

264-349

9/29/2009

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460-0001

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Attn: Danielle Larochelle
Bayer CropScience LP
P.O. Box 12014
2 T.W. Alexander Drive
Research Triangle Park, NC 27709

SEP 29 2009

Subject: SEVIN^R brand 4F Carbaryl Insecticide
EPA Reg. No. 264-349
Your Application Dated September 21, 2009
Label Correction/Rice

Dear Ms. Larochelle;

The label referred to above, submitted in connection with the registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. Within 45 days from the date of this notice, two copies of a final printed label must be submitted. 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.

Sincerely yours,
Joanne S. Edwards
Joanne S. Edwards
Insecticide-Rodenticide Branch
Registration Division (7504P)

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ACCEPTED

September 29, 2009

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide Registered under

EPA Reg. No. 264-349

SEVIN® brand 4F Carbaryl Insecticide

INTENDED FOR AGRICULTURAL OR COMMERCIAL USE

ACTIVE INGREDIENTS:

Carbaryl (1-naphthyl N-methylcarbamate).....43.0% by Wt.

INERT INGREDIENTS:.....57.0% by Wt.

(Contains 4 pounds Carbaryl per Gallon)

E.P.A Reg No. 264-349

E.P.A. Est. No. 264-MO-02

KEEP OUT OF REACH OF CHILDREN CAUTION

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

For PRODUCT USE Information Call 1-866-99BAYER (1-866-992-2937)

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 ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF INHALED:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.

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 CropScience. 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

CAUTION

Harmful if swallowed, absorbed through the skin, or inhaled. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing.

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.

PERSONAL PROTECTIVE EQUIPMENT (PPE) Continued

Handlers applying with open cab airblast equipment at application rates equal to or greater than 5 quarts of SEVIN® brand 4F Carbaryl Insecticide per acre must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear, and
- 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.

In addition, mixers and loaders supporting aerial or chemigation applications must 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.

See engineering controls for additional requirements and exceptions.

Follow manufacturer's instructions for cleaning and maintaining Personal Protective Equipment (PPE). If no such instructions for washables, 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

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240(d)(6)].

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.

Human flagging is prohibited, except for flagging to support ultra low volume aerial applications for Rangeland Grasshopper and Mormon Cricket Suppression through the Animal and Plant Health Inspection Service (APHIS) Program or affiliated state programs. Flagging to support aerial application for all other use patterns is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

Flaggers supporting ultra low volume aerial applications for Rangeland Grasshopper and Mormon Cricket Suppression through the Animal and Plant Health Inspection Service (APHIS) Program or affiliated state programs 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, flaggers 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: chemical-resistant gloves and chemical-resistant headgear, and, if using an enclosed cab that provides respiratory protection, a respirator of the type 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.

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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. 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.

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STORAGE AND DISPOSAL

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

STORAGE

Store unused SEVIN® brand 4F Carbaryl Insecticide 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. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Offer for recycling, if available. If not recycled, then puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

INFORMATION AND RESTRICTIONS

SEVIN® brand 4F Carbaryl Insecticide is a suspension of microfine SEVIN® Carbaryl Insecticide in an aqueous medium. It readily disperses in water to form a spray which may be applied by air or ground.

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

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 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

TO ASSURE A UNIFORM SUSPENSION, AGITATE, STIR OR RECIRCULATE ALL CONTAINERS OF THIS PRODUCT PRIOR TO USE. Remove oil, rust, scale, pesticide residues and other foreign matter from mix tanks and entire spray system. Flush with clean water. Fill spray or mix tank with 1/2 to 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of SEVIN brand 4F Carbaryl Insecticide, and then the remaining volume of water. Include rinse water from container. Prepare only as much spray mixture as can be applied on the day of mixing: 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.

COMPATIBILITY INFORMATION

SEVIN brand 4F 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 BRAND 4F 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.

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. The flow rate of this product diluted 1:1 with water is similar to water. 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.

