DOC ID 551920

GROUP 1A INSECTICIDE

June 22, 2017

New York State Department of Environmental Conservation Division of Materials Management Pesticide Product Registration



Carbaryl 4L

Insecticide

Intended For Agricultural or Commercial Use.

ACTIVE INGREDIENT:

Carbaryl	42.6%
OTHER INGREDIENTS:	57.4%
TOTAL:	100.0%
This product contains 4 pounds of Carbaryl per gallor	1.

KEEP OUT OF REACH OF CHILDREN CAUTION

SHAKE WELL BEFORE USING

ATTENTION: This product contains a chemical known to the State of California to cause cancer and reproductive harm in laboratory animals.



EPA Reg. No. 19713-49 EPA Est. No. 19713-GA-2 Net Content: 2.5 Gals. (9.46 L) 49PS2-0417(0417*)•G2

FIRST AID

IF SWALLOWED:

- Immediately call a poison control center or doctor 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 ON SKIN OR CLOTHING:

- · Take off contaminated clothing
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

IF INHALED:

- · 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:

- 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.
- 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. You may also call CHEMTREC at 800-424-9300 for medical emergency.

Note to Physician: Carbaryl is an N-methyl carbamate that inhibits cholinesterase. Drugs like 2-PAM (pyridine-2-aldoxime methiodide) are NOT recommended.

Manufactured By:

Drexel Chemical Company

P.O. Box 13327, Memphis, TN 38113-0327

SINCE 1972

The DREXEL logo is a registered trademark of Drexel Chemical Company.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed, absorbed through 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 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)

Some materials that are chemical-resistant to this product are made of any waterproof

Handlers applying with open cab airblast equipment at application rates equal to or greater than 5 quarts of this product (5 lbs. a.i.) must wear: Coveralls over long-sleeved shirt and long pants, chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ mils, polyethlene, polyvinyl chloride ≥ 14 mils or viton ≥ 14 mils, chemical-resistant footwear plus socks, chemical-resistant headgear and a NIOSH approved particulate respirator with any N, R or P filter, NIOSH approval number prefix TC-84A or a NIOSH approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C.

All other mixers, loaders, applicators and handlers must wear: Long-sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves and a 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 a NIOSH approved particulate respirator with any N, R or P filter, NIOSH approval number prefix TC-84A; or a NIOSH approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C.

See "ENGINEERING CONTROLS" for additional requirements and exceptions.

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

ENGINEERING CONTROLS

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 and for wide area mosquito adulticide applications must use an enclosed cab that meets the definition in the WPS for Agricultural Pesticides [40 CFR 170.240(d)(5)] for dermal protection. In addition, such applicators must:

- · wear long-sleeved shirt, long pants, shoes and socks;
- either wear a NIOSH approved particulate respirator with any N, R or P filter, NIOSH approval number prefix TC-84A; or a NIOSH approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C 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, chemicalresistant 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 re-entering 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 the use of Global Positioning System (GPS) or mechanical flaggers. (Continued)

ENGINEERING CONTROLS (Cont.)

Flaggers supporting ultra low volume aerial applications for Rangeland Grasshopper and Mormon Cricket Suppression through APHIS program or affiliated State programs must use an enclosed cab that meets the definition in the WPS for Agricultural Pesticides [40 CFR 170.240(d)(5)] for dermal protection.

In addition, flaggers must:

- · wear long-sleeved shirt, long pants, shoes and socks;
- either wear a NIOSH-approved dust / mist filtering respirator with a NIOSH approved particulate respirator with any N, R or P filter, NIOSH approval number prefix TC-84A; or a NIOSH approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C or use an enclosed cab that is declared in writing by the manufacturer or by 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 re-entering the cab; and
- store all such PPE in a chemical-resistant container, such as plastic bag, to prevent contamination of the inside of the cab.

When applicators use enclosed cabs in a manner that meets the requirements listed in the 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: 1) Wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) 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 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 applications 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 Corn and Soybeans):

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

For Corn and 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.

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 posticide reoulation.

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), Restricted Entry Interval (REI), and notification to workers. 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. 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 WPS and tat involves contact with anything that has been treated, such as plants, soil or water is: Coveralls over short-sleeved shirt and short pants, chemical-resistant gloves made of any waterproof material, chemical-resistant footwear plus socks and chemical-resistant headgear if overhead exposure.

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

USE INFORMATION

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.

RESISTANCE MANAGEMENT

GROUP 1A INSECTICIDE

Carbaryl 4L contains a Group 1A insecticide. Insect biotypes with acquired resistance to Group 1A may eventually dominate the insect population if Group 1A insecticides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by this product or other Group 1A insecticides.

To delay insecticide resistance, consider:

- Avoiding the consecutive use of this product or other Group 1A insecticides that have similar target site of action on the same insect species.
- Using tank-mixtures or pre-mixes with insecticides from a different target site action Group as long as the involved products are all registered for the same use and have different sites of action.
- · Basing insecticide use on a comprehensive IPM program.
- · Monitoring treated insect populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors, and / or manufacturer for insecticide resistance management and / or IPM recommendations for specific site and resistant pest problems.

PLANT RESPONSE PRECAUTIONS

Application to wet foliage or during period 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

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 crop for which Carbaryl tolerances are not established.

APPLICATION INFORMATION

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. For outdoor use only.

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 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 one-half to three-fourths 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 INFORMATION".

COMPATIBILITY INFORMATION

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 product performance 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 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 to tree and orchard crops or at least 2 gallons of spray mixture per acre for application to other crops. EXCEPTION: For use on Rangeland as a pest management approach for grasshoppers under the Reduced Area and Agent Treatment (RAATs) program only, use at least 16 fluid 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 this product in a mix tank. Fill tank with one-half to three-fourths 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.

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 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.

Systems Connected to Public Water Systems:

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, Reduced-Pressure Zone, back flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.

