water soluble packets) per acre per crop per year.
- Application is permitted only within 30 days from the date of crop emergence or the date of transplanting
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.



**CEREAL GRAIN CROPS**  
**FIELD CORN AND POPCORN**

PEST		POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Armyworm Chinch bugs Corn earworm Corn rootworm adults Fall armyworm Flea beetles	Japanese beetle Sap beetles Southwestern corn borer Leafhoppers	1 1/4 to 2 1/2	1.0 to 0.5	<b>OBSERVE BEE CAUTION.</b> Repeat applications as needed up to a total of 4 times per year but not more often than once every 14 days. Good timing and good coverage are essential for effective product performance.
European corn borer		1 7/8 to 2 1/2	0.67 to 0.5	For best results on chinch bug, use ground equipment to apply at least 20 gallons of water per acre and direct spray toward stalk to provide thorough coverage. For best results on European corn borer, do not apply in less than 15 gallons of water per acre.
Western bean cutworm	Cutworms	2 1/2	0.5	For western bean cutworm, treat when infestation averages 15% and at 90 to 100% tassel emergence. Treatment after 100% silk emergence will reduce effectiveness. For best results on cutworm, apply in a 12-inch band, over the row, using sufficient volume of water to obtain thorough coverage. For broadcast application, use at least 20 gallons of water per acre. For cutworm, this product is most effective against species which feed on the upper portions of the plant.

**RESTRICTIONS: FIELD AND POP CORN**

- Do not apply within 48 days of harvest of grain and fodder or within 14 days of harvest or grazing of forage or silage.
- Do not apply more than a total of 10 pounds (8 water soluble packets) per acre per crop per year.
- Hand harvesting is prohibited.
- Restricted-entry interval (REI) = 24 hours  
EXCEPTION: the REI is 21 days for workers detasseling corn.
- **BEE CAUTION**  
For corn: If application cannot be avoided when target crop or weeds are in bloom, limiting applications to times when bees are least active, e.g. within 2 hours of sunrise or sunset, will minimize risk to bees. Notifying beekeepers within 1 mile of treatment area at least 48 hours before product is applied will allow them to take additional steps to protect their bees. Do not apply to target crop 4 days prior to bloom.

## GRAIN SORGHUM

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS	
Armyworm Chinch bugs Corn earworm	Fall armyworm Stink bugs Webworms	1 1/4 to 2 1/2	1.0 to 0.5	Repeat applications as necessary up to a total of 4 times per year but not more often than once every 7 days.
Southwestern corn borer		1 7/8	0.67	Direct spray into forming heads for best results on insects attacking heads.
Cutworms		2 1/2	0.5	For best results on chinch bug, use high gallonage ground application at the base of plants. For cutworm, this product is most effective against species which feed on the upper portions of the plant.

## RESTRICTIONS: GRAIN SORGHUM

- Do not apply within 21 days of harvest for grain or fodder or within 14 days of harvest or grazing of forage or silage.
- Do not apply more than a total of 7 1/2 pounds (6 water soluble packets) per acre per year.
- BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

## RICE

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS	
Armyworm Chinch bugs Fall armyworm	Leafhoppers Stink bugs	1 1/4 to 1 7/8	1.0 to 0.67	Up to 2 applications per crop per year may be made but not more often than once every 7 days.
Tadpole shrimp		1 7/8	0.67	<b>California only</b> Up to 2 applications per crop per year may be made but not more often than once every 7 days. For best results on tadpole shrimp, apply to water when pest first appears.

## RESTRICTIONS: RICE

- Do not apply within 14 days of harvest for grain or straw.
- Do not apply more than a total of 3 3/4 pounds (3 water soluble packets) per acre per crop per year.
- Discharge from treated rice fields may kill shrimp, crabs, and crayfish.
- Do not apply propanil herbicides within 15 days before or after application of this product or plant injury will result.
- BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

SWEET CORN

PEST		POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Armyworm	Japanese beetle	1 1/4 to 2 1/2	1.0 to 0.5	<p>OBSERVE BEE CAUTION</p> <p>Repeat applications as necessary up to a total of 8 times per year but not more often than once every 3 days.</p> <p>Good timing and good coverage are essential for effective product performance.</p>
Chinch bugs	Sap beetles			
Corn earworm	Southwestern			
Corn rootworm adults	corn borer			
Fall armyworm	Leafhoppers			
Flea beetles				
European corn borer		1 7/8 to 2 1/2	0.67 to 0.5	<p>For insects attacking silks and ears, insecticide sprays should be applied starting when first silks appear and continuing until silks begin to dry. During silking, the minimum retreatment interval (3 days) may not provide adequate levels of protection under conditions of rapid growth or severe pest pressure. The use of an alternative product should be considered in conjunction with this product.</p> <p>For best results on chinch bug, use ground equipment to apply at least 20 gallons of water per acre and direct spray toward stalk to provide thorough coverage.</p> <p>For best results on European corn borer, do not apply in less than 15 gallons of water per acre.</p> <p>For western bean cutworm, treat when infestation average 15% and at 90 to 100% tassel emergence. Treatment after 100% silk emergence will reduce effectiveness.</p> <p>For best results on cutworm, apply in a 12-inch band, over the row, using sufficient volume of water to obtain thorough coverage. For broadcast application, use at least 20 gallons of water per acre.</p> <p>For cutworm, this product is most effective against species which feed on the upper portions of the plant.</p>
Western bean cutworm	Cutworms	2 1/2	0.5	

**RESTRICTIONS: SWEET CORN**

- Do not apply within 2 days of harvest of ears, within 14 days of harvest or grazing of forage, or within 48 days of harvest of fodder.
- Do not apply more than a total of 20 pounds (16 water soluble packets) per acre per crop per year.
- Hand harvesting is prohibited.
- Restricted-entry interval (REI) = 24 hours
- EXCEPTION: the REI is 21 days for workers detasseling corn.

**BEE CAUTION**

For corn: If application cannot be avoided when target crop or weeds are in bloom, limiting applications to times when bees are least active, e.g. within 2 hours of sunrise or sunset, will minimize risk to bees. Notifying beekeepers within 1 mile of treatment area at least 48 hours before product is applied will allow them to take additional steps to protect their bees. Do not apply to target crop 4 days prior to bloom.

