

432-1226

9/30/2009

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

EPA Reg. Number:
432-1226

Date of Issuance:
SEP 30 2009

Terms of Issuance:
Unconditional

Name of Pesticide Product:
Sevin 80 WSP Carbaryl
Insecticide

NOTICE OF PESTICIDE:

Registration
 Reregistration
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Bayer Environmental Science
P.O. Box 12014, 2 T.W. Alexander Drive
Research Triangle Park, NC 27709

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 Document, 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.

Your Confidential Statement of Formula (CSF) dated July 18, 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:

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SEVIN® 80 WSP Carbaryl Insecticide

INTENDED FOR AGRICULTURAL OR COMMERCIAL USE ONLY

ACTIVE INGREDIENT:

Carbaryl (1-naphthyl N-methylcarbamate) 80% by wt.

OTHER INGREDIENTS: 20% by wt.

E.P.A. Reg. No. 432-1226

E.P.A. Est. No.

[Note: Brackets indicate optional text or mandatory language options, depending on the product uses placed on final package label]

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.)

For **MEDICAL** And **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours A Day 1-800-334-7577

For **PRODUCT USE** Information Call 1-800-331-2867

FIRST AID

Carbaryl is an N-Methyl Carbamate Insecticide.

IF SWALLOWED:	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor for treatment advice. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Have person sip a glass of water if able to swallow. • Do not give anything by mouth to an unconscious person.
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.

For **MEDICAL** Emergencies Call 24 Hours A Day 1-800-334-7577.

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

NOTE TO PHYSICIAN: Carbaryl contains an N-methyl carbamate that inhibits cholinesterase. Drugs like 2-Pam (pyridine-2-aldoxime methiodide) are not recommended. To aid in the confirmation of diagnosis, urine samples should be obtained within 24 hours of exposure and immediately frozen. Analysis will be arranged by Bayer Environmental Science. Consultation on therapy can be obtained at all hours by calling the appropriate emergency number 1-800-334-7577 (U.S.A.)

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 barrier laminate, nitrile rubber, neoprene rubber, or viton. 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 1/4 quarts 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

ACCEPTED
September 30, 2009
Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended, for the
pesticide registered under:

EPA. Reg. No: 432-1226

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- 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 or 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.

Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should 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.

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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: Do not apply this product to target crops or weeds in bloom.

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

Do not contaminate water, food or feed by storage or 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

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

This product readily disperses in water to form a spray which 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 INFORMATION

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.

APPLICATION PROCEDURES

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.**

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 paks and spray volume required. Fill the mixing tank partially (1/2 to 3/4 full) with water. With the agitator on, slowly add the required number of unopened paks of SEVIN 80WSP Carbaryl Insecticide into the mixing tank. Allow all the water-soluble paks to dissolve and completely disperse. Depending upon the water temperature and the degree of agitation, the water-soluble paks should be completely dissolved within 3-5 minutes. Continue agitation while adding the remainder of the water. Do not put water-soluble paks close the recirculation 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 paks. **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 paks have completely dissolved, add other products in the following order: wettable powder, dry flowable (wetable granules), liquid flowable, liquids, and EC's. Always allow each tank mix partner to disperse fully before adding the next product.

COMPATIBILITY INFORMATION

SEVIN 80WSP 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® 80WSP CARBARYL INSECTICIDE 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.

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.

SPECIFIC USE DIRECTIONS

CROP/SITE GROUPINGS:

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

Tree Nut Crops (Pistachios; Tree Nuts)

Ornamental Trees and Plants

Turfgrass

Brassica Leafy Vegetable Crops

Fruiting Vegetables

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

Pasture and Grasses Grown for Seed

Rangeland

Forested Areas and Rangeland Trees

Noncropland (Conservation Reserve Program; Set-aside Program Acreage; Wasteland; Rights-of-Way; Hedgerows; Ditchbanks; Roadsides)

Specific Pests Across Multiple Sites

Grasshoppers

Ticks which may vector Lyme Disease

Imported Fire Ants

Nuisance Pests

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 for treatment and specific use information 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 PAK CONTAINS 1.25 LB OF FORMULATED PRODUCT.

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.