The pesticide injection pipeline must contain a functional, normally closed, solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, 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 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 above 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), Cucurbit vegetables, Flax, Forage crops (Alfalfa, Birdsfoot trefoil, Clovers, Pasture and Grasses grown for hay and / or seed, Rangeland), Fruiting vegetables (Eggplant, Peppers, Tomato), Leafy vegetables (Dandelion, Endive, Lettuce, Parsley, Spinach, Leaf Petiole Subgroup 4B), Legume vegetables (Edible-Podded Legume Vegetables; Dried Shelled Pea and Bean (except Soybean); Soybean; Foliage of Legume vegetables), Non-cropland (Conservation Reserve Program, Ditchbanks, Hedgerows, Rights-of-Way, Roadsides, Set-Aside Program Acreage, Wasteland), Okra, Peanuts, Prickly pear cactus, Root and Tuber crops, Sugar beets, Sweet potatoes, Small Fruits and Berries (Bushberries, Caneberries, Cranberries, Grapes, Strawberries), Sunflowers, Tobacco, Tree fruit crops (Citrus fruits, Olives, Pome fruits, Stone fruits), Tree nut crops (Pistachics, Tree nuts), Forested areas and Rangeland trees, Ornamental trees and plants, Turfgrass, Specific pests across multiple sites (Grasshoppers, Imported fire ants, Ticks which may vector Lyme disease and 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 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 product performance.

REI = Restricted Entry Interval.

ASPARAGUS

Crop	Pest	This Product Per Acre (Qts.)
Asparagus	Apache cicadas, Asparagus beetles, Cutworms	1
	SPECIFIC DIRECTIONS: Apply prior to harvest. 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. Do not apply within 1 day of harvest. For Cutworm, this product is most effective against species which feed on the upper portions of the plant.	
	Apache cicadas, Asparagus beetles, Cutworms	2
	SPECIFIC DIRECTIONS: Applications after har or brush growth following harvest of spears. Re necessary at minimum 7 day intervals. Do not ma of 5 applications per year to spears and ferns com	peat applications as ike more than a total

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

BRASSICA (Leafy Vegetables)

Repeat applications as needed up to a total of 4 times per year at minimum 7 day intervals.

Crop	Pest	This Product Per Acre (Qts.)
All members of the Brassica leafy vegetable Group 5 including: Broccoli,	Flea beetles, Harlequin bugs, Leafhoppers	0.5 to 1
Broccoli raab (Rapini), Brussels sprouts, Cauliflower, Cabbage, Cavalo broccolo, Chinese broccoli (Gai Ion), Chinese cabbage (Bok choy), Chinese cabbage (Napa), Chinese mustard cabbage (Gai choy), Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens, Turnip greens	Armyworms, Aster leafhoppers, Corn earworms, Diamondback moth, Fall armyworms, Imported cabbageworms, Lygus bugs, Spittlebugs, Stink bugs, Tarnished plant bugs	1 to 2
		(Continued)

BRASSICA (Leafy Vegetables) (Cont.)

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

For Head and Stem Brassica Subgroup 5A including Broccoli, Chinese broccoli (Gai Ion), 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 including Broccoli raab (Rapini), Chinese cabbage (Bok choy), Collards, Kale, Mizuna, Mustard greens, Mustard spinach, Rape greens, Turnip greens, do not apply within 14 days of harvest. Application is only permitted within 30 days from date of crop emergence or the date of transplanting. Do not apply more than a total of 6 dts. per acre per crop per year.

CEREAL GRAIN CROPS Corn (Field, Pop) (REI = 24 hours)

Repeat applications as needed up to a total of 4 times per year at minimum 14 day intervals. Good timing and good coverage are essential for effective product performance.

Crop	Pest	This Product Per Acre (Qts.)
Field corn, 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 best results on Chinc equipment to apply at least 20 gals. of water per act toward stalk to provide thorough coverage.	
	European corn borers	1.5 to 2
	SPECIFIC DIRECTIONS: For best results on European corn borer, 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 best results on Cutworn band over the row using sufficient volume of water coverage. For broadcast application, use at least 20. gals. by air per acre. For Cutworm, this product is m species which feed on the upper portions of the plant cutworms, treat when infestation averages 15% a tassel emergence. Treatment after 100% silk emergeficctiveness.	to obtain thorough gals. by ground or 5 ost effective against t. For Western bean and at 90 to 100% ergence will reduce

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

Do not apply more than a total of 8 qts. per acre per crop per year. Do not apply within 48 days of harvest of grain and fodder or within 14 days of harvest or grazing forage or silage. **Prohibition:** Do not enter or allow workers to enter treated areas to perform hand detasselling tasks 21 days after application. Hand harvesting is prohibited.

Corn (Sweet) (REI = 24 hours)

Repeat applications as necessary up to a total of 8 times per year at minimum 3 day intervals. 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.

Crop	Pest	This Product Per Acre (Qts.)
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 best results on Chinc equipment to apply at least 20 gals. of water per ac toward stalk to provide thorough coverage.	
	European corn borers	1.5 to 2
	SPECIFIC DIRECTIONS: For best results on Europeal apply in less than 3 gals. of water per acre by air an by ground.	
	Cutworms, Western bean cutworms	2
	SPECIFIC DIRECTIONS: For best results on Cutworm, 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, 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: BEE CAUTION: If application cannot be avoided when target crops or weeds are in bloom, limiting applications to times when bees are least active, e.g., within 2 hours of sunrise or sunset, will minimize risk to bees. Notifying beekeepers within 1 mile of treatment area at least 48 hours before product is applied will allow them to take additional steps to protect their bees.

Do not apply 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 per year.

Prohibition: Do not enter or allow workers to enter treated areas to perform hand detasselling tasks until 21 days after application. Hand harvesting is prohibited.

Grain Sorghum

Repeat applications as necessary up to a total of 4 times per year at minimum 7 day intervals. Direct spray into forming heads for best results on insects attacking heads.

	3 3	
Crop	Pest	This Product Per Acre (Qts.)
Grain sorghum	Armyworms, Chinch bugs, Corn earworms, Fall armyworms, Stink bugs, Webworms	1 to 2
	SPECIFIC DIRECTIONS: For best results on Chinch bug, use hig gallonage ground application at the base of the plants.	
	Southwestern corn borers	1.5
	Cutworms	2
SPECIFIC DIRECTIONS: For Cutworm, this against species which feed on the upper portion		

RESTRICTIONS: BEE CAUTION: Do not apply this product to target crops or weeds in bloom. 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 per year.

