

19713-49

3-31-2003

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

MAR 31 2003

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Luz G. Piwonka
Registration Manager
Drexel Chemical Company
P.O. Box 13327
Memphis, TN 38113-0327

Subject: Label Amendment: Response to Agency's letter of September 23, 2002
Drexel Carbaryl 4L
EPA Reg. No. 19713-49
Resubmissions dated October 31, 2002, acceptable.

Dear Ms. Piwonka:

The labeling referred to above submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable.

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

Please submit two (2) copies of the final printed label. If you have any questions please call me at (703) 308-8328.

Sincerely yours,

A handwritten signature in black ink that reads "Akiva Abramovitch".

Akiva Abramovitch, Ph.D.

Chemist

Insecticide-Rodenticide Branch
Registration Division (7505C)

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ACCEPTED
with COMMENTS
In EPA Letter Dated:

MAR 31 2003

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.

19713-49



Carbaryl 4L

Insecticide

For Agricultural or Commercial Use Only.

ACTIVE INGREDIENT:

Carbaryl (1-naphthyl N-methylcarbamate)	43.4%
OTHER INGREDIENTS:	56.6%
TOTAL:	100.0%

This product contains 4 pounds of Carbaryl per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See **FIRST AID** Below
SHAKE WELL BEFORE USING

EPA Reg. No. 19713-49

EPA Est. No. 19713-GA-1

Net Contents:

FIRST AID	
IF SWALLOWED:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious or convulsing person.
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes.
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 treatment advice. Have the product container or label with you when calling poison control center or doctor, or going for treatment. For information on this pesticide product (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.	
GENERAL: Contact a physician immediately in all cases of suspected poisoning. Transport to a physician or hospital immediately and SHOW A COPY OF THIS LABEL TO THE PHYSICIAN. If poisoning is suspected in animals, contact a veterinarian.	
ANTIDOTE STATEMENT ATROPINE SULFATE IS HIGHLY EFFECTIVE AS AN ANTIDOTE. Narcotics and other sedatives should not be used. Further, drugs like 2-PAM (pyridine-2-aldoxime methiodide) are NOT recommended. See NOTE TO PHYSICIAN	
NOTE TO PHYSICIAN Treat symptomatically. Overexposure to materials other than this product may have occurred. Carbaryl is an N-methyl carbamate that inhibits cholinesterase. Overexposure to this substance may cause toxic signs and symptoms due to stimulation of the cholinergic nervous system. These effects of overexposure are spontaneously and rapidly reversible. Gastric lavage may be used if this product has been swallowed. Carbaryl poisoning may occur rapidly after ingestion and prompt removal of stomach contents is indicated. Specific treatment consists of parenteral atropine sulfate. Caution should be maintained to prevent overatropinization. Improve tissue oxygenation as much as possible before administering atropine to minimize the risk of ventricular fibrillation. Mild cases may be given 1 to 2 mg intramuscularly every 30 to 60 minutes as needed to maintain the effect for at least 12 hours. Doses for children should be appropriately reduced. Complete recovery from overexposure is to be expected within 24 hours. Narcotics and other sedatives should not be used. Further, drugs like 2-PAM (pyridine-2-aldoxime methiodide) are NOT recommended. To aid in confirmation of a diagnosis, urine samples should be obtained within 24 hours of exposure and immediately frozen.	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed, absorbed through skin, inhaled or if in eyes. Avoid breathing vapors or spray mist. Avoid contact with eyes, skin or clothing. Keep out of reach of children and domestic animals.

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

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: Long-sleeved shirt and long pants, chemical-resistant gloves such as Barrier Laminate, Butyl Rubber, Nitrile Rubber, Neoprene Rubber, Polyvinyl Chloride (PVC) or Viton, shoes plus socks and chemical-resistant headgear for overhead exposure.

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

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

USER SAFETY RECOMMENDATIONS

Users should: 1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

ENVIRONMENTAL HAZARDS

This product is extremely toxic to aquatic and estuarine 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. Do not contaminate water by cleaning equipment or disposal of wastes. Do not contaminate water when disposing of equipment washwaters.

Note: Add this statement to all container sizes of 5 gallons and higher. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

BEE CAUTION: May kill Honeybees in substantial numbers. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. This product is less hazardous to Honeybees when direct application is avoided and the spray residues have dried.



Manufactured By:
Drexel Chemical Company

P.O. BOX 13327, MEMPHIS, TN 38113-0327

SINCE 1972

For maximum Honeybee hazard reduction, apply from late evening to early morning or when bees are not foraging. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging in the treatment area. However, applications may be made during foraging periods if the beekeeper takes one of the following precautionary measures prior to bee flight activity on the day of treatment: (1) Confine the Honeybees to the hives by covering the colony or screening the entrance; (2) locate hives beyond bee flight range from the treated area. Precautionary measures may be discontinued after spray residues have dried. Contact your Cooperative Agricultural Extension Service for further information.

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 precautions. 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 (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, 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 (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

Do not enter or allow worker entry into treated areas during the REI of 12 hours.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, chemical-resistant gloves such as Barrier Laminate, Butyl Rubber, Nitrile Rubber, Neoprene Rubber, Polyvinyl Chloride (PVC) or Viton, shoes plus socks and chemical-resistant headgear for overhead exposure.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the WPS 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.

The area being treated must be vacated by unprotected persons. Keep unprotected persons out of treated areas until sprays have dried.

GENERAL PRECAUTIONS AND RESTRICTIONS

CARBARYL 4L Insecticide is a suspension of microfine 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.

PRE-HARVEST AND GRAZING RESTRICTIONS AND LIMITATIONS

Tolerances established under the Federal Food, Drug and Cosmetic Act permit the sale of labeled crops bearing probable carbaryl residues when this product is used in accordance with the label directions. If used as directed, treated forage may be grazed or used as feed for dairy and meat animals without causing illegal residues in meat or milk. Do not apply at greater rates or at more frequent intervals than stated on the label. To do so may result in illegal residues in crops, meat and milk. Do not use reclaimed irrigation water from crops treated with carbaryl on crops for which carbaryl tolerances are not established. Do not plant rotational food and feed crops not listed on this or other carbaryl labels in carbaryl treated soil.

APPLICATION STATEMENTS

Calibrate and adjust application equipment to ensure proper rate and accurate placement. To clean spray system after use, drain and flush with 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.

RESISTANT SPECIES NOTICE: All references to Armyworms on the crops listed on this label refer to the species, *Pseudaletia unipuncta*, often called the "True armyworm". Except where indicated otherwise, this product is not registered for the control of other Armyworm species. Regional differences have been noted in the susceptibility of certain strains of Colorado potato beetles, Diamondback moths, Fall armyworms and Southern green stink bugs to carbaryl, if local experience indicates inadequate control, 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 0.5 to 0.75 the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of this product 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 the following "COMPATIBILITY STATEMENT".

COMPATIBILITY STATEMENT

This product, 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 insect control and may cause application and handling difficulties or plant injury. Observe all precautions and limitations on labeling of all products used in mixtures. WHEN PREPARING COMBINATION SPRAYS, FIRST ADD THIS PRODUCT 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 and 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 insect control.

APPLICATION PROCEDURES AND PRECAUTIONS

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. To prepare small volumes of spray mixture, use 0.33 fluid ounce (approximately 2 teaspoons) of this product in an adequate amount of water and apply to 500 square feet, where rates of 1 quart per acre are indicated.

Aerial Application: For adequate distribution, use at least 10 gallons of spray mixture per acre for application to Tree and Orchard crops or at least 2 gallons of spray mixture per acre for application to other crops.

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 this product in a mix tank. Fill tank with 0.5 to 0.75 the desired amount of water. Start mechanical or hydraulic agitation. Add the required amount of this product and then the remaining volume of water. (Suspension concentrations using the appropriate dosage per acre recommended on this label 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 this product into the irrigation water line so as to deliver the desired rate per acre. The suspension of this product should be injected with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing. If you should have any other questions about calibration, you should contact your State Extension Service Specialists, equipment manufacturers or other experts.

Note: When treatment with this product 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.

General Precautions For 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

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is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

Do not apply when wind speed favors drift, 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 non-uniform 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.