**CUCURBIT VEGETABLES**

All members of the Cucurbit Vegetable Group 9 including: Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Gourd (edible, includes hyotan, cucuzza, hechima, Chinese okra), *Momordica* spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of *Cucumis melo* including 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 (includes summer squash types such as: crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini, and winter squash types such as acorn squash, butternut squash, calabaza, cushaw, Hubbard squash, spaghetti squash), Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*).

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Pickleworm Melonworm	5/8 to 1 1/4	2.0 to 1.0	Repeat applications as necessary up to a total of 6 times per year but not more often than once every 7 days.
Cucumber beetles Flea beetles Leafhoppers Squash bugs	1 1/4	1.0	For best results on squash bugs, apply sufficient spray volume for thorough coverage and time sprays for early morning or late afternoon.

**RESTRICTIONS: CUCURBIT VEGETABLES**

- Do not apply within 3 days of harvest.
- Do not apply more than a total of 7 1/2 pounds (6 water soluble packets) per acre per crop per year.
- Observe plant response precautions.
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**FORAGE CROPS**  
**ALFALFA AND CLOVERS ONLY**

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Blister beetles Mexican bean beetle	5/8 to 1 1/4	2.0 to 1.0	OBSERVE BEE CAUTION. Observe plant response precautions.
Alfalfa caterpillar. Bean leaf beetle Cucumber beetles Green cloverworm Japanese beetle Leafhoppers	Three cornered alfalfa hopper Thrips Velvetbean caterpillar	1 1/4	1.0
Armyworm Cloverhead weevil Corn earworm Cutworms Egyptian alfalfa weevil larvae	Essex skipper European alfalfa beetle Fall armyworm Lygus bugs Webworms Yellow striped armyworm	1 1/4 to 1 5/8	1.0 to 0.77
Alfalfa weevil larvae (west of the Rocky Mountains)	1 1/4 to 1 7/8	1.0 to 0.67	For alfalfa weevil larvae, if pretreatment damage is extensive, cut alfalfa and treat the stubble. This product is not effective against adult alfalfa weevils. For cutworm, this product is most effective against species which feed on the upper portions of the plant.
Alfalfa weevil larvae (east of the Rocky Mountains)	1 7/8	0.67	

**RESTRICTIONS: FORAGE CROPS**

- Do not apply more than once per cutting.
- Do not apply within 7 days of harvest or grazing.
- Do not exceed 1 7/8 pounds (1 1/2 water soluble packets) per acre per cutting per year.
- Carbaryl may cause a temporary bleaching of tender alfalfa foliage.
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**PASTURE AND GRASSES GROWN FOR HAY AND/OR SEED**

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Armyworm Chinch bugs Essex skipper Fall armyworm Striped grass looper Thrips Range caterpillar Range crane fly	1 1/4 to 1 7/8	1.0 to 0.67	Up to 2 applications per year may be made but not more often than once every 14 days. Accurately mark swaths to avoid over-application. To kill thrips in grasses, use high spray pressure to improve penetration into boot.
Ticks*	1 1/4	1.0	*Will kill only ticks present at the time of application and directly contacted by product

**RESTRICTIONS: PASTURE AND GRASSES GROWN FOR HAY AND/OR SEED**

- Do not apply within 14 days of harvest or grazing.
- Do not exceed a total of 3 3/4 pounds (3 water soluble packets) per acre per year.
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**RANGELAND**

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Black grass bug Range caterpillar Range crane fly	5/8 to 1 1/4	2.0 to 1.0	Do not make more than 1 application per year.
Grasshoppers Mormon cricket	5/8	2.0	Accurately mark swaths to avoid over-application.

**RESTRICTIONS: RANGELAND**

- May be harvested or grazed the same day as treatment.
- Do not apply more than 1 1/4 pounds (1 water soluble packet) per acre per year.
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**FRUITING VEGETABLES**

Eggplant, Pepper (includes: bell pepper, chili pepper, cooking pepper, pimento, sweet pepper) and Tomato only

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Colorado potato beetle Tomato hornworm Tomato pinworm European corn borer Fall armyworm Lace bugs Stink bugs ... (suppression) Tarnished plant bug Thrips (suppression) Tomato fruitworm	1 1/4 to 2 1/2	1.0 to 0.5	Repeat applications as necessary up to a total of 7 times per year but not more often than once every 7 days.  Thorough coverage is essential to effectively suppress stink bugs.  When disease transmission is suspected, monitor fields following application and retreat if reinfestation occurs but not more often than once every 7 days.
Flea beetles Leafhoppers	5/8 to 1 1/4	2.0 to 1.0	For cutworm, this product is most effective against species which feed on the upper portions of the plant.
Cutworms	2 1/2	0.5	

**RESTRICTIONS: FRUITING VEGETABLES**

- Do not apply within 3 days of harvest.
- Do not apply more than a total of 10 pounds (8 water soluble packets) per crop per year.
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**LEAFY VEGETABLES**

Dandelion; Endive (escarole); Lettuce (head and leaf); Parsley; Spinach; Celery, Chinese celery, and Swiss chard only

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Flea beetles Harlequin bug Leafhoppers	5/8 to 1 1/4	2.0 to 1.0	Repeat applications as necessary up to a total of 5 times per year but not more often than once every 7 days.
Armyworm Aster leafhopper Corn earworm Fall armyworm Imported cabbageworm Lygus bugs Spittlebugs Stink bugs Tarnished plant bug	1 1/4 to 2 1/2	1.0 to 0.5	

**RESTRICTIONS: LEAFY VEGETABLES**

- Do not apply within 14 days of harvest.
- Do not apply more than a total of 7 1/2 pounds (6 water soluble packets) per acre per crop per year.
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**LEGUME VEGETABLES**

**All members of the Edible Podded Legume Vegetable Subgroup 6A including:** Phaseolus sp. including runner bean, snap bean, and wax bean; Vigna sp. including asparagus bean, Chinese longbean, moth bean, and yardlong bean; Pisum sp. including dwarf pea, edible-pod pea, snow pea, sugar snap pea; Jackbean; Pigeon pea; Soybean (immature seed); Sword bean;

**All members of the Dried Shelled Legume Vegetable (except soybean) Subgroup 6C including:** Lupinus sp. including grain lupin, sweet lupin, white lupin, and white sweet lupin; Phaseolus sp. including field bean, kidney bean, dry lima bean, navy bean, pinto bean, tepary bean; Vigna sp. including adzuki bean, blackeyed pea, catjang, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, Urd bean; Pisum sp. including dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea; Broad bean (dry); Chickpea (dry); Guar (dry); Lablab bean (dry); Lentil (dry); Pigeon pea (dry);