Rice

Up to 2 applications can be made per year per crop at minimum 7 day intervals.

Crop	Pest	This Product Per Acre (Qts.)
Rice	Armyworms, Chinch bugs, Fall armyworms, Leafhoppers, Stink bugs	1 to 1.5
	SPECIFIC DIRECTIONS: Up to 2 applications per crop per year may be made, but not more often than once every 7 days.	
	Tadpole shrimp (CA Only)	1.5
	SPECIFIC DIRECTIONS: For best results on Tadpo water when pest first appears.	ole shrimp, apply to
		(Continued)

Rice (Cont.)

RESTRICTIONS: BEE CAUTION: Do not apply this product to target crops or weeds in bloom. Do not apply within 14 days of harvest for grain or straw. Do not apply more than a total of 3 qts. 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 may result.

CUCURBIT VEGETABLES

Repeat applications as necessary up to a total of 6 times per year at minimum 7 day intervals.

Стор	Pest	This Product Per Acre (Qts.)
All members of the Cucurbit Vegetables Crop Group 9 including: Momordica spp. (includes	Melonworms, Pickleworms	0.5 to 1
Balsam apple, Balsam pear, Bitter melon, Chinese cucumber), Chayote, Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Edible gourd (includes Hyotan, Cucuzza, Hechima, Chinese okra), Muskmelon (includes hybrid and / or cultivars of Cucumis melo including Cantaloupe, true Cantaloupe, Casaba, Crenshaw melon, Golden pershaw melon, Honeydew melon, Honey balls, Mango melon, Persian melon, Pineapple melon, Santa Claus melon, Snake melon), Pineapple melon, Santa Claus melon, Snake melon), Pineapple such as: Crookneck squash, Scallon seriase. Strainthrack squash, Scallon seriase. Strainthrack squash, Scallon seriase.	Cucumber beetles, Flea beetles, Leafhoppers, Squash bugs	1
	SPECIFIC DIRECTIONS: For best results on Squash bugs, apply sufficient spray volume for thorough coverage and time sprays for early morning or late afternoon.	
DESTRUCTIONS D		

RESTRICTIONS: Do not apply within 3 days of harvest. Do not apply more than a total of 6 qts. per crop per acre per year. Observe "PLANT RESPONSE PRECAUTIONS". BEE CAUTION: Do not apply this product to target crops or weeds in bloom.

FLAX

Up to 2 applications can be made per crop per year at minimum 14 day intervals.

Crop	Pest	This Product Per Acre (Qts.)
Flax (Except CA)	Armyworms	1 to 1.5

RESTRICTIONS: 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 qts. per acre per crop per year. BEE CAUTION: Do not apply this product to target crops or weeds in bloom.

FORAGE CROPS Alfalfa, Birdsfoot Trefoil, Clovers

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

Crop	Pest	This Product Per Acre (Qts.)
Alfalfa,	Blister beetles, Mexican bean beetles	0.5 to 1
Birdsfoot trefoil, Clover	Alfalfa caterpillars, Bean leaf beetles, Cucumber beetles, Green cloverworms, Japanese beetles, Leafhoppers, Potato leafhoppers, Three-cornered 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, this product is m species which feed on the upper portions of the plant.	ost effective against
		(Continued)

Alfalfa, Birdsfoot Trefoil, Clovers (Cont.)

	Crop	Pest	This Product Per Acre (Qts.)
	Alfalfa, Birdsfoot	Alfalfa weevil larvae (West of the Rocky Mountains)	1 to 1.5
	trefoil, Clover	SPECIFIC DIRECTIONS: For Alfalfa weevil larvae, if pre is extensive, cut Alfalfa and treat the stubble. This produgainst adult Alfalfa weevils.	
		Alfalfa weevil larvae (East of the Rocky Mountains)	1.5
		SPECIFIC DIRECTIONS: For Alfalfa weevil larvae, if pre is extensive, cut Alfalfa and treat the stubble. This producing against adult Alfalfa weevils.	

RESTRICTIONS: BEE CAUTION: Do not apply this product to target crops or weeds in bloom. Observe "PLANT RESPONSE PRECAUTIONS". Do not apply more than once per cutting per year. Do not apply within 7 days of harvest or grazing. Do not exceed 1.5 qts. per acre per cutting. Carbaryl may cause temporary bleaching of tender Alfalfa foliage.

Pastures and Grasses Grown for Hay and/or Seed

Up to 2 applications per year can be made at minimum 14 day intervals. Accurately mark swaths to avoid overapplication.

Crop	Pest	This Product Per Acre (Qts.)
Pasture and Grasses grown for	Armyworms, Cereal rust mite (Timothy mite), Chinch bugs, Essex skippers, Fall armyworms, Striped grass loopers, Thrips, Range caterpillars, Range crane flies	1 to 1.5
hay and / or seed	SPECIFIC DIRECTIONS: To kill Thrips in grasses grown for hay and / or seed, use high spray pressure to improve penetration into the boot.	
	Ticks	1
	SPECIFIC DIRECTIONS: Will kill only Ticks present at the	e time of application

RESTRICTIONS: BEE CAUTION: Do not apply this product to target crops or weeds in bloom. 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. Accurately mark swaths to avoid overapplication.

Pest	This Product Per Acre (Qts.)	
Black grass bugs, Range caterpillars, Range crane flies 0.5 to 1		
Grasshoppers, Mormon crickets 0.5		
SPECIFIC DIRECTIONS: Aerial application is allowed on through USDA APHIS and affiliated State grasshopper as Mormon cricket suppression programs. Reduced Area and Agricatment (RAATs) is required. See the following website for deta www.sidney.ars.usda.gov/grasshopper/Research/lockwood.htm		
Ticks	1	
SPECIFIC DIRECTIONS: Will only kill Ticks prese application and directly contacted by product.	ent at the time of	
	Black grass bugs, Range caterpillars, Range crane flies Grasshoppers, Mormon crickets SPECIFIC DIRECTIONS: Aerial application it through USDA APHIS and affiliated State Mormon cricket suppression programs. Reduced Treatment (RAATs) is required. See the following www.sidney.ars.usda.gov/grasshopper/Research/lockw.Ticks SPECIFIC DIRECTIONS: Will only kill Ticks prese	

RESTRICTIONS: BEE CAUTION: Do not apply to target crops or weeds in bloom. May be harvested or grazed the same day of treatment. Do not apply more than 1 qt. per acre per crop per year.