AERIAL APPLICATION

For adequate distribution, use at least 10 gallons of spray mixture per acre for application for tree and orchard crops or at least 2 gallons of spray mixture per acre for application to other crops. **EXCEPTION:** For the use on rangeland as a pest management approach for grasshoppers under the Reduced Area and Agent Treatments (RAATs) program only, use at least 16 ounces of finished spray mixture per acre for aerial application.

SPRINKLER IRRIGATION SYSTEMS

Apply this product only through sprinkler irrigation systems including center pivot and solid set. Do not apply this product through any other type of irrigation system.

SPRAY PREPARATION: First prepare a suspension of SEVIN brand 4F Carbaryl Insecticide in a mix tank. Fill tank with 1/2 to 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Add the required amount of SEVIN brand 4F Carbaryl Insecticide, and then the remaining volume of water. (Suspension concentrations using the appropriate dosage per acre recommended on this label of SEVIN brand 4F Carbaryl Insecticide, per 1 to 4 gallons of water are recommended). Then set sprinkler to deliver 0.1 to 0.3 inch of water per acre. Start sprinkler and uniformly inject the suspension of SEVIN brand 4F Carbaryl Insecticide into the irrigation water line so as to deliver the desired rate per acre. The suspension of SEVIN brand 4F Carbaryl Insecticide should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing. If you should have any other questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

NOTE: When treatment with SEVIN brand 4F Carbaryl Insecticide has been completed, further field irrigation over the treated area should be avoided for 24 to 48 hours to prevent washing the chemical off the crop.

APPLICATIONS THROUGH SPRINKLER IRRIGATION SYSTEMS

Maintain continuous agitation in mix tank during mixing and application to assure a uniform suspension.

Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute solution per unit time.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment, when system connection or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product must be dismantled and drained.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from nonuniform distribution of treated water.

Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation shall shut the system down and make necessary adjustments should the need arise.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water supplies are in place.

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SPECIFIC USE DIRECTIONS

USE SITES:

Asparagus

Brassica Leafy Vegetables

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

Cucurbit Vegetables

Flax

Forage Crops (Alfalfa, Clovers, Birdsfoot Trefoil; Pasture and Grasses 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 (Conservation Reserve Program; Set-Aside Program Acreage; Wasteland; Rights-of-Way; Hedgerows; Ditchbanks; Roadsides)

Okra

Peanuts

Prickly Pear Cactus

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

Small Fruits and Berries (Bushberries, Caneberries, Cranberries, Grapes, Strawberries)

Sunflower

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

Turfgrass

Specific Pests Across Multiple Sites

Grasshoppers

Ticks which Vector Lyme Disease

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.

ASPARAGUS

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Apache cicada Asparagus beetle	1	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. For cutworm, this product is most effective against species which feed on the upper portions of the plant.
	2	Application to ferns or brush growth following harvest of spears: Repeat applications as necessary but not more often than 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 quarts per acre before harvest of spears.
- Do not apply more than a total of 5 quarts per acre per year.
- **BEE CAUTION**
Do not apply this product to target crops or weeds 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	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Flea beetles Harlequin bug Leafhoppers	1/2 to 1	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	1 to 2	

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 6 quarts 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.

**CEREAL GRAIN CROPS
FIELD CORN AND POPCORN**

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Armyworm Japanese beetle Chinch bugs Sap beetles Corn earworm Southwestern corn borer Corn rootworm adults Fall armyworm Leafhoppers Flea beetles	1 to 2	OBSERVE BEE CAUTION. 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 1/2 to 2	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.
Western bean cutworm Cutworms	2	For best results on European corn borer, do not apply in less than 3 gallons of water per acre by air and 15 gallons of water by ground. 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 by ground or 5 gallons by air 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 8 quarts 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.

GRAIN SORGHUM

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Armyworm Fall armyworm Chinch bugs Stink bugs Corn earworm Webworms	1 to 2	Repeat applications as necessary up to a total of 4 times per year but not more often than once every 7 days. Direct spray into forming heads for best results on insects attacking heads.
Southwestern corn borer	1 1/2	For best results on chinch bug, use high gallonage ground application at the base of plants.
Cutworms	2	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 6 quarts per acre per crop per year.
- BEE CAUTION**
 Do not apply this product to target crops or weeds in bloom.