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 Pak	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	OBSERVE BEE CAUTION. Repeat applications as necessary up to a total of 8 times per crop per year but not more often than once every 14 days.
Citrus rust mite Eriophyid mites Plant bugs	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	For scale, apply when crawlers are present. For best results on Eriophyid mites, including citrus rust mite, apply when pest populations are low.
Apopka weevil (adult) Citrus root weevils (adults)	Fuller Rose Beetle Little leaf notcher (adult)	6 1/4	0.2	
California only: California red scale	Yellow scale	6 1/4 to 15	0.2 to 0.08	Do not make more than 1 application per crop per year for California red scale. Apply when crawlers are present.
Florida only: Adult citrus weevils (such as, <i>Diaprepes abbreviatus</i> , <i>Pantomorus cervinus</i> , <i>Artipes floridanus</i> , and <i>Pachnaeus spp.</i>)		6 1/4 to 10	0.2 to 0.12	Apply as a foliar spray in adequate volume to obtain uniform coverage. May be applied by ground as a dilute or concentrate spray. Repeat application as necessary up to a total of 3 times per crop per year but not more often than once every 14 days.

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 paks) 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 paks).
Do not apply more than 15 pounds per acre (12 water soluble paks) per application.
- Florida only:
Restricted-entry interval (REI) = 12 hours
- Do not apply more than 8 quarts per acre per application
- All States other than California and Florida:
Restricted-entry interval (REI) = 12 hours
Do not apply more than 6.14 pounds per acre (5 water soluble paks) 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.

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OLIVES

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Pak	SPECIFIC DIRECTIONS
Scale insects (olive scale, black scale)	6 1/4 to 9 3/8	0.2 to 0.13	Up to 2 applications per crop per year may be made but not more often than once every 14 days.

RESTRICTIONS: OLIVES

- Do not apply within 14 days of harvest.
- Do not apply more than a total of 18 3/4 pounds (15 water soluble paks) per acre per crop per year.
- Restricted-entry interval (REI) = 3 days (72 hours).
- **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.

POME FRUITS

Members of the Pome Fruit Group 11 including: Apple, Crabapple, Loquat, Mayhaw, Pear, Oriental pear.

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Pak	SPECIFIC DIRECTIONS
White apple leafhopper	5/8 to 1 7/8	2.0 to 0.67	OBSERVE BEE CAUTION On apples, avoid use during the period from full bloom until 30 days after full bloom unless fruit thinning is desired. Use for pest pesticidal activity during this period may also result in fruit removal.
Apple aphid Codling moth	1 1/4 to 3 3/4	1.0 to 0.3	
Apple aphid Pearleaf blister mite Apple maggot Pear psylla Apple mealybug Pear rust mite Apple rust mite Periodical cicada Bagworms Plum curculio California pearslug Redbanded leafroller (pear sawfly) Rosy apply aphid European apple Scale insects sawfly (Forbes scale, Eyespotted bud moth Lecanium scale, Fruittree leafroller San Jose scale) Gypsy moth Tarnished plant bug Japanese beetle Tentiform leafminers Lesser appleworm Woolly apple aphid Lygus bugs Yellowheaded Orange tortrix fireworm	1 7/8 to 3 3/4	0.67 to 0.3	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.

**POME FRUITS
(continued)**

CROP	PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Pak	SPECIFIC DIRECTIONS
Apples Only, for Fruit Thinning		1 1/4 to 3 3/4	1.0 to 0.3	<p>OBSERVE BEE CAUTION.</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. Rates may vary depending on variety and local orchard conditions.</p> <p>NOTE: The use of SEVIN® brand 80 WSP Carbaryl Insecticide 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 80% petal fall and 6 mm fruit size. 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 paks) 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

All members of the Stone Fruit Group 12 including: Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune (fresh).

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Pak	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 June beetle Lesser peachtree borer Mealy plum aphid 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.
California Only: Black cherry aphid Cherry fruitworm Cherry maggot (Cherry fruit fly) Codling moth Cucumber beetles Eyespotted bud moth European earwig Fruittree leafroller Green fruitworm Mealy plum aphid 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 paks) per acre per crop per year.
 Do not apply more than a total of 6 1/4 pounds (5 water soluble paks) per acre at the dormant or delayed dormant timing.
 Do not apply more than a total of 11 1/4 pounds (9 water soluble paks) per acre during the production season.
- California only:
 Do not apply more than 5 pounds per acre (4 water soluble paks) 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 paks) 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 Pak	SPECIFIC DIRECTIONS
Brown soft scale Lecanium scale 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.
Scale insects	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: 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 paks) 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.