SPECIFIC USE DIRECTIONS

Crop/Site Groupings: Asparagus, Brassica leafy vegetable crops, Cereal grain crops (Field and Popcorn, Grain sorghum, Rice, Sweet corn, Wheat and Proso millet), Cucurbit vegetables, Flax, Forage crops (Alfalfa, Birdsfoot trefoil, Clovers, Pasture and Grasses grown for seed, Rangeland), Fruiting vegetables, Leafy vegetables, Legume vegetables, Non-cropland (Conservation Reserve Program—Ditchbanks, Hedgerows, Right-of-ways, Roadsides, Wasteland), Okra, Peanuts, Prickly pear cactus, Root and Tuber crops, Sugar beets, Sweet potatoes, small Fruits and Berries, Sunflowers, Tobacco, Tree fruit crops (Citrus fruits, Olives, Pome fruits, Stone fruits), Tree nut crops (Pistachios, Tree nuts), Forested areas and Rangeland trees, Trees and Ornamentals, Turfgrass, control of specific pests across multiple sites (adult Mosquito control, Grasshoppers, Imported fire ants, Ticks which vector Lyme disease), and pest control in and around buildings.

INSECT CONTROL

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 control.

ASPARAGUS

Crop	Pest	Qts. of This Product Per Acre
Asparagus	Apache cicadas, Asparagus beetles, Cutworms	1 to 2
	SPECIFIC DIRECTIONS: Repeat application as necessary up to a total of 3 times prior to harvest, but not more often than once every 3 days. For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.	
	Apache cicadas, Asparagus beetles, Cutworms	2 to 4
	SPECIFIC DIRECTIONS: Application to ferns or brush growth following harvest of spears: Repeat applications as necessary, but not more often than once every 7 days. Do not make more than a total of 5 applications per year to spears and ferns combined.	

RESTRICTIONS AND PRECAUTIONS: Do not apply within 1 day of harvest. Do not apply more than a total of 6 qts. per acre before harvest of spears. Do not apply more than a total of 10 qts. per acre per year.

BRASSICA LEAFY VEGETABLE CROPS

Repeat applications as needed, up to a total of 4 times, but not more often than once every 7 days.

Crop	Pest	Qts. of This Product Per Acre
Broccoli, Brussels sprouts, Cauliflower, Cabbage, Chinese cabbage, Collards, Kale, Kohlrabi, Mustard greens	Flea beetles, Harlequin bugs, Leafhoppers	0.5 to 1
	Armyworms, Aster leafhoppers, Corn earworms, Diamondback moths, Fall armyworms, Imported cabbageworms, Lygus bugs, Spittlebugs, Stink bugs, Tarnished plant bugs	1 to 2

RESTRICTIONS AND PRECAUTIONS: For Broccoli, Brussels sprouts, Cabbage, Cauliflower and Kohlrabi, do not apply within 3 days of harvest. For Chinese cabbage, Collards, Kale and Mustard greens, do not apply within 14 days of harvest. Do not apply more than a total of 6 qts. per acre per crop.

CEREAL GRAIN CROPS

Repeat applications as needed, up to a total of 4 times, but not more often than once every 14 days. Optimum timing and good coverage are essential for effective control.

Crop	Pest	Qts. of This Product Per Acre
Field com, Popcorn	Armyworms, Chinch bugs, Corn earworms, Corn rootworm adults, Fall armyworms, Flea beetles, Japanese beetles, Sap beetles, Southwestern corn borers, Leafhoppers	1 to 2
	SPECIFIC DIRECTIONS: For optimum Chinch bug control, use ground equipment to apply at least 20 gals. of water per acre and direct spray toward stalk to provide thorough coverage.	
	European corn borers	1.5 to 2
	SPECIFIC DIRECTIONS: For optimum European corn borer control, do not apply in less than 3 gals. of water per acre by air and 15 gals. of water by ground.	
Cutworms, Western bean cutworms		2
	SPECIFIC DIRECTIONS: For optimum Cutworm control, 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 gals. by ground or 5 gals. by air per acre. For Cutworm control, this product is most effective against species which feed on the upper portions of the plant. For Western bean cutworms, treat when infestation averages 15% and at 90 to 100% tassel emergence. Treatment after 100% silk emergence will reduce effectiveness.	
RESTRICTIONS AND PRECAUTIONS: Observe Bee Caution. Do not apply more than a total of 8 qts. per acre per crop. Do not apply within 48 days of harvest of grain and fodder or within 14 days of harvest or grazing forage or silage.		

GRAIN SORGHUM

Repeat applications as necessary, up to a total of 4 times, but not more often than once every 7 days. Direct spray into forming heads for optimum control of insects attacking heads.

Crop	Pest	Qts. of This Product Per Acre
Grain sorghum	Armyworms, Chinch bugs, Corn earworms, Fall armyworms, Stink bugs, Webworms	1 to 2
	SPECIFIC DIRECTIONS: For optimum Chinch bug control, use high gallonage ground application at the base of the plants.	
	Southwestern corn borers	1.5
	Cutworms	2
SPECIFIC DIRECTIONS: For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.		
RESTRICTIONS AND PRECAUTIONS: 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 qts. per acre per crop.		

RICE

Crop	Pest	Qts. of This Product Per Acre
Rice	Armyworms, Chinch bugs, Fall armyworms, Leafhoppers, Stink bugs	1 to 1.5
	SPECIFIC DIRECTIONS: Up to 2 applications per crop may be made, but not more often than once every 7 days.	
	Tadpole shrimp (CA Only)	1.5
	SPECIFIC DIRECTIONS: For optimum Tadpole shrimp control, apply to water when pest first appears.	
RESTRICTIONS AND PRECAUTIONS: Do not apply within 14 days of harvest for grain or straw. Do not apply more than a total of 4 qts. per acre per crop. May kill shrimp, crabs and crayfish. Do not apply propanil herbicides within 15 days before or after application of this product, or plant injury may result.		

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SWEET CORN

Observe Bee Caution. Repeat applications as necessary up to a total of 8 times, but not more than once every 3 days. Optimum timing and good coverage are essential for effective control. 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 re-treatment 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.

Crop	Pest	Qts. of This Product Per Acre
Sweet corn	Armyworms, Chinch bugs, Corn earworms, Corn rootworm adults, Fall armyworms, Flea beetles, Japanese beetles, Leafhoppers, Sap beetles, Southwestern corn borers	1 to 2
	SPECIFIC DIRECTIONS: For optimum Chinch bug control, use ground equipment to apply at least 20 gals. of water per acre and direct spray toward stalk to provide thorough coverage.	
	European corn borers	1.5 to 2
	SPECIFIC DIRECTIONS: For optimum European corn borer control, do not apply in less than 3 gals. of water per acre by air and 15 gals. of water by ground.	
	Cutworms, Western bean cutworms	2
SPECIFIC DIRECTIONS: For optimum Cutworm control, apply in a 12-inch band over the row using a sufficient volume of water to obtain thorough coverage. For broadcast application, use at least 20 gals. by ground or 5 gals. by air per acre. For Cutworm control, this product is most effective against species which feed on the upper portions of the plant. For Western bean cutworms, treat when infestation averages 15% and at 90 to 100% tassel emergence. Treatment after 100% silk emergence will reduce effectiveness.		
RESTRICTIONS AND PRECAUTIONS: 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 qts. per acre per crop.		

WHEAT AND PROSO MILLET

Up to 2 applications per crop may be made, but not more often than once every 14 days.

Crop	Pest	Qts. of This Product Per Acre
Proso millet, Wheat (DO NOT USE IN CA)	Flea beetles	0.5 to 1
	Cereal leaf beetles	1
	SPECIFIC DIRECTIONS: Application is effective against eggs, larvae and adults of the Cereal leaf beetles.	
	Armyworms, Fall armyworms	1 to 1.5
	SPECIFIC DIRECTIONS: Application for Armyworm control should be made when Armyworms are actively feeding on the upper foliage and night temperatures are not expected to drop below 55°F. If applied by air to lush growth, use a minimum spray volume of 5 gals. per acre to optimize coverage.	
RESTRICTIONS AND PRECAUTIONS: Do not apply within 21 days of harvest for grain or straw or within 7 days of harvest or grazing for forage. Do not apply more than a total of 3 qts. per acre per crop.		

CUCURBIT VEGETABLES

Repeat applications as necessary, up to a total of 6 times, but not more often than once every 7 days.

Crop	Pest	Qts. of This Product Per Acre
Cucumbers, Melons, Pumpkins, Squash	Melonworms, Pickleworms	0.5 to 1
	Cucumber beetles, Flea beetles, Leafhoppers, Squash bugs	1
SPECIFIC DIRECTIONS: For optimum control of Squash bugs, apply sufficient spray volume for thorough coverage and time sprays for early morning or late afternoon.		
RESTRICTIONS AND PRECAUTIONS: Do not apply within 3 days of harvest. Do not apply more than a total of 6 qts. per acre per crop. Observe plant response precautions.		

FLAX

Up to 2 applications per crop may be made, but not more than once every 14 days.

Crop	Pest	Qts. of This Product Per Acre
Flax (DO NOT USE IN CA)	Armyworms	1 to 1.5
RESTRICTIONS AND PRECAUTIONS: Do not apply within 42 days of harvest for seed or straw. Do not apply more than a total of 3 qts. per acre per crop.		