**All members of the Foliage of Legume Vegetable Group 7:** Plant parts of any legume vegetables included in the legume vegetable (Crop Group 6) that will be used as animal feed;

**Soybeans**

PEST		POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Bean leaf beetle Blister beetle Cucumber beetles	Green cloverworm Japanese beetle Mexican bean beetle Velvetbean caterpillar	5/8 to 1 1/4	2.0 to 1.0	Repeat applications as necessary up to a total of 4 times per year but not more often than once every 7 days. For cutworm, this product is most effective against species which feed on the upper portions of the plant. Use lower rates for light to moderate populations and smaller instars. Use the higher rates for heavy populations and larger instars.
Corn earworm		5/8 to 1 7/8	2.0 to 0.67	
Alfalfa caterpillar Colorado potato beetle Flea beetles Leafhoppers	Three cornered alfalfa hopper Thrips Western bean cutworm	1 1/4	1.0	
Armyworm Cutworms European corn borer Fall armyworm	Stink bugs Tarnished plant bug Webworms	1 1/4 to 1 7/8	1.0 to 0.67	
Alfalfa looper (suppression) Cowpea curculio (suppression) Pea leaf weevil	Pea weevil Yellowstriped armyworm	1 7/8	0.67	
<b>California only:</b> Corn earworm (suppression) Limabean podborer (suppression)	Lygus bugs (suppression) Stink bugs (suppression)	1 7/8	0.67	

**RESTRICTIONS: LEGUME VEGETABLES**

- Do not apply within 14 days of grazing or harvest for forage or within 3 days of harvest of fresh edible-podded beans or peas or within 21 days of harvest of dried beans or peas, seed, or hay.
- Do not apply more than a total of 7 1/2 pounds (6 water soluble packets) per acre per crop per year.
- Do not apply a combination of this product and 2,4-DB herbicides to soybeans as crop injury may result.
- Use on succulent, shelled peas and beans (Crop Subgroup 6B) is prohibited.
- Observe plant response precautions.
- DO NOT USE ON LENTILS IN CALIFORNIA



**BEE CAUTION**

For crops in bloom (except soybeans): Do not apply this product to target crops or weeds in bloom.

For soybeans: If application cannot be avoided when target crop or weeds are in bloom, limiting applications to times when bees are least active, e.g. within 2 hours of sunrise or sunset, will minimize risk to bees.

Notifying beekeepers within 1 mile of treatment area at least 48 hours before product is applied will allow them to take additional steps to protect their bees. Do not apply to target crop 4 days prior to bloom.

**NONCROPLAND**

**Wasteland, Rights-of-Way, Hedgerows, Ditchbanks, Roadsides**

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Black grass bug	1/3 to 5/8	3.7 to 2.0	Up to 2 applications per year may be made but not more often than once every 14 days.  Accurately mark swaths to avoid over-application.
Mormon cricket	5/8	2.0	
Range caterpillar Range crane fly	5/8 to 1 1/4	2.0 to 1.0	

**RESTRICTIONS: NONCROPLAND**

- Do not apply within 14 days of grazing or harvest for forage or hay.
- Do not apply more than a total of 3 3/4 pounds (3 water soluble packets) per acre per year.

**BEE CAUTION**

Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**OKRA \***

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Corn earworm Stink bugs	1 1/4 to 1 7/8	1.0 to 0.67	Apply using ground equipment in sufficient volume to insure good coverage.  Apply as needed on 6 to 8 day intervals.  For grasshopper, refer to the general Grasshopper Section.

**RESTRICTIONS: OKRA**

- Do not apply within 3 days of harvest.
- Do not apply more than a total of 7 1/2 pounds (6 water soluble packets) per acre per year.
- DO NOT USE IN CALIFORNIA.

**BEE CAUTION**

Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

## PEANUTS

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Blister beetles Mexican bean beetle	5/8 to 1 1/4	2.0 to 1.0	Repeat applications as necessary up to a total of 5 times per year but not more often than once every 7 days.  For best results on thrips, use directed or banded sprays with hollow cone spray nozzles. Ensure adequate coverage for the underside of leaves.
Alfalfa caterpillar Bean leaf beetle Cucumber beetle Green cloverworm Japanese beetle Leafhoppers	1 1/4	1.0	
Rednecked peanutworm Three cornered alfalfa hopper Thrips Velvetbean caterpillar	1 1/4 to 1 7/8	1.0 to 0.67	For cutworm, this product is most effective against species which feed on the upper portions of the plant.
Armyworm Corn earworm Fall armyworm	1 1/4 to 1 7/8	1.0 to 0.67	
Whitefringed beetle adults Cutworms	2 1/2	0.5	

## RESTRICTIONS: PEANUTS

- Do not apply within 14 days of harvest.
- Do not apply more than a total of 10 pounds (8 water soluble packets) per acre per crop per year.
- Observe plant response precautions.
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

## ROOT AND TUBER CROPS

Beet (garden), Carrot, Horseradish, Parsley (turnip-rooted), Parsnip, Potato, Radish, Oriental radish (daikon), Rutabaga and Turnips only (see below for sugar beets and sweet potatoes)

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Flea beetles Leafhoppers	5/8 to 1 1/4	2.0 to 1.0	Repeat applications as necessary up to a total of 6 times per year but not more often than once every 7 days.  For cutworm, this product is most effective against species which feed on the upper portions of the plant.
Armyworm Aster leafhopper Colorado potato beetle Corn earworm Cutworms European corn borer Fall armyworm	1 1/4 to 2 1/2	1.0 to 0.5	
Lace bugs Lygus bugs Spittlebugs Stink bugs Tarnished plant bug	1 1/4 to 2 1/2	1.0 to 0.5	

## RESTRICTIONS: ROOT AND TUBER CROPS EXCEPT SUGAR BEETS AND SWEET POTATOES

- Do not apply within 7 days of harvest.
- Do not apply more than a total of 7 1/2 pounds (6 water soluble packets) per acre per crop per year.
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**SUGAR BEETS**

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Armyworm Beet leaf beetle Fall armyworm Flea beetles Leafhoppers Webworms	1 1/4 to 1 7/8	1.0 to 0.67	Repeat applications as necessary up to a total of 2 times per year but not more often than once every 14 days.
Cutworms	1 7/8	0.67	For cutworm, this product is most effective against species which feed on the upper portions of the plant.