120924

TREE NUTS

All members of the Tree Nut Group 14 including: Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, Walnut (including black and English (Persian) walnuts)

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Pak	SPECIFIC DIRECTIONS
Black margined aphid Calico scale Codling moth European fruit lecanium Fall webworm Filbert aphid Filbert leafroller Filbertworm Frosted scale 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 European earwig	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 paks) 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.

13024

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 Pak	SPECIFIC DIRECTIONS
Ants (except harvester, pharaoh and carpenter)	Maple leafcutter Mealy bugs Mimosa webworm	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.</p> <p>*Will kill only pests that are present at the time of application and directly contacted by product.</p>
Apple aphid	Nantucket pine tip moth			
Armyworm	Oak leafminers			
Ash whitefly	Oak moth			
Azalea leafminer	Oak skeletonizer			
Bagworms	Oakworm complex			
Balsam twig aphid	Oleander caterpillar			
Birch leafminer	Olive ash borer			
Blister beetle	Orange-striped oakworm			
Boxelder bug	Periodical cicada			
Boxwood leafminer	Pine looper			
Brown tail moth	Pine sawfly			
Cankerworms	Pine spittlebug			
Catalpa sphinx	Pitch pine tip moth			
Chiggers*	Spruce budworm			
Cooley spruce gall adelgid	Plant bugs			
Cutworms	Poinsettia hornworm			
Cypress tip moth	Psyllids			
Douglas-fir tussock moth	Puss caterpillar			
Eastern spruce gall adelgid	Redhumped oakworm			
Elm leaf aphid	Rose aphid			
Elm leaf beetle	Rose chafer			
Elm spanworm	Rose slug			
Eriophyid mites	Saddled prominent Sawflies (exposed)			
European pine shoot moth	Scale insects (crawlers)			
Fall armyworm	Sowbugs			
Flea beetle	Spiney elm caterpillar			
Fuschia gall mite	Springtails			
Fuller rose beetle	Spruce needleminer			
Gall midges	Subtropical pine tip moth			
Gall wasps	Tent caterpillars			
Greenstriped mapleworm	Thorn bug			
Grasshoppers	Thrips (exposed)			
Hackberry nipplegall maker	Walnut caterpillar			
Holly bud moth	Webworms			
Holly leafminer	Western hemlock looper			
Jackpine budworm	Western spruce budworm			
Japanese beetle	Willow leaf beetles			
Jeffrey pine needleminer	Wooly gall aphid			
June beetles	Yellow poplar weevil			
Lace bugs				
Leafhoppers				
Leafrollers				
Locust borer				
Gypsy Moth		9/10 to 1 1/4	1.4 to 1.0	
Ticks*		1 1/4	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 Pak	SPECIFIC DIRECTIONS
Elm bark beetle Ips engraver beetles Mountain pine beetle Roundheaded pine beetle Spruce beetle Western pine beetle	3 oz per gallon (1 pak per 6.7 gallons)	See Specific Directions	<p>Direct Trunk Treatment: 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.

TURFGRASS

Apply using ground pressure-type equipment in sufficient spray volume for thorough coverage and thatch penetration. **Turfgrass:** golf turf, sports fields, sod farms, domestic and commercial lawns, cemeteries, parks, campsites, recreational areas.