FORAGE CROPS

On dense growth, use 25 to 40 gallons of water per acre with ground equipment to ensure adequate coverage.

Crop	Pest	Qts. of This Product Per Acre
Alfalfa, Birdsfoot trefoil, Clovers	Blister beetles, Mexican bean beetles	0.5 to 1
	Alfalfa caterpillars, Bean leaf beetles, Cucumber beetles, Green cloverworms, Japanese beetles, Leafhoppers, Potato leafhoppers, Threecornered alfalfa hoppers, Thrips, Velvetbean caterpillars	1
	Alfalfa blotch leafminers, Armyworms, Cloverhead weevils, Corn earworms, Cutworms, Egyptian alfalfa weevil larvae, Essex skippers, European alfalfa beetles, Fall armyworms, Lygus bugs, Stink bugs, Webworms, Yellowstriped armyworms	1 to 1.5
	SPECIFIC DIRECTIONS: For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.	
	Alfalfa weevil larvae (West of the Rocky Mountains)	1 to 1.5
SPECIFIC DIRECTIONS: For Alfalfa weevil larvae, if pre-treatment damage is extensive, cut Alfalfa and treat the stubble. This product is not effective against adult Alfalfa weevils.		
	Alfalfa weevil larvae (East of the Rocky Mountains)	1.5
SPECIFIC DIRECTIONS: For Alfalfa weevil larvae, if pre-treatment damage is extensive, cut Alfalfa and treat the stubble. This product is not effective against adult Alfalfa weevils.		
RESTRICTIONS AND PRECAUTIONS: Observe Bee Caution. Observe plant response precautions. Do not apply more than once per cutting. Do not apply within 7 days of harvest or grazing. Do not exceed 1.5 qts. per acre per cutting. Carbaryl may cause a temporary bleaching of tender Alfalfa foliage.		

PASTURE AND GRASSES GROWN FOR SEED

Up to 2 applications per year may be made, but not more often than once every 14 days.

Crop	Pest	Qts. of This Product Per Acre
Pasture and Grasses grown for seed	Armyworms, Chinch bugs, Essex skippers, Fall armyworms, Striped grass loopers, Thrips, Range caterpillars, Range crane flies, Ticks	1 to 1.5
SPECIFIC DIRECTIONS: To control Thrips in grasses grown for seed, use high spray pressure to improve penetration into the boot. Carefully mark swaths to avoid overapplication.		
RESTRICTIONS AND PRECAUTIONS: Do not apply within 14 days of harvest or grazing. Do not exceed a total of 3 qts. per acre per year.		

RANGELAND

Do not make more than 1 application per year. Carefully mark swaths to avoid overapplication.

Site	Pest	Qts. of This Product Per Acre
Rangeland	Black grass bugs, Grasshoppers, Mormon crickets, Range caterpillars, Range crane flies	0.5 to 1
	Ticks	1
RESTRICTIONS AND PRECAUTIONS: May be harvested or grazed the same day of treatment. Do not apply more than 1 qt. per acre per year.		

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FRUITING VEGETABLES

Repeat applications as necessary, up to a total of 7 times, but not more often than once every 7 days. When disease transmission is suspected, monitor fields following application and re-treat if reinfestation occurs, but not more often than once every 7 days.

Crop	Pest	Qts. of This Product Per Acre
Eggplant, Peppers, Tomatoes	Colorado potato beetles, European corn borers, Fall armyworms, Lace bugs, Stink bugs (suppression), Tarnished plant bugs, Thrips (suppression), Tomato fruitworms, Tomato hornworms, Tomato pinworms	1 to 2
	SPECIFIC DIRECTIONS: Thorough coverage is essential to effectively suppress Stink bugs.	
	Flea beetles, Leafhoppers	0.5 to 1
	Cutworms	2
SPECIFIC DIRECTIONS: For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.		
RESTRICTIONS AND PRECAUTIONS: Do not apply within 3 days of harvest. Do not apply more than a total of 8 qts. per crop.		

LEAFY VEGETABLES

Repeat applications as necessary, up to a total of 5 times, but not more often than once every 7 days.

Crop	Pest	Qts. of This Product Per Acre
Celery, Dandelion, Endive, Lettuce (Head and Leaf), Parsley, Spinach, Swiss chard	Flea beetles, Harlequin bugs, Leafhoppers	0.5 to 1
	Armyworms, Aster leafhoppers, Corn earworms, Fall armyworms, Imported cabbageworms, Lygus bugs, Spittlebugs, Stink bugs, Tarnished plant bugs	1 to 2
RESTRICTIONS AND PRECAUTIONS: Do not apply within 14 days of harvest. Do not apply more than a total of 6 qts. per acre per crop.		

LEGUME VEGETABLES

Repeat applications as necessary, up to a total of 4 times, but not more often than once every 7 days. Use lower rates for light to moderate populations and smaller instars and to provide maximum survival of beneficial insects and spiders. Use the higher rates for heavy populations and larger instars.

Crop	Pest	Qts. of This Product Per Acre
Cowpeas, Fresh and Dried beans (Phaseolus species including Kidney, Navy and Snap), Fresh and Dried peas (Pisum species), Lentils, Southern peas, Soybeans	Bean leaf beetles, Blister beetles, Cucumber beetles, Grape colaspis, Green cloverworms, Japanese beetles, Mexican bean beetles, Velvetbean caterpillars	0.5 to 1
	Corn earworms	0.5 to 1.5
(DO NOT USE ON LENTILS IN CA)	Alfalfa caterpillars, Colorado potato beetles, Flea beetles, Leafhoppers, Threecornered alfalfa hoppers, Thrips, Western bean cutworms	1
	Armyworms, Cutworms, European corn borers, Fall armyworms, Stink bugs, Tarnished plant bugs, Webworms	1 to 1.5
	SPECIFIC DIRECTIONS: For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.	
	Alfalfa loopers (suppression), Cowpea curculios (suppression), Painted ladies (Thistle caterpillars), Pea leaf weevils, Pea weevils, Saltmarsh caterpillars, Woollybear caterpillars, Yellowstriped armyworms	1.5
	CA ONLY: Corn earworms (suppression), Limabean podborers (suppression), Lygus bugs (suppression), Stink bugs (suppression)	
RESTRICTIONS AND PRECAUTIONS: Do not apply within 14 days of grazing or harvest for forage or within 3 days of harvest of fresh 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 qts. per acre per crop. Do not apply a combination of this product and 2,4-DB herbicides to Soybeans, as crop injury may result. Observe plant response precautions.		

NON-CROPLAND

Up to 2 applications per year may be made, but not more often than once every 14 days. Carefully mark swaths to avoid overapplication.

Site	Pest	Qts. of This Product Per Acre
Conservation Reserve Program Acreage, Set-Aside Program Acreage, Wasteland, Right-of-Ways, Hedge-rows, Ditchbanks, Roadsides	Black grass bugs	0.25 to 0.5
	Mormon crickets, Range caterpillars, Range crane flies	0.5 to 1
	Ticks	1 to 1.5
RESTRICTIONS AND PRECAUTIONS: Do not apply within 14 days of grazing or harvest for forage or hay. Do not apply more than a total of 3 qts. per acre per year.		

OKRA

Apply using ground equipment in sufficient volume to ensure good coverage.

Crop	Pest	Qts. of This Product Per Acre
Okra	Corn earworms, Stink bugs	1 to 1.5
	SPECIFIC DIRECTIONS: Treat on a 6- to 8-day schedule. For Grasshopper control, refer to the "CONTROL OF SPECIFIC PESTS ACROSS MULTIPLE SITES" section.	
RESTRICTIONS AND PRECAUTIONS: Do not apply within 3 days of harvest. Do not apply more than a total of 6 qts. per crop.		

PEANUTS

Repeat applications as necessary, up to a total of 5 times, but not more often than once every 7 days.

Crop	Pest	Qts. of This Product Per Acre
Peanuts	Blister beetles, Mexican bean beetles	0.5 to 1
	Alfalfa caterpillars, Bean leaf beetles, Cucumber beetles, Green cloverworms, Japanese beetles, Leafhoppers, Red-necked peanutworms, Threecornered alfalfa hoppers, Thrips, Velvetbean caterpillars	1
	SPECIFIC DIRECTIONS: For optimum control of Thrips, use directed or banded sprays with hollow cone spray nozzles. Ensure adequate coverage for the underside of leaves.	
	Armyworms, Corn earworms, Fall armyworms, Stink bugs, Webworms	1 to 1.5
	Whitefringed beetle adults, Cutworms	2
SPECIFIC DIRECTIONS: For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.		
RESTRICTIONS AND PRECAUTIONS: Observe plant response precaution. Do not apply within 14 days of harvest. Do not apply more than a total of 8 qts. per acre per crop.		