FRUITING VEGETABLES

Repeat applications as necessary up to a total of 7 times per year at minimum 7 day intervals. When disease transmission is suspected, monitor fields following application and retreat if reinfestation occurs, but not more often than once every 7 days.

Crop	Pest	This Product Per Acre (Qts.)
All members of the Fruiting Vegetables Crop Group 8 including: Eggplant,	Colorado potato beetles, European com borers, Fall armyworms, Lace bugs, Stink bugs (suppression), Tarnished plant bugs, Thrips (suppression), Tomato fruitworms, Tomato hornworms, Tomato pinworms	1 to 2
Groundcherry, Pepinos, Pepper (includes: Bell pepper,	SPECIFIC DIRECTIONS: Thorough coverage is effectively suppress Stink bugs.	s essential to
Chili pepper, Cooking	Flea beetles, Leafhoppers	0.5 to 1
pepper, Pimento,	Cutworms	2
Sweet pepper), Tomatillo, Tomato	SPECIFIC DIRECTIONS: For Cutworm, this product is most effective against species which feed on the upper portions of the plant.	

RESTRICTIONS: BEE CAUTION: Do not apply to target crops or weeds in bloom. Do not apply within 3 days of harvest. Do not apply more than a total of 8 qts. per acre per crop per year.

LEAFY VEGETABLES

Repeat applications as necessary up to a total of 5 times per year at minimum 7 day intervals.

Crop	Pest	This Product Per Acre (Qts.)
Dandelion, Endive (Escarole), Lettuce (Head and Leaf), Parsley, Spinach and	Flea beetles, Harlequin bugs, Leafhoppers	0.5 to 1
All members of the Leaf Petioles Vegetables Subgroup 4B including: Cardoon, Celery, Celtuce, Chinese celery, Florence fennel (including Sweet anise, Sweet fennel, Finocchio), Rhubarb, Swiss chard	Armyworms, Aster leafhoppers, Corn earworms, Fall armyworms, Imported cabbageworms, Lygus bugs, Spittlebugs, Stink bugs, Tarnished plant bugs	1 to 2

RESTRICTIONS: BEE CAUTION: Do not apply to target crops or weeds in bloom. Do not apply within 14 days of harvest. Do not apply more than a total of 6 qts. per acre per crop per year.

LEGUME VEGETABLES

Repeat applications as necessary up to a total of 4 times per year at minimum 7 day intervals. Use lower rates for light to moderate populations and smaller instars. Use the higher rates for heavy populations and larger instars.

Use on fresh / succulent shelled Beans and Peas (Crop Subgroup 6B) is prohibited.

n leaf beetles, Blister les, Cucumber beetles, be colapsis, Green erworms, Japanese les, Mexican bean les, Velvetbean	0.5 to 1.0
rpillars	
earworms	0.5 to 1.5
	1
f	fhoppers, Threecornered Ifa hoppers, Thrips, stern bean cutworms

LEGUME VEGETABLES (Cont.)

	Crop	Pest	This Product Per Acre (Qts.)
Legume Vegetab Crop Subgroup 6 spp. including G	he Dried Shelled les (except Soybeans) 6C including: Lupinus irain lupin, Sweet lupin,	Armyworms, Cutworms, European corn borers, Fall armyworms, Stink bugs, Tarnished plant bugs, Webworms	1 to 1.5
Phaseolus spp. ii Kidney bean, dry	White sweet lupin; ncluding Field bean, Lima bean, Navy I, Tepary bean; Vigna	SPECIFIC DIRECTIONS: For product is most effective again feed on the upper portions of the	nst species which
spp. including Ad pea, Catjang, Co Moth bean, Mung Southern pea, Ul including Dwarf pea, English pea pea, Green pea, pea; Broad bean	Izuki bean, Blackeyed wpea, Crowder pea, g bean, Rice bean, rd bean, Pisum spp. bea, Edible-podded , Field pea, Garden Snow pea, Sugar snap (Dry); Chickpea (Dry);	Alfalfa loopers (suppression), Cowpea curculios (suppression), Painted ladies (Thistle caterpillars), Pea leaf weevils, Pea weevils, Saltmarsh caterpillars, Woollybear caterpillars, Yellowstriped armyworms	1.5
(Dry); Pigeon per (DO NOT USE O All members of Legume Vegetal Plant parts of any included in the Li	the Foliage of bles Crop Group 7: y Legume vegetables egume vegetable (Crop I be used as animal	CA ONLY: Corn earworms (suppression), Lima bean podborers (suppression), Lygus bugs (suppression), Stink bugs (suppression)	1.5

RESTRICTIONS: 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 qts. 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. Observe "PLANT RESPONSE PRECAUTIONS". 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 crops 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 48 hours before product is applied will allow them to take additional steps to protect their bees.

NON-CROPLAND

Up to 2 applications can be made per year at minimum 14 day intervals. Accurately mark swaths to avoid overapplication.

Site	Pest	This Product Per Acre (Qts.)
Conservation Reserve Program Acreage, Set- Aside Program Acreage,	Black grass bugs	0.25 to 0.5 (0.2 to 0.4 fl. oz. per 1,000 sq. ft.)
Wasteland, Rights-of-Way, Hedgerows, Ditchbanks, Roadsides	Range caterpillars, Range crane flies	0.5 to 1.0 (0.4 to 0.75 fl. oz. per 1,000 sq. ft.)
	Mormon crickets	0.5 (0.4 fl. oz. per 1,000 sq. ft.)
	Ticks	1 (0.75 fl. oz. per 1,000 sq. ft.)
	SPECIFIC DIRECTIONS: Will kill only time of application and directly contact	

RESTRICTIONS: Do not apply within 14 days of grazing or harvest for forage or hay. Do not apply more than a total of 3 dis. per acre per year. BEE CAUTION: Do not apply this product to target crops or weeds in bloom.