PEST	POUNDS OF THIS PRODUCT PER ACRE	SQ. FT. TREATED PER Water Soluble Pak	DIRECTIONS
Ants (except harvester, pharaoh and carpenter) Armyworm Cutworms Essex skipper European chafer Fall armyworm Fiery skipper Grasshoppers Green June beetle larvae Leafhoppers	5	11,000 to 22,000	<p>For Armyworm, Cutworm, and Fall Armyworm: Do not irrigate treated areas within 24 hrs. following insecticide application.</p> <p>For Green June Beetle Grub (larvae): Make applications when grubs are feeding near the soil surface. Water or irrigate turfgrass within 48 hours after treatment.</p> <p>Repeat applications as necessary up to a total of 4 times per year but not more often than once every 7 days.</p> <p>*Will kill only pests that are present only at the time of application and directly contacted by product.</p>
Centipedes* Chiggers* Earwigs*	5		
Ticks*	1 ¼		
Chinch bugs Sod Webworm (lawn moths)	7 1/2 to 10	5,000 to 7,000	<p>For Chinch bug: Treat entire grass area rather than just damaged areas. Irrigation prior to treatment will aid in penetration of insecticide into turfgrass. Do not irrigate treated areas within 24 hrs. following insecticide application.</p>
Bluegrass billbug larvae European crane fly White grubs (Japanese beetle, Chafer beetle, and <i>Phyllophaga</i> spp. larvae) Black turfgrass ataenius beetle larvae Hyperodes weevil (bluegrass weevil) larvae Springtails	10	5,000	<p>For European Crane Fly: Apply in early spring, April 1 to April 15, or at timing recommended by local Agricultural Extension Service agents. Water or irrigate turfgrass within 48 hours after treatment.</p> <p>For White Grub: Apply when grubs are feeding near the soil surface, usually during late March through May, or July through early September, or at timing recommended by local Agricultural Extension Service agents. Water or irrigate turfgrass within 48 hours after treatment. Repeat applications as necessary up to 2 times per year but not more often than once every 7 days.</p>
Fleas*	10	5,000	*Will kill only pests that are present only at the time of application and directly contacted by product.

RESTRICTIONS: TURFGRASS

- Do not apply more than a total of 20 pounds per acre per year.
- 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.
- Restricted-entry interval (REI) for harvesting sod productions (sod farms) = 24 hours.
- **DO NOT ENTER OR ALLOW OTHERS TO ENTER TREATED AREAS UNTIL SPRAYS HAVE DRIED.**
- Do not apply by air or chemigation
- **BEE CAUTION:** Do not apply this product to plants in 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 Pak	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 Diamondback moth Fall armyworm Imported cabbageworm Lygus bugs Spittle bugs 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 ½ (6 water soluble paks) pounds 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.

FRUITING VEGETABLES

All members of the Fruiting Vegetable Group 8 including: Eggplant, Groundcherry, Pepinos, Pepper (includes: bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Tomato

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Pak	SPECIFIC DIRECTIONS
Colorado potato beetle 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 paks) 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;

All members of the Leaf Petiole Vegetable Subgroup 4B including: Cardoon, Celery, Celtuce, Chinese celery, Florence fennel (including sweet anise, sweet fennel, Finocchio), Rhubarb, Swiss chard

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Pak	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.
Amyworm Aster leafhopper Corn earworm Fall armyworm Imported cabbageworm	1 1/4 to 2 1/2	1.0 to 0.5	
Lygus bugs Spittlebugs Stink bugs Tarnished plant bug			

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 paks) 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.

PASTURE AND GRASSES GROWN FOR HAY AND/OR SEED

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Pak	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 1.5 Up to 2 applications per year may be made but not more often than once every 14 days. To kill thrips in grasses, use high spray pressure to improve penetration into boot. Accurately mark swaths to avoid over-application.
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 paks) 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 PAK	DIRECTIONS
Black grass bug Grasshoppers Mormon cricket	Range caterpillar Range crane fly	2/3 to 1 1/4	1.8 to 1.0 Do not make more than 1 application per year. Carefully mark swaths to avoid over-application. Aerial application is allowed only through USDA APHIS and affiliated state grasshopper and Mormon Cricket suppression programs. Reduced Area and Agent Treatment (RAATs) is required. See the following web site for details – www.sidney.ars.usda.gov/Research/lockwood.htm
Ticks*	1 1/4	1.0	*Will only kill pests that are present only at the time of application and directly contacted by product.

RESTRICTIONS: RANGELAND

- May be harvested or grazed the same day as treatment.
- Do not apply more than 1 1/4 pounds (1 water soluble pak) 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

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FORESTED AREAS AND RANGELAND TREES

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 Pak	SPECIFIC DIRECTIONS
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 worm, 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 2 times per year but not more often than once every 7 days.</p> <p>For gypsy moths, use the higher rate for heavy infestations.</p>
Apple aphid	Mealy bugs			
Armyworm	Mimosa webworm			
Ash whitefly	Nantucket pine tip moth			
Azalea leafminer	Oak leafminers			
Bagworms	Oak moth			
Balsam twig aphid	Oak skeletonizer			
Birch leafminer	Oakworm complex			
Blister beetle	Oleander caterpillar			
Boxelder bug	Olive ash borer			
Boxwood leafminer	Orange-striped oakworm			
Brown tail moth	Periodical cicada			
Cankerworms	Pine looper			
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			
Flea beetle	Sawflies (exposed)			
Fuschia gall mite	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	Thrips (exposed)			
Jackpine budworm	Walnut caterpillar			
Japanese beetle	Webworms			
Jeffrey pine needleminer	Western hemlock looper			
June beetles	Western spruce budworm			
Lace bugs	Willow leaf beetles			
Leafhoppers	Woolly gall aphid			
Leafrollers	Yellow poplar weevil			
Locust borer				
Gypsy Moth		9/10 to 1 1/4	1.4 to 1.0	
Ticks*		1 1/4	1.0	* Will kill only pests that are present at the time of application and directly contacted by product