PRICKLY PEAR CACTUS

Apply using ground equipment in sufficient volume to ensure good coverage.

Crop	Pest	Qts. of This Product Per Acre
Prickly pear cactus	Cochineal scales (crawlers)	2
	SPECIFIC DIRECTIONS: Apply as needed at 7- to 10-day intervals. For Grasshopper control, refer to the "CONTROL OF SPECIFIC PESTS ACROSS MULTIPLE SITES" section.	
RESTRICTIONS AND PRECAUTIONS: Do not apply within 3 days of harvest. Do not apply more than a total of 6 qts. per acre per season.		

ROOT AND TUBER CROPS

(Except Sugar beets and Sweet potatoes)

Repeat applications as necessary, up to a total of 6 times, but not more often than once every 7 days.

Crop	Pest	Qts. of This Product Per Acre
Carrots, Garden beets, Horse-radish, Parsnips, Potatoes, Radishes, Rutabagas, Salsify	Flea beetles, Leafhoppers	0.5 to 1
	Armyworms, Aster leafhoppers, Colorado potato beetles, Corn earworms, Cutworms, European corn borers, Fall armyworms, Lace bugs, Lygus bugs, Spittlebugs, Stink bugs, Tarnished plant bugs	1 to 2
SPECIFIC DIRECTIONS: For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.		
RESTRICTIONS AND PRECAUTIONS: Do not apply within 7 days of harvest. Do not apply more than a total of 6 qts. per acre per crop.		

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SUGAR BEETS

Repeat applications as necessary, up to a total of 2 times, but not more often than once every 14 days.

Crop	Pest	Qts. of This Product Per Acre
Sugar beets	Amyworms, Beet leaf beetles, Fall armyworms, Flea beetles, Leafhoppers, Webworms	1 to 1.5
	Cutworms	1.5
SPECIFIC DIRECTIONS: For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.		
RESTRICTIONS AND PRECAUTIONS: Do not apply within 28 days of harvest for roots or forage. Do not apply more than a total of 3 qts. per acre per crop.		

SWEET POTATOES

Crop	Pest	Qts. of This Product Per Acre
Sweet potatoes	Corn earworms, Cucumber beetles, Flea beetles, Sweet potato hornworms, Sweet potato weevils, Tortoise beetles, Whitefringed beetles	1 to 2
	Yellowstriped armyworms	2
SPECIFIC DIRECTIONS: Pre-plant dip for control of Sweet potato weevils: Just prior to planting, dip Sweet potato cuttings in a suspension containing 2 gals. of this product in 100 gals. of water (2.6 fl. ozs. per gal. of water). For foliar sprays, repeat applications as necessary, up to a total of 8 times, but not more often than once every 7 days.		
RESTRICTIONS AND PRECAUTIONS: Do not apply within 7 days of harvest. Do not apply more than a total of 8 qts. per acre per crop with in-season sprays. Do not apply more than a total of 1.2 qts. per acre as a pre-plant dip treatment.		

SMALL FRUITS AND BERRIES

Repeat applications as necessary, up to a total of 5 times, but not more often than once every 7 days.

Crop	Pest	Qts. of This Product Per Acre
Blueberries, Caneberries, Cranberries, Grapes, Strawberries	European fruit lecaniums, European raspberry aphids, Flea beetles, Grape leafhoppers, Grape leafrollers, Japanese beetles, Leafhoppers, Leafrollers, Meadow spittlebugs, Omnivorous leafhoppers, Rose chafers, Snowy tree crickets, Strawberry bud weevils, Strawberry clippers, Strawberry fruitworms, Strawberry leafrollers, Strawberry weevils, Western grapeleaf skeletonizers, Western yellowstriped armyworms	1 to 2
	SPECIFIC DIRECTIONS: In Grapes, for Grape leafroller control, apply before the first brood larvae emerge from rolls.	
	Blueberry maggots, Cherry fruitworms, Cranberry fireworms, Cranberry fruitworms, Cranberry twig girdlers, Elm spanworms, Gypsy moths, Sparganothis fruitworms, Tarnished plant bugs	1.5 to 2
	Eightspotted foresters, Cutworms, Grape berry moths, June beetles, Omnivorous leafrollers, Orange tortrix, Raspberry fruitworms, Raspberry sawflies, Redbanded leafrollers, Saltmarsh caterpillars	2
SPECIFIC DIRECTIONS: For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.		
RESTRICTIONS AND PRECAUTIONS: Observe Bee Caution. Do not apply within 7 days of harvest. Do not apply more than a total of 10 qts. per acre per crop.		
Note: Use in Cranberries may kill shrimp and crabs. Do not use in areas where these are important resources. Carbaryl may injure Early dawn and Sunrise varieties of Strawberries. In Grapes, do not concentrate spray on the bunch or visible residues may result.		

SUNFLOWERS

Up to 2 applications may be made, but not more often than once every 7 days.

Crop	Pest	Qts. of This Product Per Acre
Sunflowers (DO NOT USE IN CA)	Stem weevils, Sunflower beetles	1 to 1.5
	Amyworms, Cutworms, Fall armyworms, Sunflower moths	1.5
SPECIFIC DIRECTIONS: For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.		
RESTRICTIONS AND PRECAUTIONS: 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 qts. per acre per crop.		

TOBACCO

Plant bed and Field Treatment—Repeat treatments as necessary, up to a total of 4 times per crop, 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.

Crop	Pest	Qts. of This Product Per Acre
Tobacco	Budworms, Fall armyworms, Hornworms, Japanese beetles, June beetles, Suckflies, Tobacco flea beetles	1 to 2
RESTRICTIONS AND PRECAUTIONS: Tobacco may be harvested on the day of treatment. Do not apply more than a total of 8 qts. per acre per crop. Observe plant response precautions.		

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, density and other factors. Repeat applications as necessary, up to a total of 8 times, but not more often than once every 14 days.

Crop	Pest	Qts. of This Product Per Acre
Citrus fruits	Avocado leafrollers, California orangedogs, Citrus cutworms, Fruitree leafrollers, Orange tortrix, Western tussock moths	2 to 3
	Citrus rust mites, Eriophyid mites, Plant bugs, Scale insects (Black scales, Brown soft scales, California red scales [except in CA], Citrus snow scales, Yellow scales [except in CA])	3 to 5
	SPECIFIC DIRECTIONS: For Scale control, apply when crawlers are present. For best control of Eriophyid mites, including Citrus rust mites, apply when pest populations are low.	
	Apopka weevils (adult), Citrus root weevils (adults), Fuller rose beetles, Little leaf notchers (adult)	5 to 7.5
CA Only: California red scales, Yellow scales	5 to 16	
SPECIFIC DIRECTIONS: Do not make more than 1 application per season for California red scales. Apply when crawlers are present.		
RESTRICTIONS AND PRECAUTIONS: Observe Bee Caution. Do not apply within 5 days of harvest. Do not apply more than a total of 20 qts. per acre per crop.		

OLIVES

Up to 2 applications per crop may be made, but not more often than once every 14 days.

Crop	Pest	Qts. of This Product Per Acre
Olives	Scale insects (Black scales, Olive scales)	5 to 7.5
RESTRICTIONS AND PRECAUTIONS: Do not apply within 14 days of harvest. Do not apply more than a total of 15 qts. per acre per crop.		

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POME FRUITS

Repeat applications as necessary, up to a total of 8 times per crop (including thinning sprays on Apples), but not more often than once every 14 days.