OKRA

Up to 4 applications can be made per year at minimum 6 day intervals.

Crop	Pest	This Product Per Acre (Qts.)
Okra	Corn earworms, Stink bugs	1 to 1.5
	SPECIFIC DIRECTIONS: Apply using ground equivolume to ensure good coverage. For Grasshopper, ref PESTS ACROSS MULTIPLE SITES" section.	

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

PEANUTS

Repeat applications as necessary up to a total of 5 times per year at minimum 7 day intervals.

Crop	Pest	This Product Per Acre (Qts.)	
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, Three-cornered alfalfa hoppers, Thrips, Velvetbean caterpillars	1	
	SPECIFIC DIRECTIONS: For best results on Thrips, use directed or b sprays with hollow cone spray nozzles. Ensure adequate coverage funderside of leaves.		
	Armyworms, Corn earworms, Fall armyworms, Stink bugs, Webworms	1 to 1.5	
	Whitefringed beetle adults, Cutworms	2	
	ost effective against		

RESTRICTIONS: Observe "PLANT RESPONSE PRECAUTIONS". Do not apply within 14 days of harvest. Do not apply more than a total of 8 qts. per acre per crop per year. BEE CAUTION: Do not apply this product to target crops or weeds in bloom.

PRICKLY PEAR CACTUS

Apply using ground equipment in sufficient volume to ensure good coverage. Up to 3 applications can be made per year at minimum 7 day intervals.

Crop	Pest	This Product Per Acre (Qts.)
Prickly pear	Cochineal scales (crawlers)	2
	SPECIFIC DIRECTIONS: For Grasshopper, refer PESTS ACROSS MULTIPLE SITES" section.	to the "SPECIFIC

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

ROOT AND TUBER CROPS (Except Sugar Beets and Sweet Potatoes)

Repeat applications as necessary up to a total of 6 times per year at minimum 7 day intervals.

Crop	Pest	This Product Per Acre (Qts.)
All members of the Root and Tuber	Flea beetles,	0.5 to 1
Vegetables Crop Group 1 except Sugar	Leafhoppers	
beets and Sweet potatoes: Arracacha,		
Arrowroot, Artichoke (Chinese and Jerusalem),		
Beet (Sugar, Root), Burdock (Edible), Canna		
(Edible, Queensland arrowroot), Carrot,		
Cassava (Bitter & Sweet), (Continued)		
		(Continued)

ROOT AND TUBER CROPS (Except Sugar Beets and Sweet Potatoes) (Cont.)

Crop	Pest	This Product Per Acre (Qts.)
(Cont.)	Armyworms, Aster	1 to 2
All members of the Root and Tuber	leafhoppers, Colorado	
Vegetables Crop Group 1 except Sugar	potato beetles, Corn	
beets and Sweet potatoes:	earworms, Cutworms,	
Celeriac (Celery root), Chayote (Root),	European corn borers,	
Chervil (Turnip-rooted), Chicory, Chufa,	Fall armyworms, Lace	
Dasheen (Taro), Ginger, Ginseng,	bugs, Lygus bugs,	
Horseradish, Leren, Parsley (Turnip-rooted),	Spittlebugs, Stink	
Parsnip, Potato, Radish, Oriental radish	bugs, Tarnished plant	
(Daikon), Rutabaga, Salsify (Black), Salsify	bugs	
(Oyster plant), Salsify (Spanish), Skirret,	SPECIFIC DIRECTION	S: For Cutworm,
Tanier (Cocoyam), Turmeric, Turnip, Yam	this product is most	
bean (Jicama, Manoic pea), Yam (True)	species which feed on t of the plant.	he upper portions

RESTRICTIONS: BEE CAUTION: Do not apply this product to larget crops or weeds in bloom.

Do not apply within 7 days of harvest. Do not apply more than a total of 6 qts. per acre

SMALL FRUITS AND BERRIES

per crop per year.

(REI for Grapes Only-West of the Rocky Mountains = 6 days; East of the Rocky Mountains = 2 days for all activities except for grape girdling and cane turning. The REI is 6 days for grape girdling and cane turning.)

Repeat applications as necessary up to a total of 5 times per year at minimum 7 day intervals.

Crop	Pest	This Product Per Acre (Qts.)
All members of the Caneberry Crop Subgroup 13-07A including: Blackberry (Rubus spp., including Andean blackberry, Arctic blackberry, Bingleberry, Black satin berry, Boysenberry, Brombeere, California blackberry, Cherokee blackberry, Chesterberry, Cheyenne blackberry, Common blackberry, Coryberry, Darrowberry, Dewberry, Dirksen thornless berry, Evergreen blackberry, Himalayaberry, Hullberry, Lavacaberry, Loganberry, Lowberry, Lucretiaberry, Mammoth blackberry, Marionberry, Mora, Mures deronce, Nectarberry, Northem dewberry, Clallieberry, Oregon evergreen berry, Phenomenalberry, Rangeberry, Ravenberry, Rossberry, Rangeberry, Ravenberry, Rossberry,	European fruit lecaniums, European raspberry aphids, Flea beetles, Grape leaffolders, Grape leaffolders, Japanese beetles, Leafnolpers, Leafnolpers, Leafrollers, Meadow spittlebugs, Omnivorous leaftiers, Rose chafers, Snowy tree crickets, Strawberry bud weevils, Strawberry clippers, Strawberry fruitworms, Strawberry leaffolders, Strawberry weevils, Western grapeleaf skeletonizers, Western yellowstriped armyworms	1 to 2
Shawnee blackberry, Southern dewberry, Tayberry, Youngberry, Zarzamora plus cultivars, varieties	SPECIFIC DIRECTIONS: In leaffolder, apply before the emerge from rolls.	
and / or hybrids of these); Raspberry (Rubus spp. including Bababerry, Black and Red raspberry, Blackcap, Caneberry, Framboise, Frambueso, Himbeere, Keriberry, Mayberry, Purple raspberry, Thimbleberry, Tulameen, Wild raspberry, Yellow raspberry plus cultivars, varieties and / or hybrids of these). (Continued)	Blueberry maggots, Cherry fruitworms, Cranberry fireworms, Cranberry fruitworms, Cranberry twig girdlers, Elm spanworms, Gypsy moths, Sparganothis fruitworms, Tarnished plant bugs	1.5 to 2
		(Continued)

SMALL FRUITS AND BERRIES (Cont.)