**RESTRICTIONS: SUGAR BEETS**

- Do not apply within 28 days of harvest for roots or forage.
- Do not apply more than a total of 3 3/4 pounds (3 water soluble packets) per acre per crop per year.
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**SWEET POTATOES**

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Corn earworm Cucumber beetles Flea beetles Sweet potato hornworm Sweet potato weevil Tortoise beetles	1 1/4 to 2 1/2	1.0 to 0.5	For foliar sprays, repeat applications as necessary up to a total of 8 times per year but not more often than once every 7 days.

**RESTRICTIONS: SWEET POTATOES**

- Do not apply within 7 days of harvest.
- Do not apply more than a total of 10 pounds (8 water soluble packets) per acre per crop per year.
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**SMALL FRUITS AND BERRIES**

**Blackberry** (*Rubus* spp. - including Andean Blackberry, Arctic blackberry, Bingleberry, Black satin berry, Boysenberry, Brombeere, California blackberry, Chesterberry, Cherokee blackberry, Cheyene blackberry, Common blackberry, Coryberry, Darrowberry, Dewberry, Dirksen thornless berry, Evergreen blackberry, Himalayaberry, Hullberry, Lavacaberry, Loganberry, Lowberry, Lucretiaberry, Mammoth blackberry, Marionberry, Mora, Mures deronce, Nectarberry, Northern dewberry, Oiallieberry, Oregon evergreen berry, Phenomenalberry, Rangeberry, Ravenberry, Rossberry, Shawnee blackberry, Southern dewberry, Tayberry, Youngberry, Zarzamora, plus cultivars, varieties and/or hybrids of these).

**Raspberry** (*Rubus* spp. - including Bababerry, Black raspberry, Blackcap, Caneberry, Framboise, Frambueso, Himbeere, Keriberry, Mayberry, Purple raspberry, Red raspberry, Thimbleberry, Tulameen, Wild raspberry, Yellow raspberry, plus cultivars, varieties and/or hybrids of these).

**Blueberry** (*Vaccinium* spp. - highbush, lowbush and cultivars and/or hybrids of these [= all blueberry species]),

**Cranberries; Grapes; Strawberries.**

PEST		POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
European fruit lecanium European raspberry aphid Flea beetles Grape leaffolder Grape leafroller Japanese beetle Leafhoppers Leafrollers Meadow spittlebug Omnivorous leaflier	Rose chafer Snowy tree cricket Strawberry bud weevil Strawberry fruitworm Strawberry leafroller Strawberry weevil Western grapeleaf skeletonizer Western yellowstriped armyworm	1 1/4 to 2 1/2	1.0 to 0.5	OBSERVE BEE CAUTION. Repeat applications as necessary up to a total of 5 times per year but not more often than once every 7 days. For cutworm, this product is most effective against species which feed on the upper portions of the plant. In grapes for grape leaffolder, apply before first brood larvae emerge from rolls.
Blueberry maggot Cherry fruitworm Cranberry fireworm Cranberry fruitworms		1 7/8 to 2 1/2	0.67 to 0.5	In grapes, do not concentrate spray on the bunch or visible residues may result.
Eight-spotted forester Cutworms Grape berry moth June beetles Omnivorous leafroller	Orange tortrix Redbanded leafroller Saltmarsh caterpillar	2 1/2	0.5	

**RESTRICTIONS: SMALL FRUITS AND BERRIES**

- Do not apply within 7 days of harvest.
- Do not apply more than a total of 12 1/2 pounds (10 water soluble packets) per acre per crop per year.
- Use in cranberries may kill shrimp and crabs. Do not use in areas where these are important resources.
- Carbaryl may injure Early Dawn and Sunrise varieties of strawberries.
- For **GRAPES** only:  
East of the Rocky Mountains, the restricted-entry interval (REI) = 2 days for all activities except grape girdling and cane turning.  
**EXCEPTION:** the REI is 6 days for grape girdling and cane turning.  
West of the Rocky Mountains, the restricted-entry interval (REI) = 6 days
- Restricted-entry interval (REI) = 12 hours for Cranberries, and Strawberries
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. If weed or cover crop bloom is present, mow orchard floor or between rows prior to applying this product. Do not apply to target crop 4 days prior to bloom.

**SUNFLOWERS**

PEST		POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Stem weevil Sunflower beetle		1 1/4 to 1 7/8	1.0 to 0.67	Up to 2 applications may be made per year but not more often than once every 7 days.
Armyworm Cutworms	Fall armyworm	1 7/8	0.67	For cutworm, this product is most effective against species which feed on the upper portions of the plant.

**RESTRICTIONS: SUNFLOWERS**

- Do not apply within 30 days of grazing or harvest for forage or within 60 days of harvest for seed.
- Do not apply more than a total of 3 3/4 pounds (3 water soluble packets) per acre per crop per year.
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.
- **DO NOT USE ON SUNFLOWER IN CALIFORNIA.**

**TOBACCO**

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Budworms Fall armyworm Tobacco flea beetles Hornworms  Japanese beetle June beetle Suckfly	1 1/4 to 2 1/2	1.0 to 0.5	<b>Plant bed and Field Treatment</b> Repeat treatments as necessary up to a total of 4 times per crop per year but not more often than once every 7 days. Use lower rate on young plants (up to knee height). Use at least 10 gallons of prepared spray per acre. Begin treatments when worms are small.

**RESTRICTIONS: TOBACCO**

- Do not apply within 2 days of harvest.
- Do not apply more than a total of 10 pounds (8 water soluble packets) per acre per crop per year.
- Observe plant response precautions.
- Restricted-entry interval (REI) = 2 days (48 hours).
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

### TREE FRUIT CROPS

On all tree fruit crops, apply in sufficient volume for adequate coverage. This will vary depending on the pest and its severity, the tree condition, size, and density, and other factors.