Crop	Pest	Qts. of This Product Per Acre
Apples, Crabapples, Pears, Loquats, Oriental pears	White apple leafhoppers	0.5 to 1.5
	Apple aphids, Codling moths	1 to 3
	Apple aphids, Apple maggots, Apple mealybugs, Apple rust mites, Bagworms, California pearstugs (Pear sawflies), European apple sawflies, Eyespotted bud moths, Fruitree leafrollers, Gypsy moths, Japanese beetles, Lesser appleworms, Lygus bugs, Orange tortrix, Pearleaf blister mites, Pear psyllas, Pear rust mites, Periodical cicadas, Plum curculios, Redbanded leafrollers, Rosy apple aphids, Scale insects (Forbes scales, Lecanium scales, San Jose scales), Tarnished plant bugs, Tentiform leafminers, Woolly apple aphids, Yellowheaded fireworms	1.5 to 3
<p>SPECIFIC DIRECTIONS: On Apples, avoid use during the period from full bloom until 30 days after full bloom unless fruit thinning is desired. Use for pest control during this period also may result in fruit removal. For Psylla control, apply when eggs hatch or young nymphs are present. For Scale control, apply when crawlers are present.</p>		
Apples Only, for fruit thinning	-	1 to 3
<p>SPECIFIC DIRECTIONS: Observe Bee Caution. Apply between 80% petal fall and 16 mm fruit size. Use the higher rates on hard to thin varieties at the early timing which is the 80% petal fall to 6 mm fruit size. Use the lower rates on easy to thin varieties and at the later thinning period which is the 10 to 16 mm fruit size. The rate to use per acre will depend on varieties, tree size, row spacing, weather conditions at the time of and following applications. Consult with the local fruit thinning experts in your area for the proper rate to use under your conditions. The optimum spray gallonage will depend on the size, planting density, row spacing and amount of foliage. Use sufficient spray volume to ensure adequate coverage (100 to 400 gals. per acre). Avoid spray to the point of runoff. Reduce spray coverage to the lower portion of the tree since overthinning may occur here. Factors such as climatic temperature, high humidity, frost, tree age, variety, nutrition, previous crop, pruning and bloom may influence fruit thinning results with the product. Exercise caution to avoid possible overthinning. For the most effective results, apply under good drying conditions and when daytime temperatures (°F) will be 70 to low 80's for the following 1 to 3 days. Application with daytime temperatures in excess of 80°F may result in overthinning. This product may be mixed with other fruit thinners; however, use caution to avoid overthinning and other adverse effects. Consult with local fruit thinning experts in your area for recommendations. Refer to the other product labels for specific use directions. Consult with local fruit thinning experts in your area for advice on the proper use of this product on your varieties under your growing conditions. PRECAUTIONS: The use of this product 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 increase the possibility of fruit deformity. The use with Summer spray oils and wetting agents may increase the risk of fruit deformity and injury.</p>		
<p>RESTRICTIONS AND PRECAUTIONS: 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 15 qts. per acre per crop. Do not make more than a total of 8 applications per crop.</p> <p>FOR PROTECTION OF HONEYBEES: Remove all bee hives from orchard to be treated prior to application. Do not apply this product if bees are actively foraging in orchard. If weed bloom is present, mow the cover crop on the orchard floor prior to applying this product.</p>		

STONE FRUITS

Crop	Pest	Qts. of This Product Per Acre
Apricots, Cherries, Nectarines, Peaches, Plums, Prunes	Apple pandemis, Black cherry aphids, Cherry fruitworms, Cherry maggots (Cherry fruit flies), Codling moths, Cucumber beetles, Eastern tent caterpillars, Eyespotted bud moths, European earwigs, Fruitree leafrollers, Green fruitworms, Gypsy moths, Japanese beetles, June beetles, Lesser peachtree borers, Mealy plum aphids, Orange tortrix, Oriental fruit moths, Peach twig borers, Periodical cicadas, Plum curculios, Prune leafhoppers, Redbanded leafrollers, Rose chafers, Scale insects (Brown soft scales, Forbes scales, Lecanium scales, Olive scales, Oystershell scales, San Jose scales), Tarnished plant bugs, Tussock moths, Variegated leafrollers	2 to 3
<p>SPECIFIC DIRECTIONS: Observe Bee Caution. Repeat applications as necessary, up to a total of 3 times per crop, but not more often than once every 7 days. An additional application at the dormant or delayed dormant timing may be made. For optimum Scale control, apply when crawlers are present. For Lesser peachtree borers, best results have been found by thoroughly spraying limbs and tree trunks at weekly intervals during moth flight.</p>		
	CA ONLY: Black cherry aphids, Cherry fruitworms, Cherry maggots (Cherry fruit flies), Codling moths, Cucumber beetles, Eyespotted bud moths, European earwigs, Fruitree leafrollers, Green fruitworms, Mealy plum aphids, Orange tortrix, Oriental fruit moths, Peach twig borers, Scale insects (Brown soft scales, Forbes scales, Lecanium scales, Olive scales, Oystershell scales, San Jose scales), Tarnished plant bugs, Tussock moths	3 to 4
<p>SPECIFIC DIRECTIONS: Observe Bee Caution. Repeat applications as necessary, up to a total of 3 times per crop, but not more often than once every 14 days. An additional application at the dormant or delayed dormant timing may be made. For optimum Scale control, apply when crawlers are present.</p>		
	Peach twig borers, Scale insects (Brown soft scales, Forbes scales, Lecanium scales, Olive scales, Oystershell scales, San Jose scales)	4 to 5
<p>SPECIFIC DIRECTIONS: 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>		
<p>RESTRICTIONS AND PRECAUTIONS: Do not apply within 3 days of harvest, except in CA. In CA, do not apply within 1 day of harvest. Do not apply more than a total of 14 qts. per acre per crop. Do not apply more than a total of 5 qts. per acre at the dormant or delayed dormant timing. Do not apply more than a total of 9 qts. per acre during the production season.</p>		

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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.

Crop	Pest	Qts. of This Product Per Acre
Pistachios	Brown soft scales, Lecanium scales, Navel orangeworms	3 to 5
	SPECIFIC DIRECTIONS: Repeat applications as necessary, up to a total of 4 times per crop (including any applications at the dormant or delayed dormant timing), but not more often than once every 7 days. For Scale control, apply when crawlers are present.	
	Scale insects	4 to 5
SPECIFIC DIRECTIONS: 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 AND PRECAUTIONS: Do not apply within 14 days of harvest. Do not apply more than a total of 15 qts. per acre per crop, including any application at the dormant or delayed dormant timing.		
Almonds, Chestnuts, Filberts, Pecans, Walnuts	Black margined aphids, Calico scales, Codling moths, European fruit lecaniums, Fall webworms, Filbert aphids, Filbert leafrollers, Filbertworms, Frosted scales, Fruit tree leafrollers, Hickory shuckworms, Lesser webworms, Navel orangeworms, Peach twig borers, Pecan leaf phyloxera, Pecan stem phyloxera, Pecan nut casebearers, Pecan spittlebugs, Pecan weevils, San Jose scales, Twig girdlers, Walnut caterpillars	2 to 5
	SPECIFIC DIRECTIONS: Observe Bee Caution. Repeat applications as necessary, up to a total of 4 times per crop (including any applications at the dormant or delayed dormant timing), but not more often than once every 7 days. Use lower rates for pests attacking leaves. Use higher rates for pests attacking fruit and for higher infestations. For Scale control, apply when crawlers are present. For Peach twig borers, best results with foliar applications have been found by making applications in Popcorn or petal fall stages when the May brood begins to hatch. For Navel orangeworms in Almonds and Walnuts, best results have been found by timing early and mid-season applications to correspond with moth flight peaks. For Filbert leafrollers, best results have been found by making applications when eggs are hatching, repeating application in first appearance of moths and again 3 to 4 weeks later. For Codling moths in Walnuts, best results have been found by making applications when average cross-sectional diameters of developing nuts are 0.5 to 0.75 inch and again during middle or late June, as needed.	
	Chestnut weevils, European earwigs	4 to 5
SPECIFIC DIRECTIONS: For Chestnut weevils, 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. For European earwigs, thorough coverage of trunks, branches and nuts is needed for best results.		
Almonds Only	Peach twig borers, Scale insects	4 to 5
	SPECIFIC DIRECTIONS: For dormant or delayed dormant timing, apply in combination with recommended dormant oil. Refer to the dormant oil product label for additional use directions and restrictions.	
RESTRICTIONS AND PRECAUTIONS: Do not apply within 14 days of harvest. Do not apply more than a total of 15 qts. per acre per crop, including any applications at the dormant or delayed dormant timing.		