Crop	Pest	This Product Per Acre (Qts.)	
(Cont.) All members of the Bushberry Crop Subgroup 13-07B including: Aronia berry, Blueberry (Vaccinium sppHighbush, Lowbush and cultivars and / or hybrids of these [=Blueberry species]), Chilean guava, Currant (Black, Buffalo, Native, Red), European barberry, Elderberry, Gooseberry,	Cutworms, Eightspotted foresters, Grape berry moths, June beetles, Omnivorous leafrollers, Orange tortix, Raspberry fruitworms, Raspberry sawflies, Redbanded leafrollers, Saltmarsh caterpillars	2	
Highbush cranberry, Honeysuckle (Edible), Jostaberry, Huckleberry, Juneberry, Lingonberry, Salal, Sea buckthorn, plus varieties and / or hybrids of these. Cranberries; Grapes; Strawberries	product is most effective aga	C DIRECTIONS: For Cutworm, this most effective against species which ne upper portions of the plant.	

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

Do not apply within 7 days of harvest. Do not apply more than a total of 10 qts. per acre per crop per year.

Note: 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. In Grapes, do not concentrate soray on the bunch or visible residues may result.

SUGAR BEETS

Repeat applications as necessary up to a total of 2 times per year at minimum 14 day intervals.

Crop	Pest	This Product Per Acre (Qts.)
Sugar beets	Armyworms, Beet leaf beetles, Fall armyworms, Flea beetles, Leafhoppers, Webworms	1 to 1.5
	Cutworms	1.5
	SPECIFIC DIRECTIONS: For Cutworm, this product against species which feed on the upper portions of the	t is most effective e plant.

RESTRICTIONS: BEE CAUTION: Do not apply this product to target crops or weeds in bloom. Do not apply within 28 days of harvest of roots or forage. Do not apply more than a total of 3 qts. per acre per crop per year.

SUNFLOWERS

Up to 2 applications can be made per year at minimum 7 day intervals.

Crop	Pest	This Product Per Acre (Qts.)
	Stem weevils, Sunflower beetles	1 to 1.5
(Except CA)	Armyworms, Cutworms, Fall armyworms, Sunflower moths	1.5
	SPECIFIC DIRECTIONS: For Cutworm, this product is most effective against species which feed on the upper portions of the plant.	

RESTRICTIONS: BEE CAUTION: Do not apply this product to target crops or weeds in bloom. 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 (st. per acre per crop per year)

SWEET POTATOES

Up to 8 foliar applications can be made per year at minimum 7 day intervals.

Crop	Pest	This Product Per Acre (Qts.)
Sweet potatoes	Corn earworms, Cucumber beetles, Flea beetles, Sweet potato hornworms, Sweet potato weevils, Tortoise beetles, Whitefringed beetles	1 to 2
	Yellowstriped armyworms	2

RESTRICTIONS: BEE CAUTION: Do not apply this product to target crops or weeds in bloom. Do not apply within 7 days of harvest. Do not apply more than a total of 8 qts. per acre per crop per year.

TOBACCO (REI = 48 hours)

Plant Bed and Field Treatment – Repeat treatments as necessary up to a total of 4 times per year at minimum 7 day intervals. 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	This Product Per Acre (Qts.)
Tobacco	Budworms, Fall armyworms, Hornworms, Japanese beetles, June beetles, Suckflies, Tobacco flea beetles	1 to 2

RESTRICTIONS: Do not apply within 2 days of harvest. Do not apply more than a total of 8 qts. per acre per crop per year. Observe "PLANT RESPONSE PRECAUTIONS". BEE CAUTION: Do not apply this product to tarreet crops or weeds in bloom.

TREE FRUIT CROPS

On all tree fruit crops, apply in sufficient volume for adequate coverage. This will vary depending on the pest and its severity, the tree condition, size, density and other factors. By air, use at least 10 gallons of spray mixture per acre for adequate distribution.

Citrus

(REI for Citrus in All States Other Than CA = 12 hours)

(REI for Citrus in CA = 3 days for application rates greater than or equal to 5 qts. per acre)

	Crop	Pest	This Product Per Acre (Qts.)
All members of the Citrus Fruit Crop Group 10 including: Calamondin, Citrus citron, Citrus hybrids	Avocado leafrollers, California orangedogs, Citrus cutworms, Fruit tree 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	
	(Citrus spp., including Chironja, Tangelo and Tangor),	SPECIFIC DIRECTIONS: For Scale, apply wl present. For results on Eriophyid mites, including apply when pest populations are low.	
	Grapefruit, Kumquat, Lemon,	Apopka weevils (adult), Citrus root weevils (adults), Fuller rose beetles, Little leaf notchers (adult)	5
	Lime, Mandarin	Psyllid	1.5 to 3
(Tangerine), Orange (Sweet and Sour), Pummelo, Tangelo, Satsuma mandarin, White sapote (Casimiroa spp.) and other	SPECIFIC DIRECTIONS: Apply at the beginning an overwintering period before the first Spring fills ho sprays are needed during the year just before each grove or when an increase in Psyllid populations is or Use the lower rate on light to moderate infestations early instar. Use the higher rate on heavy infestatic advanced instars and adults. Thorough and unifor is essential for effective control.	the year. Additional n major flush in the bserved. , young plants and ons, mature plants,	
	cultivars and / or hybrids of these.	CA Only: California red scales, Yellow scales	5 to 12
nyonus or trese.	SPECIFIC DIRECTIONS: Do not make more than 1 a per year in CA for California red scale. Apply when cr		
	Florida Only: Adult citrus weevils (such as Diaprepes abbreviatus, Pantomorus cervinus, Artipes floridanus and Pachnaeus spp.)	5 to 8	
		SPECIFIC DIRECTIONS: Apply as a foliar spray bor concentrate spray or by air in 10 to 25 gals. of w	
		BEE CAUTION: Do not apply this product to target ed or cover crop bloom prior to application will reduce	

bloom. Mowing weed or cover crop bloom prior to application will reduce hazard to bees. Do not apply within 5 days of harvest. Do not apply more than a total of 20 qts. per acre per crop per year. Minimum retreatment interval is 14 days.