### CITRUS FRUITS

**All members of the Citrus Fruit Group 10 including:** Calamondin, Citrus citron, Citrus hybrids (Citrus spp., includes chironja, tangelo and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (sweet and sour), Pummelo, Satsuma mandarin, White sapote (*Casimiroa* spp.), and other cultivars and/or hybrids of these

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Avocado leafroller California orangedog Citrus cutworm Fruittree leafroller	Orange Tortrix Western tussock moth	2 1/2 to 3 3/4	0.5 to 0.3
	Scale insects [Black scale, brown soft scale, California red scale (except in California), citrus snow scale, yellow scale (except in California)]	3 3/4 to 6 1/4	0.3 to 0.2
Citrus root weevils (adults)		6 1/4	0.2
<b>California only:</b> California red scale	Yellow scale	6 1/4 to 15	0.2 to 0.08
<b>Florida only:</b> Adult citrus weevils (such as, <i>Diaprepes abbreviatus</i> , <i>Pantomorus cervinus</i> , <i>Artipes floridanus</i> , and <i>Pachnaeus</i> spp.)		6 1/4 to 10	0.2 to 0.12

#### RESTRICTIONS: CITRUS FRUITS

- Do not apply within 5 days of harvest.
- All States including Florida and California:  
Do not apply more than a total of 25 pounds (20 water soluble packets) per acre per crop per year.
- California only:  
Restricted-entry interval (REI) = 3 days for application rates  $\geq$  6 1/4 pounds per acre (5 water soluble packets).  
Do not apply more than 15 pounds (12 water soluble packets) per acre per application.
- Florida only:  
Restricted-entry interval (REI) = 12 hours  
Do not apply more than 10 pounds (8 water soluble packets) per acre per application
- All States other than Florida and California:  
Restricted-entry interval (REI) = 12 hours  
Do not apply more than 6 1/4 pounds (5 water soluble packets) per acre per application.

• **BEE CAUTION**

Do not apply this product to target crop in bloom. Mowing weed or cover crop bloom prior to applying this product will reduce hazard to bees. Do not apply to target crop 4 days prior to bloom.

**POME FRUITS**

**Apple, Crabapple, Pear, and Oriental pear only**

PEST		POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
White apple leafhopper		5/8 to 1 7/8	2.0 to 0.67	<p><b>OBSERVE BEE CAUTION</b>                      On apples, avoid use during the period from full bloom until 30 days after full bloom unless fruit thinning is desired. Use for pest activity during this period may also result in fruit removal. Repeat applications as necessary up to a total of 8 times per crop per year (including thinning sprays on apples) but not more often than once every 14 days.                      For psylla, apply when eggs hatch or young nymphs are present.                      For scale, apply when crawlers are present.</p>
Apple aphid	Codling moth	1 1/4 to 3 3/4	1.0 to 0.3	
Apple aphid Apple maggot Apple rust mite Bagworms California pearslug (pear sawfly) European apple sawfly Eyespotted bud moth Fruittree leafroller Lesser appleworm Lygus bugs Orange tortrix	Pearleaf blister mite Pear psylla Pear rust mite Periodical cicada Plum curculio Redbanded leafroller Rosy apply aphid Scale insects (Forbes scale, Lecanium scale, San Jose scale) Tarnished plant bug Tentiform leafminers Woolly apple aphid Yellowheaded fireworm	1 7/8 to 3 3/4	0.67 to 0.3	

**POME FRUITS**  
(continued)

CROP	PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Apples Only, for Fruit Thinning		1 1/4 to 3 3/4	1.0 to 0.3	<p><b>OBSERVE BEE CAUTION.</b></p> <p>For easily thinned varieties: apply 1/3 to 5/8 pounds per 100 gal. of spray mixture.</p> <p>For difficult to thin varieties: apply 5/8 to 1 1/4 pounds per 100 gal. of spray mixture.</p> <p>Apply between 10 and 25 days after full bloom. Factors such as tree age, variety, nutrition, previous crop, pruning, bloom and degree of set favor excessive fruit thinning with this product. Exercise caution to avoid possible yield reduction. <b>Rates may vary depending on variety and local orchard conditions.</b></p> <p><b>NOTE:</b> The use of SEVIN® 80 Solupacket may result in fruit deformity under certain environmental conditions. Before using on any variety of apples, the user must weigh the risk versus benefits when using this product, particularly when using between <b>80% petal fall and 6 mm fruit size</b>. Red Delicious are more sensitive to this phenomenon and in particular, the varieties Bisbee, Red Chief and Vallee Spur are very susceptible to conditions causing fruit deformity. Precipitation and temperatures below 65° F increases the possibility of fruit deformity. The use with summer spray oils and wetting agents may increase the risk of fruit deformity and injury. Consult with fruit thinning experts in your area for advice on using this product on specific apple varieties under local growing conditions or other questions. Observe all restrictions on the use of this product for apple thinning.</p>

**RESTRICTIONS: POME FRUITS**

Do not apply to quince.

- Do not use on pears between the tight flower cluster up to the 20 mm fruit size. Use during this period may result in undesirable fruit thinning and/or deformed fruit.
- Do not apply within 3 days of harvest.
- Do not apply more than a total of 18 3/4 pounds (15 water soluble packets) per acre per crop per year.
- Do not make more than a total of 8 applications per crop per year.

**FOR PROTECTION OF HONEY BEES:****BEE CAUTION**

Do not apply this product to target crops or weeds in bloom. If weed or cover crop bloom is present, mow orchard floor or between rows prior to applying this product. Do not apply to target crop 4 days prior to bloom.

**For Apple Thinning Use**

- Do not apply during bloom.
- Remove bee hives from orchard to be treated before applying this product. Removing bee hives from adjacent orchards will further minimize risk to bees.