FORESTED AREAS AND RANGELAND TREES

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

Crop/Site	Pest	Qts. of This Product Per Acre
Non-urban forests, Tree plantations, Planted Christmas trees, Parks, Rural shelter belts, Rangeland trees	Ants, Apple aphids, Armyworms, Ash whiteflies, Azalea leafminers, Bagworms, Balsam twig aphids, Birch leafminers, Blister beetles, Boxelder bugs, Boxwood leafminers, Browntail moths, Cankerworms, Catalpa sphinx, Chiggers, Cooley spruce gall adelgids, Cutworms, Cypress tip moths, Douglas-fir tussock moths, Eastern spruce gall adelgids, Elm leaf aphids, Elm leaf beetles, Elm spanworms, Eriophyid mites, European pine shoot moths, Fall armyworms, Flea beetles, Fuchsia gall mites, Fuller rose beetles, Gall midges, Gall wasps, Greenstriped mapeworms, Grasshoppers, Hackberry nipplegall makers, Holly bud moths, Holly leafminers, Jackpine budworms, Japanese beetles, Jeffrey pine needleminers, June beetles, Lace bugs, Leafhoppers, Leafrollers, Locust borers, Maple leafcutters, Mealybugs, Mimosa webworms, Nantucket pine tip moths, Oak leafminers, Oak moths, Oak skeletonizers, Oakworm (complex), Oleander caterpillars, Olive ash borers, Orangestriped oakworms, Periodical cicadas, Pine loopers, Pine sawflies, Pine spittlebugs, Pitch pine tip moths, Plant bugs, Poinsettia hornworms, Psyllids, Puss caterpillars, Redhumped oakworms, Rose aphids, Rose chafers, Rose slugs, Saddled prominents, Sawflies (exposed), Scale insects (crawlers), Sowbugs, Spiny elm caterpillars, Springtails, Spruce budworms, Spruce needleminers, Subtropical pine tip moths, Tent caterpillars, Thornbugs, Thrips (exposed), Ticks, Walnut caterpillars, Webworms, Western hemlock loopers, Western spruce budworms, Willow leaf beetles, Woolly gall aphids, Yellow-poplar weevils	1
	SPECIFIC DIRECTIONS: Observe plant response precautions. Obtain thorough coverage of upper and lower leaf surfaces. The addition of a sticker may improve residual control. To control Scale insects, treat trunks, stems and twigs in addition to plant foliage. For optimum Worm control, treat when pests are small. Do not use on syrup-producing Sugar maples where sap is harvested. Applications for control of Maple leafcutters on Sugar maple should be made when larvae are in 2nd instar after mining and as cases are being formed. Repeat treatments as necessary, up to a total of 2 times per year, but not more often than once every 7 days.	
	Gypsy moths	0.75 to 1
SPECIFIC DIRECTIONS: For Gypsy moth control, use the higher rate for heavy infestations.		
Elm bark beetles, Ips engraver beetles, Mountain pine beetles, Roundheaded pine beetles, Spruce beetles, Western pine beetles	2% solution (5 fl. ozs. per gal.)	
SPECIFIC DIRECTIONS: Direct Trunk Treatment - Effective as a preventative treatment only. Repeat annually as required to prevent Beetle attacks. Apply 1 gal. of spray per 50 sq. ft. 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 beetles, apply approximately 20 to 30 gals. of spray mixture for each 50 ft. 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 6 months.		
RESTRICTIONS AND PRECAUTIONS: Do not make more than 2 applications per year. To prepare small volumes of spray mixture, use 0.33 fl. oz. (approx. 2 tsp.) of this product in an adequate amount of water and apply to 500 sq. ft. where rates of 1 qt. per acre are indicated. DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.		

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Note: All references to Armyworms on the preceding list of plants refer to the species *Pseudaletia unipuncta*, often called the "True armyworm". Except where indicated otherwise, this product is not registered for control of other Armyworm species. Regional differences have been noted in the susceptibility of certain strains of Fall armyworms to carbaryl. If local experience indicates inadequate control, use an alternative pesticide.

TREES AND ORNAMENTALS

Apply in sufficient volume for adequate coverage. This will vary depending on the plant or tree size, density and stage of growth. Do not use on Boston ivy, Virginia creeper and Maidenhair fern. During early season, it may also injure Virginia and Sand pines.

Crop/Site	Pest	Qts. of This Product Per Acre
Trees, Ornamentals: (Roses, Flowers, Other Herbaceous plants), Woody plants, Shrubs in commercial and residential areas and in Nursery production areas	Ants, Apple aphids, Armyworms, Ash whiteflies, Azalea leafminers, Bagworms, Birch leafminers, Blister beetles, Boxelder bugs, Boxwood leafminers, Browntail moths, Cankerworms, Catalpa sphinx, Chiggers, Cooley spruce gall adelgids, Cutworms, Cypress tip moths, Eastern spruce gall adelgids, Elm leaf aphids, Elm leaf beetles, Elm spanworms, Eriophyid mites, European pine shoot moths, Fall armyworms, Flea beetles, Fuchsia gall mites, Fuller rose beetles, Gall midges, Gall wasps, Greenstriped mapleworms, Grasshoppers, Hackberry nipple-gall makers, Holly bud moths, Holly leafminers, Jack pine budworms, Japanese beetles, Jeffrey pine needleminers, June beetles, Lace bugs, Leafhoppers, Leafrollers, Locust borers, Maple leafcutters, Mealybugs, Mimosa webworms, Nantucket pine tip moths, Oak leafminers, Oak moths, Oak skeletonizers, Oakworm (complex), Oleander caterpillars, Olive ash borers, Orange-striped oakworms, Periodical cicadas, Pine loopers, Pine sawflies, Pine spittlebugs, Pitch pine tip moths, Plant bugs, Poinsettia hornworms, Psyllids, Puss caterpillars, Redhumped oakworms, Rose aphids, Rose chafers, Rose slugs, Saddled prominents, Sawflies (exposed), Scale insects (crawlers), Sowbugs, Spiney elm caterpillars, Springtails, Spruce needleminers, Subtropical pine tip moths, Tent caterpillars, Thornbugs, Thrips (exposed), Ticks, Walnut caterpillars, Webworms, Western hemlock loopers, Willow leaf beetles, Woolly gall aphids, Yellow-poplar weevils	1 qt. -OR- 1 fl. oz per 3 gals. of spray -OR- 2 tsps. per gal. of spray
SPECIFIC DIRECTIONS: Observe plant response precautions. Obtain thorough coverage of upper and lower leaf surfaces. The addition of a sticker may improve residual control. To control Scale insects, treat trunks, stems and twigs in addition to plant foliage. For optimum Worm control, treat when pests are small. Do not use on syrup-producing Sugar maples where sap is harvested. Applications for control of Maple leafcutters on Sugar maple should be made when larvae are in 2nd instar after mining and as cases are being formed. Repeat treatments as necessary, up to a total of 6 times per year, but not more often than once every 7 days.		
	Balsam twig aphids, Cooley spruce gall adelgids, Douglas-fir tussock moths, Spruce budworms, Western spruce budworms	1 to 2 qts. -OR- 2 to 4 tsps. per gal. of spray
SPECIFIC DIRECTIONS: Use higher rate when large larvae or heavy populations are present.		
	Gypsy moths	0.75 to 1
SPECIFIC DIRECTIONS: For Gypsy moth control, use the higher rate for heavy infestations.		
	Elm bark beetles, Ips engraver beetles, Mountain pine beetles, Roundheaded pine beetles, Spruce beetles, Western pine beetles	2% solution (5 fl. ozs. per gal.)
SPECIFIC DIRECTIONS: Direct Trunk Treatment - Effective as a preventative treatment only. Repeat annually as required to prevent Beetle attacks. Apply 1 gal. of spray per 50 sq. ft. 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 beetles, apply approximately 20 to 30 gals. of spray mixture for each 50 ft. 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 6 months.		

RESTRICTIONS AND PRECAUTIONS: Do not make more than 6 foliar and 2 direct trunk applications per year. To prepare small volumes of spray mixture, use 0.33 fl. oz. (approx. 2 tsps.) of this product in an adequate amount of water and apply to 500 sq. ft. where rates of 1 qt. per acre are indicated. **DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.**

TURFGRASS

Apply the recommended rates using pressure-type equipment in sufficient spray volume for thorough coverage and thatch penetration.

Site	Pest	Qts. of This Product Per Acre
Golf turf, Sports fields, Sod farms, Domestic and Commercial lawns, Cemeteries, Parks, Campsites, Recreational areas	Ants, Armyworms, Centipedes, Chiggers, Cutworms, Earwigs, Essex skippers, European chafers, Fall armyworms, Fiery skippers, Grasshoppers, Green June beetle larvae, Leafhoppers, Lucerne moths, Milkpedes, Mosquitoes (adults), Scarab beetle adults (May beetles, June beetles, Japanese beetles, Green June beetles), Sowbugs, Spittlebugs, Springtails, Ticks, Yellowstriped armyworms	2 to 4 (1.5 to 3 fl. ozs. per 1,000 sq. ft.)
SPECIFIC DIRECTIONS: For Armyworm, Cutworm and Fall armyworm control: Do not irrigate treated areas within 24 hours following insecticide application. For Green June beetle grub (larvae) control: Make applications when grubs are feeding near the soil surface. Water or irrigate Turfgrass soon after treatment. Repeat applications as necessary, up to a total of 4 times a year, but not more often than once every 7 days.		
	Chinch bugs, Sod webworms (Lawn moths)	6 to 8 (4.4 to 6 fl. ozs. per 1,000 sq. ft.)
SPECIFIC DIRECTIONS: For Chinch bug control: 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 hours following insecticide application. Repeat applications as necessary, up to 2 times per year, but not more often than once every 7 days.		
	Bluegrass billbug larvae, European crane flies, Fleas, White grubs (such as Japanese beetles, Chafer beetles and <i>Phyllophaga spp.</i> larvae), Black turfgrass atanerius beetle larvae, Hyperodes weevils (Bluegrass weevil) larvae	8 (6 fl. ozs. per 1,000 sq. ft.)
SPECIFIC DIRECTIONS: For European Crane Fly Control: Treatments should be applied in early Spring (April 1 to April 15) or as recommended by local Agricultural Extension Service Agents. Water or irrigate Turfgrass soon after treatment. For White grub control: Applications should be made when Grubs are feeding near the soil surface, usually during late March through May or July through early September or as recommended by local Agricultural Extension Service Agents. Water or irrigate Turfgrass soon after treatment. Repeat applications as necessary, up to 2 times per year, but not more often than once every 7 days. For White grub control - Applications should be made when Grubs are feeding near the soil surface, usually during late March through May or July to early September, or as recommended by local Agricultural Extension service agents. Water or irrigate Turfgrasses thoroughly soon after treatment.		