RICE

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Armyworm Chinch bugs Fall armyworm	Leafhoppers Stink bugs	1 to 1 1/2
Tadpole shrimp		California only 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 quarts per acre per crop per year.
- Discharge from 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.

SWEET CORN

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Armyworm Chinch bugs Corn earworm Corn rootworm adults Fall armyworm Flea beetles	Japanese beetle Sap beetles Southwestern corn borer Leafhoppers	1 to 2
European corn borer		1 1/2 to 2
Western bean cutworm Cutworms		2

SPECIFIC DIRECTIONS:
OBSERVE BEE CAUTION
 Repeat applications as necessary up to a total of 8 times per year but not more often than once every 3 days.
 Good timing and good coverage are essential for effective product performance.
 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.
 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 3 gallons of water per acre by air and 15 gallons of water by ground.
 For western bean cutworm, treat when infestation average 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 by ground or 5 gallons by air per acre. For cutworm, this product is most effective against species which feed on the upper portions of the plant.

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 16 quarts 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.

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	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Pickleworm Melonworm	1/2 to 1	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	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 6 quarts per acre per crop per year.
- Observe plant response precautions.
- **BEE CAUTION**
Do not apply this product to target crops or weeds in bloom.

FLAX

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Armyworm	1 to 1 1/2	Up to 2 applications per crop per year may be made but not more often than once every 14 days.

RESTRICTIONS: FLAX

- **DO NOT USE IN CALIFORNIA**
- Do not apply within 42 days of harvest for seed or straw.
- Do not apply more than a total of 3 quarts per acre per crop per year.
- **BEE CAUTION**
Do not apply this product to target crops or weeds in bloom.

**FORAGE CROPS
ALFALFA, CLOVERS, AND BIRDSFOOT TREFOIL**

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Blister beetles Mexican bean beetle	1/2 to 1	OBSERVE BEE CAUTION. Observe plant response precautions.
Alfalfa caterpillar Bean leaf beetle Cucumber beetles Green cloverworm Japanese beetle Leafhoppers	1	On dense growth, use 25 to 40 gallons of water per acre with ground equipment to ensure adequate coverage.
Potato leafhopper Three cornered alfalfa hopper Thrips Velvetbean caterpillar	1 to 1 1/2	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 blotch leafminer Armyworm Cloverhead weevil Corn earworm Cutworms Egyptian alfalfa weevil larvae	1 to 1 1/2	
Essex skipper European alfalfa beetle Fall armyworm Lygus bugs Stink bugs Webworms Yellow striped armyworm	1 1/2	
Alfalfa weevil larvae (west of the Rocky Mountains)	1 to 1 1/2	
Alfalfa weevil larvae (east of the Rocky Mountains)	1 1/2	

RESTRICTIONS: FORAGE CROPS

- Do not apply more than once per cutting per year.
- Do not apply within 7 days of harvest or grazing.
- Do not exceed 1 1/2 quarts per acre per cutting.
- Carbaryl may cause a temporary bleaching of tender alfalfa foliage.
- **BEE CAUTION**
Do not apply this product to target crops or weeds in bloom.

PASTURE AND GRASSES GROWN FOR HAY AND/OR SEED

PEST		QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Armyworm Chinch bugs Cereal rust mite Essex skipper Fall armyworm	Striped grass looper Thrips Range caterpillar Range crane fly	1 to 1 1/2	Up to 2 applications per year may be made but not more often than once every 14 days. To kill thrips in grasses grown for hay or seed, use high spray pressure to improve penetration into boot. Accurately mark swaths to avoid over-application.
Ticks*		1	*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 quarts per acre per year.
- **BEE CAUTION**
Do not apply this product to target crops or weeds in bloom.