**Drift Management**

For airblast application, follow the following drift management practices:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy;
- Block off upward pointed nozzles when there is no overhanging canopy;



- Do not allow the spray to go beyond the edge of the cultivated area (i.e., turn off sprayer when turning at end rows);
- For applications to the outside rows, only spray inward, toward the orchard

**STONE FRUITS**

**Apricot, Nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune (fresh) only**

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Apple pandemis Black cherry aphid Cherry fruitworm Cherry maggot (Cherry fruit fly) Codling moth Cucumber beetles Eastern tent caterpillar Eyespotted bud moth European earwig Fruittree leafroller Green fruitworm Gypsy moth Japanese beetle Lesser peachtree borer Orange tortrix Oriental fruit moth Peach twig borer Periodical cicada Plum curculio Prune leafhopper Redbanded leafroller Rose chafer Scale insects (Brown soft scale, Forbes scale, Lecanium scale, Olive scale, Oystershell scale, San Jose scale) Tarnished plant bug Tussock moth Variegated leafroller	2 1/2 to 3 3/4	0.5 to 0.3	OBSERVE BEE CAUTION. Repeat applications as necessary up to a total of 3 times per crop per year but not more often than once every 7 days. An additional application at the dormant or delayed dormant timing may be made. For best results on scale, apply when crawlers are present. For lesser peachtree borer, best results have been found by thoroughly spraying limbs and tree trunks at weekly intervals during moth flight.
<b>California Only:</b> Black cherry aphid Cherry fruitworm Cherry maggot (Cherry fruit fly) Codling moth Cucumber beetles Eyespotted bud moth European earwig Fruittree leafroller Green fruitworm Orange tortrix Oriental fruit moth Peach twig borer Scale insects (Brown soft scale, Forbes scale, Lecanium scale, Olive scale, Oystershell scale, San Jose scale) Tarnished plant bug Tussock moth	3 3/4 to 5	0.3 to 0.25	OBSERVE BEE CAUTION. Repeat applications as necessary up to a total of 3 times per crop per year but not more often than once every 14 days. An additional application at the dormant or delayed dormant timing may be made. For best results on scale, apply when crawlers are present.
Peach twig borer Scale insects (Brown soft scale, Forbes scale, Lecanium scale, Olive scale, Oystershell scale, San Jose scale)	5 to 6 1/4	0.25 to 0.2	For dormant or delayed dormant timing, apply in combination with a recommended dormant oil. Refer to the dormant oil product label for additional use directions and restrictions.

**RESTRICTIONS: STONE FRUITS**

- Do not apply within 3 days of harvest, except in California. In California, do not apply within 1 day of harvest.
- All States including California:  
 Do not apply more than a total of 17 1/2 pounds (14 water soluble packets) per acre per crop per year.  
 Do not apply more than a total of 6 1/4 pounds (5 water soluble packets) per acre at the dormant or delayed dormant timing.  
 Do not apply more than a total of 11 1/4 pounds (9 water soluble packets) per acre during the production season.

- **California only:**  
Do not apply more than 5 pounds per acre (4 water soluble packets) per application during the production season.
- **All States other than California:**  
Do not apply more than 3 3/4 pounds per acre (3 water soluble packets) per application during the production season.
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. If weed or cover crop bloom is present, mow orchard floor or between rows prior to applying this product. Do not apply to target crop 4 days prior to bloom.

**TREE NUT CROPS**

On all tree nut crops, apply in sufficient volume for adequate coverage. This will vary depending on the pest and its severity, the tree condition, size, and density, and other factors.

**PISTACHIOS**

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Navel orangeworm	3 3/4 to 6 1/4	0.3 to 0.2	Repeat applications as necessary up to a total of 4 times per crop per year (including any applications at the dormant or delayed dormant timing) but not more often than once every 7 days. For scale, apply when crawlers are present. For dormant or delayed dormant timing, apply in combination with a recommended dormant oil. Refer to the dormant oil product label for additional use directions and restrictions.

**RESTRICTIONS: PISTACHIOS**

- Do not apply within 14 days of harvest.
- Do not apply more than 6 1/4 pounds per acre per application.
- Do not apply more than a total of 18 3/4 pounds (15 water soluble packets) per acre per crop per year, including any application at the dormant or delayed dormant timing.
- **BEE CAUTION**  
Do not apply this product to target crops or weeds in bloom. If weed or cover crop bloom is present, mow orchard floor or between rows prior to applying this product. Do not apply to target crop 4 days prior to bloom.

## TREE NUTS

Almond, Chestnut, Filbert (hazelnut), Pecan, Walnut [including black and English (Persian) walnuts] only

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Calico scale Codling moth European fruit lecanium Fall webworm Fruittree leafroller Hickory shuckworm Lesser webworm Navel orangeworm Peach twig borer Pecan leaf phylloxera Pecan stem phylloxera Pecan nut casebearer Pecan spittlebug Pecan weevil San Jose scale Twig girdler Walnut caterpillar	2 1/2 to 6 1/4	0.5 to 0.2	<p>OBSERVE BEE CAUTION</p> <p>Repeat applications as necessary up to a total of 4 times per crop per year (including any applications at the dormant or delayed dormant timing) but not more often than once every 7 days.</p> <p>Use lower rates for pests attacking leaves. Use higher rates for pests attacking fruit and for higher infestations.</p> <p>For scale, apply when crawlers are present.</p> <p>For peach twig borer, best results with foliar applications have been found by making applications in "popcorn" or petal fall stages when the May brood begins to hatch.</p> <p>For navel orangeworm in almonds and walnuts, best results have been found by timing early and midseason applications to correspond with moth flight peaks.</p> <p>For filbert leafroller, best results have been found by making applications when eggs are hatching, repeating application on first appearance of moths and again 3 to 4 weeks later.</p> <p>For codling moth in walnuts, best results have been found by making applications when average cross-sectional diameters of developing nuts are 0.5 to 0.75 inches and again during middle or late June as needed.</p>
Chestnut weevil	5 to 6 1/4	0.25 to 0.2	<p>For chestnut weevil, best results have been found with 4 applications at weekly intervals beginning in late July. The last application should be made prior to shuck split.</p> <p>For European earwig, thorough coverage of trunks, branches, and nuts is needed for best results.</p>
Almonds only Peach twig borer Scale insects	5 to 6 1/4	0.25 to 0.2	<p>For dormant or delayed dormant timing, apply in combination with a recommended dormant oil. Refer to the dormant oil product label for additional use directions and restrictions.</p>

## RESTRICTIONS: TREE NUTS

- Do not apply within 14 days of harvest.
- Do not apply more than a total of 18 3/4 pounds (15 water soluble packets) per acre per crop per year, including any application at the dormant or delayed dormant timing.



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**FORESTED AREAS AND RANGELAND TREES**


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Apply by ground in sufficient volume for adequate coverage. This will vary depending on the tree size, density and stage of growth.