RESTRICTIONS AND PRECAUTIONS: DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.

CONTROL OF SPECIFIC PESTS ACROSS MULTIPLE SITES

Crop	Pest	Qts. of This Product Per Acre
All crops on this label	Grasshoppers	0.5 to 1.5*
SPECIFIC DIRECTIONS: Apply 0.5 to 0.75 qt. per acre of this product for nymphs on small plants or sparse vegetation. Apply 1 to 1.5 qts. per acre for mature Grasshoppers or applications to dense foliage or if extended residual control is desired. Be certain spray volumes are appropriate to assure adequate coverage.		
*Note: Refer to individual site listing elsewhere on this label for use limitations and restrictions. Do not use rates higher than listed for the site or exceed other use restrictions.		

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CONTROL OF TICKS WHICH VECTOR LYME DISEASE

For control of juvenile and adult Ticks which vector Lyme disease, apply the recommended amount in sufficient volume for thorough coverage.

Crop/Site	Pest	Qts. of This Product Per Acre
All crops on this label: Pastures, Forested areas, Wasteland, Right-of-Ways, Hedge-rows, Ditchbanks, Roadsides, Set-aside and Conservation Reserve Program acreage, Trees and Ornamentals, Turfgrass, Lawns and Recreational Turfgrasses (including Lawns and Perimeters, Golf courses, Sports fields, Cemeteries, Parks and Pastures, Shrubs, Wooded areas, (including: Military posts, Logging camps and Campsites)	<i>Ixodes spp.</i> (Deer ticks, Bear ticks, Black legged ticks), <i>Amblyomma spp.</i> (Lone star ticks)	1 to 2* (2 to 4 tps. per gal.)

SPECIFIC DIRECTIONS: Use higher spray volumes for dense ground cover or heavy leaf litter. Target applications for nymphal control in late Spring or early Summer. Control of adult Ticks can be obtained with late Summer and Fall applications. Do not use spot treatments. Treat entire area and perimeter areas where exposure to Ticks may occur. Ticks may be reintroduced from surrounding areas on host animals. Re-treat as necessary to maintain adequate control levels.**

RESTRICTIONS AND PRECAUTIONS FOR CONTROL OF TICKS WHICH VECTOR LYME DISEASE

*Use the higher rate for heavy Tick infestations.
**Note: refer to individual site listings elsewhere on this label for use limitations and restrictions. Do not use rates higher than listed for the site or exceed other use restrictions.
DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATION OR UNTIL SPRAYS HAVE DRIED.

IMPORTED FIRE ANTS

Crop/Site	Pest	Qts. of This Product Per Volume of Water
Pastures, Rangelands, Forested areas, Trees and Ornamentals, Turfgrass, Wasteland, Lawns, Cemeteries, Recreational areas (including Turf, Golf courses and Parks)	Imported fire ants	0.75 fl. oz. per gal.
	SPECIFIC DIRECTIONS: Apply a total of 2 gals. of the diluted solution over the surface of each mound or at least 1 qt. 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 3 ft. to give sufficient force to break mound apex and flow into Ant tunnels. For best results, apply in cool weather (65 to 80°F) or in early morning or late evening hours. Repeat application if mound activity resumes after 7 days. Treat new mounds as they appear. Pressurized sprays may disturb the Ants and cause migration, reducing product effectiveness.	
Nursery stock, Vegetable transplants*, Foliage plants, Bedding plants (Outdoor use only)	Imported fire ants	1.5 qts. per 100 gals.
	SPECIFIC DIRECTIONS: Avoid contact with foliage and treat only the growing media when using on bedding plants. Do not make more than one application, either as a root dip or drench treatment (applied to the point of saturation).	

RESTRICTIONS AND PRECAUTIONS: DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL DRENCH HAS DRIED. DO NOT USE IN GREENHOUSES.
To prepare small amounts, use 0.75 fl. oz. (approx. 1.5 tbsps.) of this product per each gal. of mix where 1.5 qts. per 100 gals. are indicated.
*Note: DO NOT USE ON ANY FOOD CROP NOT LISTED ON THIS LABEL. Refer to specific crop section for additional restrictions and precautions.

ADULT MOSQUITO CONTROL

Apply in sufficient gallonage for thorough coverage.

Crop/Site	Pest	Qts. of This Product Per Acre
Pastures, Rangeland, Forested lands, Trees and Ornamentals, Turfgrass, Wastelands	Mosquitoes (adults)	0.25 to 1*

SPECIFIC DIRECTIONS: Observe Bee Caution. Treat shrubbery and areas where adult Mosquitoes congregate. Treat when adult Mosquitoes are active in early mornings or late evenings. Repeat applications as necessary*. Use 0.25 to 0.5 qt. per 100 gals. in mistblowers, 0.5 to 1 qt. per acre in low pressure ground sprayers.
For Residual Control in Subtropical Regions - Apply 4 gals. of prepared spray per 2,000 sq. ft. of surface area. Repeat in 3 to 6 months or when necessary.
*Note: Refer to individual site listings elsewhere on this label for use limitations and restrictions. Do not use rates higher than listed for the site or exceed other use restrictions.

RESTRICTIONS AND PRECAUTIONS: DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATION OR UNTIL SPRAYS HAVE DRIED. May kill shrimp and crabs. Do not use in areas where these are important resources. To prepare small volumes of spray mixture, use 0.33 fl. oz. (approx. 2 tps.) of this product in an adequate amount of water and apply to 500 sq. ft. where rates of 1 qt. per acre are indicated.

PEST CONTROL IN AND AROUND BUILDINGS

GENERAL INFORMATION

Note: Staining may occur on certain surfaces such as stucco, brick, cinder block and wood. Therefore, applications of this product to surfaces where a noticeable residue or discoloration is objectionable should be avoided. Do not apply to carpets or draperies as staining may occur. Care should also be exercised to avoid spotting of wallpaper and fabrics. Do not use this product in commercial food areas of food handling establishments, restaurants or other places where food is prepared or processed. Do not use in serving areas while food is exposed.

INDOORS

Pest	Rate
Crickets, Firebrats, Silverfish	3.5 fl. ozs. per gal. of water
SPECIFIC DIRECTIONS: Apply as fine, low pressure (20 psi) spot spray or as crack and crevice application to areas where these pests hide, such as baseboards, storage areas, closets, around water pipes, doors and windows, behind and under refrigerators, cabinets, sinks, stoves, dishwashers, hot water heaters, the underside of shelves, drawers and similar areas.	
Bees and Wasps	3.5 fl. ozs. per gal. of water
SPECIFIC DIRECTIONS: Thoroughly spray nest and entrance and surrounding areas where insects alight. It is generally advisable to spray the nests in the evening when the insects are less active and have returned to the nest. For best results, check nest carefully one or two days after spraying to ensure complete kill, then remove and destroy nest to prevent emergence of newly-hatched insects.	
Brown dog ticks, Fleas	3.5 fl. ozs. per gal. of water
SPECIFIC DIRECTIONS: Thoroughly spray infested areas such as nearby cracks and crevices, along and behind baseboards, window and door frames and other areas where these pests may be present.	
Carpenter ants	7 fl. ozs. per gal. of water
SPECIFIC DIRECTIONS: Apply to Ant trails, around doors and windows and other places where Ants enter premises. Where possible, apply this product directly to Ant nest or infested wood.	
Centipedes, Earwigs, Millipedes, Scorpions	3.5 fl. ozs. per gal. of water
SPECIFIC DIRECTIONS: Apply around water pipes, doors and windows and other places where these pests enter premises. Spray baseboards, garages, carports, basements and other areas where these pests are found.	
Cockroaches	7 fl. ozs. per gal. of water
SPECIFIC DIRECTIONS: Apply as a fine, low pressure (20 psi) spot spray or as a crack and crevice application to areas where these pests hide, such as baseboards, storage areas, closets, around water pipes, doors and windows, behind and under refrigerators, cabinets, sinks, stoves, dishwashers, hot water heaters, the underside of shelves, drawers and similar areas. Note: Efficacy varies with species sensitivity. This product is generally not highly effective in controlling German cockroaches. However, the following may be controlled with the rates as stated: American cockroach, Australian cockroach, Brown cockroach, Smoky brown cockroach and others.	
Spiders	3.5 fl. ozs. per gal. of water
SPECIFIC DIRECTIONS: Apply to infested baseboards, window and door frames, comers, pipes, storage areas, attics and under eaves. Make spot applications to other areas where these pests are present.	