RANGELAND

PEST		QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Black grass bug	Range caterpillar Range crane fly	1/2 to 1	Do not make more than 1 application per year. Accurately mark swaths to avoid over-application.
Grasshoppers Mormon cricket		1/2	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	**Will kill only ticks present 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 quart per acre per year.
- **BEE CAUTION**
Do not apply this product to target crops or weeds in 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	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Colorado potato beetle European corn borer Fall armyworm Lace bugs Stink bugs (suppression) Tarnished plant bug Thrips (suppression) Tomato fruitworm	1 to 2	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. For cutworm, this product is most effective against species which feed on the upper portions of the plant.
Flea beetles Leafhoppers	1/2 to 1	
Cutworms	2	

RESTRICTIONS: FRUITING VEGETABLES

- Do not apply within 3 days of harvest.
- Do not apply more than a total of 8 quarts per crop per year.
- **BEE CAUTION**
Do not apply this product to target crops or weeds in 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	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Flea beetles Harlequin bug Leafhoppers	1/2 to 1	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 to 2	

RESTRICTIONS: LEAFY VEGETABLES

- Do not apply within 14 days of harvest.
- Do not apply more than a total of 6 quarts per acre per crop per year.
- **BEE CAUTION**
Do not apply this product to target crops or weeds in 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 Vegetables Crop 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		QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Bean leaf beetle Blister beetle Cucumber beetles Grape colapsis	Green cloverworm Japanese beetle Mexican bean beetle Velvetbean caterpillar	1/2 to 1	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		1/2 to 1 1/2	
Alfalfa caterpillar Colorado potato beetle Flea beetles Leafhoppers	Three cornered alfalfa hopper Thrips Western bean cutworm	1	
Armyworm Cutworms European corn borer Fall armyworm	Stink bugs Tarnished plant bug Webworms	1 to 1 1/2	
Alfalfa looper (suppression) Cowpea curculio (suppression) Painted lady (Thistle caterpillar) Pea leaf weevil	Pea weevil Saltmarsh caterpillar Woollybean caterpillar Yellowstriped armyworm	1 1/2	
California only: Corn earworm (suppression) Limabean podborer (suppression)	Lygus bugs (suppression) Stink bugs (suppression)	1 1/2	

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 6 quarts 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.

NONCROPLAND

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

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Black grass bug	1/4 to 1/2 quart per acre (3/16 to 3/8 fl. oz per 1000 ft ²)	Up to 2 applications per year may be made but not more often than once every 14 days.
Range caterpillar Range crane fly	1/2 to 1 quart per acre (3/8 to 3/4 fl. oz per 1000 ft ²)	Accurately mark swaths to avoid over-application.
Mormon cricket	1/2 quart per acre (3/8 fl. oz. per 1000 ft ²)	
Ticks*	1 quart per acre (3/4 fl. oz per 1000 ft ²)	* Will kill only pests that are 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 quarts per acre per year.
- **BEE CAUTION**
Do not apply this product to target crops or weeds in bloom.

OKRA*

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Corn earworm Stink bugs	1 to 1 1/2	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 6 quarts per acre per year.
 - **BEE CAUTION**
Do not apply this product to target crops or weeds in bloom.
- * Use not permitted in CA.

PEANUTS

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Blistar beetles Mexican bean beetle	1/2 to 1	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. For cutworm, this product is most effective against species which feed on the upper portions of the plant.
Alfalfa caterpillar Bean leaf beetle Cucumber beetle Green cloverworm Japanese beetle Leafhoppers	1	
Rednecked peanutworm Three cornered alfalfa hopper Thrips Velvetbean caterpillar		
Armyworm Corn earworm Fall armyworm	1 to 1 1/2	
Whitefringed beetle adults Cutworms	2	

RESTRICTIONS: PEANUTS

- Do not apply within 14 days of harvest.
- Do not apply more than a total of 8 quarts per acre per crop per year.
- Observe plant response precautions.
- **BEE CAUTION**
Do not apply this product to target crops or weeds in bloom.