**Forested areas:** Non-urban Forests, Tree Plantations, Planted Christmas Trees, Parks, Rural Shelter Belts; **Rangeland Trees.**

PEST		POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Ants (except harvester, pharaoh and carpenter)	Locust borer	1 1/4	1.0	Observe plant response precautions.
Apple aphid	Maple leafcutter			Obtain thorough coverage of upper and lower leaf surfaces. The addition of a sticker may improve product performance.
Armyworm	Mealy bugs			To kill scale insects, treat trunks, stems and twigs in addition to plant foliage.
Azalea leafminer	Mimosa webworm			For best results on worm, treat when pests are small.
Bagworms	Nantucket pine tip moth			Make applications for maple leafcutter on sugar maple when larvae are in 2nd instar after mining and as cases are being formed.
Birch leafminer	Oak leafminers			Repeat treatments as necessary up to a total of 2 times per year but not more often than once every 7 days. For gypsy moths, use the higher rate for heavy infestations.
Blister beetle	Oak skeletonizer			
Boxelder bug	Oakworm complex			
Boxwood leafminer	Oleander caterpillar			
Brown tail moth	Olive ash borer			
Cankerworms	Orange-striped oakworm			
Catalpa sphinx	Periodical cicada			
Chiggers*	Pine sawfly			
Cooley spruce gall adelgid	Pine spittlebug			
Cutworms	Pitch pine tip moth			
Cypress tip moth	Spruce budworm			
Douglas-fir tussock moth	Plant bugs			
Eastern spruce gall adelgid	Poinsettia hornworm			
Elm leaf aphid	Psyllids			
Elm leaf beetle	Puss caterpillar			
Elm spanworm	Redhumped oakworm			
Eriophyid mites	Rose aphid			
European pine shoot moth	Rose chafer			
Fall armyworm	Rose slug			
Flea beetle	Saddled prominent Sawflies (exposed)			
Fuller rose beetle	Scale insects (crawlers)			
Gall midges	Sowbugs			
Gall wasps	Spiney elm caterpillar			
Greenstriped mapleworm	Springtails			
Grasshoppers	Spruce needleminer			
Hackberry nipplegall maker	Subtropical pine tip moth			
Holly bud moth	Tent caterpillars			
Holly leafminer	Thorn bug			
Jackpine budworm	Walnut caterpillar			
Japanese beetle	Webworms			
Jeffrey pine needleminer	Western hemlock looper			
June beetles	Western spruce budworm			
Lace bugs	Willow leaf beetles			
Leafhoppers	Yellow poplar weevil			
Leafrollers				
Gypsy Moth		9/10 to 1 1/4	1.4 to 1.0	

**FORESTED AREAS AND RANGELAND TREES, CONTINUED**

PEST	RATE OF THIS PRODUCT PER GALLON	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Elm bark beetle Ips engraver beetles Mountain pine beetle Roundheaded pine beetle Western pine beetle	3 oz per gallon (1 packet per 6.7 gallons)	See Specific Directions	<p><b>Direct Trunk Treatment:</b>                      Effective as a preventative treatment only. Treat annually to prevent beetle attacks.</p> <p>Apply 1 gallon of spray per 50 square feet of bark prior to beetle flight or host-tree attack. Treat tree trunk from ground level up, until trunk diameter is less than 5 inches.</p> <p>For elm bark beetle: apply approximately 20-30 gallons of spray mixture for each 50 feet of elm tree for thorough coverage of all bark surfaces on trunks, limbs and twigs.</p> <p>Do not make more than 2 applications per year or repeat applications more often than once every six months.</p>

**RESTRICTIONS: FORESTED AREAS AND RANGELAND TREES**

- Do not make more than 2 foliar applications and 2 direct trunk treatments per year.
- Do not use on syrup-producing sugar maples where sap is harvested.
- DO NOT ENTER OR ALLOW OTHERS TO ENTER TREATED AREAS UNTIL SPRAYS HAVE DRIED.
- BEE CAUTION: Do not apply this product to plants in bloom.

**ORNAMENTAL TREES AND PLANTS**

Apply by ground in sufficient volume for adequate coverage. This will vary depending on the plant or tree size, density, and stage of growth.  
 Roses, Flowers, Other Herbaceous Plants, Woody Plants, Evergreens, Shrubs.

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
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Ants (except harvester, pharaoh and carpenter)	Maple leafcutter	1 1/4	1.0	<p>Observe plant response precautions.</p> <p>Obtain thorough coverage of upper and lower leaf surfaces. The addition of a sticker may improve product performance.</p> <p>To kill scale insects, treat trunks, stems and twigs in addition to plant foliage.</p> <p>For best results on worms, treat when pests are small.</p> <p>Make applications for maple leafcutter on sugar maple when larvae are in 2nd instar after mining and as cases are being formed.</p> <p>Repeat treatments as necessary up to a total of 6 times per year but not more often than once every 7 days.</p> <p>For gypsy moths, use the higher rate for heavy infestations. *Will kill only pests that are present at the time of application and directly contacted by product.</p>
Apple aphid	Mealy bugs			
Armyworm	Mimosa webworm			
Azalea leafminer	Nantucket pine-tip moth			
Bagworms	Oak leafminers			
Birch leafminer	Oak skeletonizer			
Blister beetle	Oakworm complex			
Boxelder bug	Oleander caterpillar			
Boxwood leafminer	Olive ash borer			
Brown tail moth	Orange-striped oakworm			
Cankerworms	Periodical cicada			
Catalpa sphinx	Pine sawfly			
Chiggers*	Pine spittlebug			
Cooley spruce gall adelgid	Pitch pine tip moth			
Cutworms	Spruce budworm			
Cypress tip moth	Plant bugs			
Douglas-fir tussock moth	Poinsettia hornworm			
Eastern spruce gall adelgid	Psyllids			
Elm leaf aphid	Puss caterpillar			
Elm leaf beetle	Redhumped oakworm			
Elm spanworm	Rose aphid			
Eriophyid mites	Rose chafer			
European pine shoot moth	Rose slug			
Fall armyworm	Saddled prominent Sawflies (exposed)			
Flea beetle	Scale insects (crawlers)			
Fuller rose beetle	Sowbugs			
Gall midges	Spiney elm caterpillar			
Gall wasps	Springtails			
Greenstriped mapleworm	Spruce needleminer			
Grasshoppers	Subtropical pine tip moth			
Hackberry nipplegall maker	Tent caterpillars			
Holly bud moth	Thorn bug			
Holly leafminer	Walnut caterpillar			
Jackpine budworm	Webworms			
Japanese beetle	Western hemlock looper			
Jeffrey pine needleminer	Western spruce budworm			
June beetles	Willow leaf beetles			
Lace bugs	Yellow poplar weevil			
Leafhoppers				
Leafrollers				
Locust borer				
Gypsy Moth		9/10 to 1 1/4	1.4 to 1.0	