All States except CA and FL: Do not apply more than 5 qts. per acre per application. CA Only: Do not apply more than 12 qts. per acre per application.

FL Only: Do not apply more than 8 qts. per acre per application.

Olives (REI = 72 hours)

Up to 2 applications can be made per crop per year at minimum 14 day intervals.

Crop	Pest	This Product Per Acre (Qts.)
Olives	Scale insects (Black scales, Olive scales)	5 to 7.5

RESTRICTIONS: Do not apply within 14 days of harvest. Do not apply more than a total of 15 qts. per acre per crop per year. 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.

Pome Fruits

Repeat applications as necessary up to a total of 8 times per crop per year including thinning sprays on Apples at minimum 14 day intervals.

Crop	Pest	This Product Per Acre (Qts.)
Members of	White apple leafhoppers	0.5 to 1.5
the Pome	Apple aphids, Codling moths	1 to 3
Fruit Group 11 including: Apples, Crab-apples, Pears, Loquats, Mayhaw, Oriental pears	Apple aphids, Apple maggots, Apple mealybugs, Apple rust mites, Bagworms, California pearslugs (Pear sawfiies), European apple sawfiies, Eyespotted bud moths, Fruittree 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
	SPECIFIC DIRECTIONS: On Apples, avoid use during bloom until 30 days after full bloom unless fruit thinning pesticidal activity during this period also may result in Psylla, apply when eggs hatch or young nymphs are papply when crawlers are present.	is desired. Use for fruit removal. For
Apples Only,	_	1 to 3
thinning (Continued)		
	Reduce spray coverage to the lower portion of overthinning may occur here.	
Factors such as climatic temperature, high humidity, frost, variety, nutrition, previous crop, pruning and bloom may influ thinning results with the product. Exercise precautions to avoid overthinning. For most effective results, apply under goc conditions and when daytime temperatures (°F) will be 70 to lot the following 1 to 3 days. Application with daytime temperatures of 80°F may result in overthinning. This product may be mixed with other fruit thinners; how precautions to avoid overthinning and other adverse effects with local fruit thinning experts in your area for recommend: appropriate tank-mixing partners. Refer to the other product specific use directions.		may influence fruit is to avoid possible ander good drying a 70 to low 80's for peratures in excessions; however, use the effects. Consult commendations on
	positio des directions.	(Continued)

Pome Fruits (Cont.)

Crop	Pest	This Product Per Acre (Qts.)
(Cont.) Apples Only, for fruit thinning	Pest Per Acre (Qts.) NOTE: 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	

RESTRICTIONS: 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 per year.

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. FOR APPLE THINNING USE: Do not apply during bloom. Remove bee hives from orchard to be treated before applying this product. Removing bee hives from adjacent orchards will further minimize risks to bees.

DRIFT MANAGEMENT:

For airblast application, follow the following drift management practices:

- · Adjust deflectors and aiming devices so that the spray is only directed into the canopy.
- · Block off upward pointed nozzles when there is no overhanging canopy.
- Do not allow the spray to go beyond the edge of the cultivated area (i.e., turn off sprayer when turning at end rows). For applications to the outside rows, only spray inward, toward the orchard.

Stone Fruits

Up to 3 applications can be made per crop per year at minimum 7 day $\,$ intervals. An additional application can be made during the dormant or delayed dormant timing.

Crop	Pest	This Product Per Acre (Qts.)
All members of the Stone Fruits Crop Group 12 including: Apricot, Cherry (including) Sweet and Tart), Nectarine, Peach, Plum (including) Chickasaw, Damson and	Apple pandemis, Black cherry aphids, Cherry fruitworms, Cherry maggots (Cherry fruit flies), Codling moths, Cucumber beetles, Eastern tent caterpillars, Eyespotted bud moths, European earwigs, Fruittree 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, Redbandel leafrollers, Rose chafers, Scale insects (Brown soft scales, Forbes scales, Lecanium scales, Olive scales, Oystershell scales, San Jose scales), Tamished plant bugs, Tussock moths, Variegated leafrollers	2 to 3
Japanese), Plumcot, Prune (fresh) (Continued)	umcot, Prune total of 3 times per crop, but not more often than once every 7 days. A additional application at the dormant or delayed dormant timing may be	

Stone Fruits (Cont.)

Pest	This Product Per Acre (Qts.)
Peach twig borers, Scale insects (Brown soft scales, Forbes scales, Lecanium scales, Olive scales, Oystershell scales, San Jose scales)	4 to 5
SPECIFIC DIRECTIONS: For dormant or delayed dor in combination with a recommended dormant oil. Re oil product label for additional use directions and rest	fer to the dormant
CA ONLY: Black cherry aphids, Cherry fruitworms, Cherry maggots (Cherry fruit flies), Codling moths, Cucumber beetles, Eyespotted bud moths, European earwigs, Fruittree 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), Tamished plant bugs, Tussock moths	3 to 4
SPECIFIC DIRECTIONS: Repeat applications as r total of 3 times per crop, but not more often than once additional application at the dormant or delayed dorm made. For Scale, apply when crawlers are present.	every 14 days. An
	Peach twig borers, Scale insects (Brown soft scales, Forbes scales, Lecanium scales, Olive scales, Oystershell scales, San Jose scales) SPECIFIC DIRECTIONS: For dormant or delayed do in combination with a recommended dormant oil. Re oil product label for additional use directions and rest CA ONLY: Black cherry aphids, Cherry fruitworms, Cherry maggots (Cherry fruit flies), Codling moths, Cucumber beetles, Eyespotted bud moths, European earwigs, Fruittree 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 SPECIFIC DIRECTIONS: Repeat applications as related to the scales of the scales

RESTRICTIONS

All States Except CA: Do not apply within 3 days of harvest. Do not apply more than 3 qts. per acre per application during the production season.

CA only: Do not apply within 1 day of harvest. Do not apply more than 4 qts. per application during the production season.

All States Including CA: Do not apply more than a total of 14 qts. per acre per crop per year. 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. 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.