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OUTDOORS

PERIMETER TREATMENT—Residual spray for control of Ants, Bees and Wasps, Brown dog ticks, Carpenter ants, Centipedes, Cockroaches, Crickets, Darkling beetles (Lesser mealworms or Litter beetles), Earwigs, Firebrats, Silverfish, Fleas, Millipedes, Scorpions and Spiders. Mix 1% solution or 2.5 fluid ounces of this product per gallon of water and apply via power spray or other spray methods.

To help prevent infestations of buildings by the above pests, apply outside perimeter as a course wet spray in a band 6 to 10 feet wide and confined to shrub beds, foundation plantings and lawn or soil areas immediately adjacent to the structure. Direct applications to the structures should be minimal and restricted to cracks and crevices and other areas where insects tend to congregate.

May be applied to outdoor sleeping quarters of pets. Do not treat animals. Do not allow animals to use treated area until sprays have dried.

RESTRICTIONS AND PRECAUTIONS:

- DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.
- NOTE: Staining may occur on certain surfaces such as brick, carpet, cinder block, fabrics, stucco, and wood. Spray deposits on painted or stained surfaces of finishes (e.g., boats, cars, house trailers, 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.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal. Open dumping is prohibited.

PESTICIDE STORAGE: Store unused product in original container only, in cool, dry areas 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 (PPE).

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, by incineration, or, if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

WARRANTY—CONDITIONS OF SALE

OUR RECOMMENDATIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith.

In no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

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HISTORY PAGE (Carbaryl 4L - 49SP):

9-28-99 — Made standard format changes throughout. Deleted "COTTON USE". Deleted "Tank Mix with Oil" in the "OLIVES" section. Changed print code to • 49SP-0999 to reflect changes to label. Submitted to EPA 9-7-99 as 49SP-0999 — PENDING. (JLK)

9-23-99 — EPA Stamped ACCEPTED 49SP-0999 — PENDING. (Cut & paste copy by Les — Request 2 "Finals".

10-4-99 — Make correction to EPA Est. # — Should be GA. Submit at FINAL 49SP-1099.

11-29-99 — Revised to match RP labels #264 and #349. Added back Okra and Prickly pear. Corrected % Active ingredient. Changed print code to • 49SP-1299 to reflect changes. (JLK)

6-8-00 — EPA ACCEPTED (• 49SP-0400—PENDING) with 3 corrections. 1) OKRA added 3-day PHI. 2) PRICKLY PEAR CACTUS - PHI should be 3 days, not 1. 3) Cockroaches—Specify species of Brown and add "cock" to word with roach in text. Make other minor changes per review of NEW Aventis (RP) label. Delete • 49SP-0500—It was the current label. Set up a duplicate of this new revision as • 49CSP-0600 and delete "Poultry" as noted. (JLK)

10-11-00 — Changed to match Aventis label. Minor changes by Amendment. Changes are as follows: 1) OKRA: Changed rate to 1 to 1½ qts./A and treat 6- to 8- days. 2) PRICKLY PEAR CACTUS: Matched Aventis directions and restrictions. 3) GRAPES: Added not on visible residue. 4) Updated FIRST AID section per PR Notice. Changed the print code to • 49SP-1000 — PENDING #2 to reflect changes made. Set up "END-USE" label as well with these same changes. (JLK)

1-10-01 — Added to label the Environmental Hazards and the Bee Caution and corrected the pH on page to (was 6.0; should be 8.0) on EPA label and End-Use label. Changed the print codes to • 49SP-1010 — PENDING #2 and • 49SP-1010(C) — PENDING #2 to reflect changes made. (JLK)

6-1-01 — EPA's letter of 2-21-01 ACCEPTS • 49SP-0101—PENDING #2. Updated to "NEW" current FIRST AID, added "Effluent statement" and changed the print codes to • 49SP-0601++ and • 49CSP-0601++ to reflect changes made. Also deleted old current file. Luz to submit FINALS. (JLK)

04-01-02 — 1) On page 9 at Trees and Ornamentals at Specific Directions for ants etc. changed total # of treatments from '2 to 6'. At Restrictions and Precautions, added "6 foliar and 2 direct trunk". 2) At 'Turfgrass' deleted white grubs box recommendation. 3) On page 11 at 'Outdoors' change 6½ to 2.5 fluid ounces, added 1% solution or after "Mix", revised statement to "apply outside perimeter as a course wet spray" and added usage to outside sleeping quarters and pets and added Restrictions and Precautions Statements. Changed fractions to decimals throughout text. cev.

04-15-02 — Corrected printer problem. On page 1 added space between the page # and the text. On page 4-6 took out space between the charts. On page 8 removed mark below "Forested Areas..." cev.

POULTRY INSECT CONTROL

Site	Pest	Qts. of This Product Per 100 Gals. of Water
Direct spray on Chickens, Ducks, Geese, Game Birds, Pigeons, Turkeys	Chicken mites, Fleas, Lice, Northern fowl mites	—
Poultry quarters	Bedbugs, Chicken mites, Fleas, Lice, Northern fowl mites	4 (2½ tbsps. per gal.)
	Fowl ticks	16 (10 tbsps. per gal.)

SPECIFIC DIRECTIONS: For use as a direct spray on birds by: (1) **Misting with Electric Fog Machine** - Mix ½ qt. (9½ fl. ozs.) of this product in 1 gal. of spray. Use 1½ gals. per 1,000 Hens in cages, on litter or on slatted floors. Repeat in 4 weeks if necessary. (2) **Spraying with knapsack or cylinder type compressed air sprayers** - Mix ½ qt. (5.4 fl. ozs.) of this product in 5 gals. of spray. Use 1 gal. per 100 Hens in cage, on litter or on slatted floors. Repeat in 4 weeks if necessary. For Northern fowl mite control, ensure pressured spray penetrates feathers of vent area on birds. Direct spray misting for Chicken mites and Fleas is a supplement to spraying rooms and buildings for control of these pests.

SPECIFIC DIRECTIONS: Apply 1 to 2 gals. of spray mixture with conventional power spray or knapsack equipment per 1,000 sq. ft. of wall, floor or roost surface. Force spray into cracks. Repeat as needed. Avoid spraying nests, eggs and water troughs.

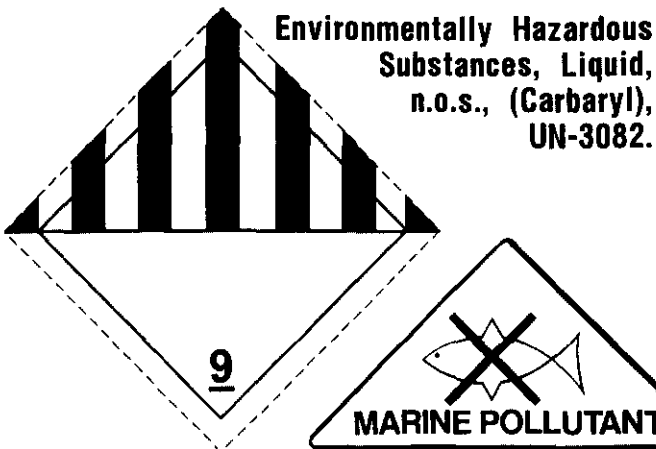
SPECIFIC DIRECTIONS: Ventilate while spraying.

POULTRY INSECT CONTROL (Darkling beetles, Lesser mealworms or Litter beetles)

Site	Pest	Lbs. of This Product
Poultry quarters	Darkling beetles (Lesser mealworms or Litter beetles)	.625 to 1.25 lbs. per 1,000 sq. ft.

SPECIFIC DIRECTIONS: Apply as a dilute spray to floor surface, walls, cracks, posts and crevices with sufficient volume of finished spray to wet all surfaces thoroughly. Optimum application timing is immediately after removing old flock from, or before placing new flock into the house when Beetles are most active. Ventilate during application. Avoid contamination of feeding and watering units.

RESTRICTIONS AND PRECAUTIONS: Do not treat Birds or premises within 7 days of slaughter.



Note: **Marine Pollutant** label is not required unless it is going Internationally, but it is okay to put it on in the event one of our customrs ships by water per Mike Shankle 6/8/01. Also: 25 gallons and up will need DOT info.