**ORNAMENTAL TREES AND PLANTS, CONTINUED**

Roses, Flowers, Other Herbaceous Plants, Woody Plants, Evergreens, Shrubs

PEST	RATE OF THIS PRODUCT PER GALLON	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Elm bark beetle Ips engraver beetles Mountain pine beetle Roundheaded pine beetle Western pine beetle	3 oz per gallon (1 packet per 6.7 gallons)	See Specific Directions	<p><b>Direct Trunk Treatment:</b></p> <p>Effective as a preventative treatment only. Treat annually to prevent beetle attacks.</p> <p>Apply 1 gallon of spray per 50 square feet of bark prior to beetle flight or host-tree attack. Treat tree trunk from ground level up, until trunk diameter is less than 5 inches.</p> <p>For elm bark beetle: apply approximately 20-30 gallons of spray mixture for each 50 feet of elm tree for thorough coverage of all bark surfaces on trunks, limbs and twigs.</p> <p>Do not make more than 2 applications per year or repeat applications more often than once every six months.</p>

**RESTRICTIONS: ORNAMENTAL TREES AND PLANTS**

- Do not make more than a total of 6 foliar and 2 direct trunk treatments per year.
- Do not use on syrup-producing sugar maples where sap is harvested.
- DO NOT ENTER OR ALLOW OTHERS TO ENTER TREATED AREAS UNTIL SPRAYS HAVE DRIED.
- Restricted-entry interval (REI) = 12 hours.
- EXCEPTION: the restricted-entry interval is 18 days for ornamentals grown for cuttings (cut flowers or cut foliage) where production is in outdoor areas and where average annual rainfall is less than 25 inches a year. Notify workers of the application and restricted-entry interval by warning them orally and by posting warning signs at entrances to treated area. Note: information on average annual rainfall for your area is available from any nearby weather bureau, such as one located at a local airport or one affiliated with the National Oceanographic and Atmospheric Administration (NOAA).
- BEE CAUTION: Do not apply this product plants in bloom.



**SPECIFIC PESTS ACROSS MULTIPLE SITES  
GRASSHOPPERS**

All crops on this label

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Packet	SPECIFIC DIRECTIONS
Grasshoppers	5/8 to 1 7/8*	2.0 to 0.67	Apply 5/8 to 9/10 pounds per acre of this product for nymphs on small plants or sparse vegetation. Apply 1 1/4 to 1 7/8 pounds per acre for mature grasshoppers or applications to dense foliage. Be certain spray volumes are appropriate to assure adequate coverage.

**RESTRICTIONS: GRASSHOPPERS**

- NOTE: Refer to individual site listings elsewhere on this label for use restrictions. Do not use rates higher than listed for the site or exceed other use restrictions.

**IMPORTED FIRE ANTS**

All crops/sites on this label

PEST	AMOUNT OF THIS PRODUCT PER GAL OF WATER	DIRECTIONS
Imported fire ants	1 packet per 67.6 gallons	<b>DRENCH APPLICATION:</b> To kill active mounds, apply a total of 2 gallons of the diluted solution over the surface of each mound or at least 1 quart per 6 inches of mound diameter using a bucket, can or other appropriate equipment. Thoroughly wet mound and surrounding areas to a 4 ft diameter (12 sq.ft.). Do not disturb mound prior to treatment. Pour solution from a height of about three feet to give sufficient force to break mound apex and flow into ant tunnels. For best results apply in cool weather (65-80°F) or in early morning or late evening hours. Repeat application if mound activity resumes after 30 days. Treat new mounds as they appear. Pressurized sprays may disturb the ants and cause migration, reducing product effectiveness.
Imported fire ants (foraging)	1 packet per 67.6 gallons	<b>BROADCAST APPLICATION (outdoor use only)**</b> Treat only the growing media when using on bedding plants and avoid contact with foliage. Do not make more than one application per year.

**RESTRICTIONS: IMPORTED FIRE ANTS**

- DO NOT ENTER OR ALLOW OTHERS TO ENTER TREATED AREAS UNTIL SPRAYS HAVE DRIED.
- FOR OUTDOOR USE ONLY. DO NOT USE IN GREENHOUSES.
- DO NOT USE ON ANY FOOD CROP NOT LISTED ON THIS LABEL. Refer to the specific site use directions elsewhere on this label for additional restrictions.

\*\* Broadcast applications to turfgrass are permitted only on golf courses, sod farms, cemeteries, and commercial landscapes. Applications to all other lawns or turf (residential settings) are limited to spot treatments.

**NUISANCE PESTS**

For use as a perimeter treatment to kill the listed nuisance pests.

PEST	RATE OF THIS PRODUCT	GALLONS per Water Soluble Packet	SPECIFIC DIRECTIONS
Ants* Brown dog tick* Cockroaches* Earwigs Fleas* Millipedes Scorpions* Silverfish* Spiders*	1% solution	13.3 gallons per packet	Observe plant response precautions. Apply as a coarse wet spray in a band 6 to 10 feet wide around the outside perimeter of buildings, contacting as many pests as possible. Confine applications to areas immediately adjacent to the building. Direct application to the outside of structures should be minimal and restricted to cracks, crevices, and areas where insects tend to congregate. For use in and around flower beds and ornamental plantings, apply as a coarse wet spray in and around plant beds.

**RESTRICTIONS: NUISANCE PEST**

- Do not make more than 4 applications per year. Do not apply more often than once every 7 days.
- DO NOT ENTER OR ALLOW OTHERS TO ENTER TREATED AREAS UNTIL SPRAYS HAVE DRIED.
- NOTE: Staining may occur on certain surfaces such as stucco, brick, cinder block, wood, fabrics, and carpet. Spray deposits on painted or stained surfaces of finishes (eg., cars, house trailers, boats, etc.) should be removed immediately by washing to prevent discoloration. Avoid application to surfaces where visible spray residues are objectionable. Staining of fabrics and carpet may be permanent. For outdoor use only.
- \*Will kill only pests that are present at the time of application and directly contacted by product

**NOTICE OF WARRANTY:** Seller's guaranty shall be limited to the purchase price of the product. To the extent consistent with applicable law, the buyer assumes any risk to persons or property arising out of use or handling and accepts the product on these conditions.

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