FORESTED AREAS AND RANGELAND TREES, CONTINUED

PEST	RATE OF THIS PRODUCT PER GALLON	ACRES TREATED per Water Soluble Pak	SPECIFIC DIRECTIONS
Elm bark beetle Ips engraver beetles Mountain pine beetle Roundheaded pine beetle Spruce beetle Western pine beetle	3 oz per gallon (1 pak per 6.7 gallons)	See Specific Directions	Direct Trunk Treatment: Effective as a preventative treatment only. Treat annually to prevent beetle attacks. 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. 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. Do not make more than 2 applications per year or repeat applications more often than once every six months.

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.

NONCROPLAND

Conservation Reserve Program Acreage, Set-Aside Program Acreage, Wasteland, Rights-of-Way, Hedgerows, Ditchbanks, Roadsides

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Pak	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	
Ticks*	1 1/4	1.0	*Will kill only ticks present at the time of application and directly contacted by product

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 paks) 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

SPECIFIC PESTS ACROSS MULTIPLE SITES

GRASSHOPPERS

All crops on this label

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Pak	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

TICKS WHICH MAY VECTOR LYME DISEASE

To kill juvenile and adult ticks which may vector Lyme Disease, apply in sufficient volume for thorough coverage*. Will kill only pests that are present at the time of application and directly contacted by product.

All crops/sites on this label including; Pastures; Forested Areas; Wasteland, Rights-of-Way, Hedgerows, Ditchbanks, Roadsides, Set-Aside and Conservation Reserve Program Acreage; Ornamental Trees and Plants; Turfgrass**.

PEST	POUNDS OF THIS PRODUCT PER ACRE	ACRES TREATED per Water Soluble Pak	SPECIFIC DIRECTIONS
<i>Ixodes</i> spp. (Deer tick, Bear tick, Black legged tick) <i>Amblyomma</i> spp. (Lone star tick)	1 1/4	1.0	To kill juvenile ticks, apply in late spring or early summer. To kill adult ticks, apply in late summer to fall. Treat entire area and perimeter areas where exposure to ticks may occur. Ticks may be reintroduced from surrounding areas on host animals. Retreat as necessary to maintain low population levels.

RESTRICTIONS: TICKS WHICH VECTOR LYME DISEASE

- Do not make more than 4 applications per year for ticks.
- * 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. If product is used to kill ticks on any use site listed on this label, the use rate must not exceed 1 1/4 pounds of this product/A (one water soluble pack/A). Observe all use 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.
- **DO NOT ENTER OR ALLOW OTHERS TO ENTER TREATED AREAS UNTIL SPRAYS HAVE DRIED.**

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IMPORTED FIRE ANTS

All crops/sites on this label

PEST	AMOUNT OF THIS PRODUCT PER GAL OF WATER	DIRECTIONS
Imported fire ants	1 pak per 67.6 gallons	<p>DRENCH APPLICATION:</p> <p>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 30days. Treat new mounds as they appear. Pressurized sprays may disturb the ants and cause migration, reducing product effectiveness.</p>
Imported fire ants (foraging)	1 pak per 67.6 gallons	<p>BROADCAST APPLICATION (outdoor use only)**</p> <p>Treat only the growing media when using on bedding plants and avoid contact with foliage.</p> <p>Do not make more than one application per year.</p>

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 Pak	SPECIFIC DIRECTIONS
Ants* Bees* Brown dog tick* Centipedes* Cockroaches* Crickets Darkling beetle (lesser mealworm or litter beetle) Earwigs Firebrats Fleas* Millipedes Scorpions* Silverfish* Spiders* Wasps*	1% solution	13.3 gallons per pak	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

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IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product.

If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

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