PRICKLY PEAR CACTUS*

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Cochineal scale (crawlers)	2	Apply using ground equipment in sufficient volume to insure good coverage. Apply as needed on 7 to 10 day intervals. For grasshopper, refer to the general Grasshopper Section.

RESTRICTIONS: PRICKLY PEAR CACTUS

- Do not apply within 3 days of harvest.
- Do not apply more than a total of 6 quarts per acre per year.
- **BEE CAUTION**
Do not apply this product to target crops or weeds in bloom.

* Use not permitted in CA.

ROOT AND TUBER CROPS
ROOT AND TUBER CROPS EXCEPT SUGAR BEETS AND SWEET POTATOES

All members of the Root and Tuber Vegetable Crop Group 1 except sugar beet and sweet potato: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (garden), Beet (sugar, root), Burdock (edible), Canna (edible, Queensland arrowroot), Carrot, Cassava (bitter & sweet), Celeriac (celery root), Chayote (root), Chervil (turnip-rooted), Chicory, Chufa, Dasheen (taro), Ginger, Ginseng, Horseradish, Leren, Parsley (turnip-rooted), Parsnip, Potato, Radish, Oriental radish (daikon), Rutabaga, Salsify (black), Salsify (oyster plant), Salsify (Spanish), Skirret, Tanier (cocoyam), Turmeric, Turnip, Yam bean (jicama, manioc pea), Yam (true).

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

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 6 quarts per acre per crop per year.
- **BEE CAUTION**
Do not apply this product to target crops or weeds in bloom.

SUGAR BEETS

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Armyworm Beet leaf beetle Fall armyworm Cutworms Flea beetles Leafhoppers Webworms	1 to 1 1/2	Repeat applications as necessary up to a total of 2 times per year but not more often than once every 14 days.
	1 1/2	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 quarts per acre per crop per year.
- **BEE CAUTION**
Do not apply this product to target crops or weeds in bloom.

SMALL FRUITS AND BERRIES

All members of the Caneberry Subgroup 13-07A including:

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, Olallieberry, Oregon evergreen berry, Phenomenalberry, Rangeberry, Ravenberry, Rossberry, Shawnee blackberry, Southern dewberry, Tayberry, Youngberry, Zazamora, 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).

All members of the Bushberry Subgroup 13-07B including: Aronia berry, Blueberry (*Vaccinium* spp. - highbush, lowbush and cultivars and/or hybrids of these [= all blueberry species]), Chilean guava, Currant (black, buffalo, native and red), European barberry, Gooseberry, Highbush cranberry, Honeysuckle (edible), Huckleberry, Jostaberry, Juneberry, Lingonberry, Salal, Sea buckthorn, plus cultivars, varieties and/or hybrids of these.

Cranberries; Grapes; Strawberries.

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
European fruit lecanium European raspberry aphid Flea beetles Grape leaffolder Grape leafroller Japanese beetle Leafhoppers Leafrollers Meadow spittlebug Omnivorous leaftier	1 to 2	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 Cranberry twig girdler	1 1/2 to 2	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	2	

RESTRICTIONS: SMALL FRUITS AND BERRIES

- Do not apply within 7 days of harvest.
- Do not apply more than a total of 10 quarts per acre per crop per year.
- Use on 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 Caneberries, Bushberries, 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.

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SUNFLOWERS

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Stem weevil Sunflower beetle	1 to 1 1/2	Up to 2 applications may be made per year but not more often than once every 7 days.
Armyworm Fall armyworm Cutworms Sunflower moth	1 1/2	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 quarts per acre per crop per year.
- **BEE CAUTION**
Do not apply this product to target crops or weeds in bloom.
- DO NOT USE IN CALIFORNIA.

TOBACCO

PEST	QUARTS OF THIS PRODUCT PER ACRE	SPECIFIC DIRECTIONS
Budworms Japanese beetle Fall armyworm June beetle Tobacco flea beetles Suckfly Hornworms	1 to 2	Plant bed and Field Treatment Repeat treatments as necessary up to a total of 4 times 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 8 quarts 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.