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	This Product Per Acre (Qts.)
Pistachios	Armyworm (Except in CA), Brown soft scales, Lecanium scales, Navel orangeworms (Except in CA)	3 to 5
	SPECIFIC DIRECTIONS: Repeat applications as neces of 4 times per crop per year (including any applications delayed dormant timing) at minimum 7 day intervals. For crawlers are present.	at the dormant or
	California Only: Armyworm, Navel orangeworm	3 to 6
SPECIFIC DIRECTIONS: Apply by air in a minimum of 20 gals. acre. Do not make more than 1 application at the maximum reper acre per crop per year. If needed, make up to 3 additional per crop per year at a rate not exceeding 5 qts. per acre per (including applications at the dormant or delayed dormant minimum 7 day intervals.		num rate of 6 qts. itional applications are per application
	Scale insects	4 to 5
	SPECIFIC DIRECTIONS: For dormant or delayed dorm in combination with dormant oil. Refer to dormant oil additional use directions and restrictions.	nant timing: Apply product label for
RESTRICTIONS: Do not apply within 14 days of harvest. Do not apply more than a total of 15 gts. per acre per year including any application at the dormant or delayed dormant timing. In All States Except California: Do not apply more than 5 gts. per acre per		

application. In California: Do not make more than 1 application at the maximum rate of 6 qts. per acre per crop per year. For any additional applications, do not apply more than 5 qts. per acre per application. 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

TREE NUT CROPS (Cont.)

Crop	Pest	This Product Per Acre (Qts.)	
All members of the Tree Nuts Crop Group 14 including: Almond, Beech nut,	Black margined aphids, Calico scales, Codling moths, European fruit lecaniums, Fall webworms, Filbert aphids, Filbert leafrollers, Filbert worms, Frosted scales, Fruittree leafrollers, Hickory shuckworms, Lesser webworms, Navel orangeworms, Peach twig borers, Pecan leaf phylloxeras, Pecan sem phylloxeras, Pecan ut casebearers, Pecan spittlebugs, Pecan weevils, San Jose scales, Twig girdlers, Walnut caterpillars	2 to 5	
	SPECIFIC DIRECTIONS: Repeat applications as necessary up to a total of 4 times per year (including any applications at the dormant or delayed dormant timing) at minimum 7 day intervals. Use lower rates for pests attacking leaves. Use higher rates for pests attacking fruit and for higher infestations. For Scale, 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 everage cross-sectional diameters of developing nuts are one-half to three-fourths inches and again during middle or late June, as needed.		
(Persian) walnuts1	Chestnut weevils, European earwigs	4 to 5	
Traine to j	SPECIFIC DIRECTIONS: For Chestnut weevils, best r found with 4 applications at weekly intervals beginning last application should be made prior to shuck split. For E thorough coverage of trunks, branches and nuts is neede	in late July. The uropean earwigs,	
Almonds	Peach twig borers, Scale insects	4 to 5	
Only	SPECIFIC DIRECTIONS: For dormant or delayed dorn in combination with recommended dormant oil. Refer t product label for additional use directions and restrictions	o the dormant oil	
RESTRICTIONS: BEE CAUTION: Do not apply this product to target crops or weeds in			

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

Do not apply within 14 days of harvest. Do not apply more than a total of 15 qts. per acre per crop per year including any applications at the dormant or delayed dormant timing.

FORESTED AREAS AND RANGELAND TREES

Up to 2 spray applications can be made per year at minimum 7 day intervals and 2 direct trunk treatments per year at 6 month intervals. Apply in sufficient volume for adequate coverage by ground or air equipment. This will vary depending on the tree size, density and stage of growth.

Crop / Site	Pest	This Product Per Acre (Qts.)
Forests, Tree	Ants*, Apple aphids, Armyworms, Ash	1
plantations, Planted	whiteflies, Azalea leafminers, Bagworms,	(0.75 fl. oz. per
Christmas trees,	Balsam twig aphids, Birch leafminers, Blister	1,000 sq. ft.)
Parks, Rural shelter	Parks, Rural shelter beetles, Boxelder bugs, Boxwood leafminers,	
belts, Rangeland	Browntail moths, Cankerworms, Catalpa	
trees	sphinx, Chiggers**, Cooley spruce gall	
(Continued)	adelgids, Cutworms, (Continued)	
		(Continued)

(Continued)

rows prior to applying this product.

FORESTED AREAS AND RANGELAND TREES (Cont.)

Crop / Site	Pest	This Product
Crop / Site (Cont.) Forests, Tree plantations, Planted Christmas trees, Parks, Rural shelter belts, Rangeland trees (Continued)	Pest (Cont.) 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 mapleworms, Grasshoppers, Hackberry nipplegall makers, Holly bud moths, Holly leafminers, Jack pine budworms, Japanese beetles, Jeffrey pine needleminers, June beetles, Lace bugs.	Per Acre (Qts.) 1 (0.75 fl. oz. per 1,000 sq. ft.)
	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, Spiney elm caterpillars, Spring-tails, Spruce budworms, Spruce needle-miners, Subtropical pine tip moths, Tent caterpillars, Thornbugs, Thrips (exposed), Walnut caterpillars, Webworms, Western hemlock loopers, Western spruce budworms, Willow leaf beetles, Woolly gall aphids, Yellow poplar weevils	
	SPECIFIC DIRECTIONS: Observe "PLAI PRECAUTIONS". Obtain thorough coverage of leaf surfaces. The addition of a sticker may performance. To kill Scale insects, treat trunks in addition to plant foliage. For best results on V pests are small. Make applications for Maple ler maple when larvae are in 2nd instar after min are being formed. * Except Carpenter, Harvester and Pharaoh. ** Will only kill pests that are present at the time directly contacted by product.	f upper and lower improve product , stems and twigs Vorms, treat when afcutters on Sugar ing and as cases
	Gypsy moths	0.75 to 1 (0.5 to 0.75 fl. oz. per 1,000 sq. ft.)
	SPECIFIC DIRECTIONS: For Gypsy moth, use heavy infestations. Repeat treatments as neces of 2 times per year, but not more often than once	ssary, up to a total
		(Continued)

FORESTED AREAS AND RANGELAND TREES (Cont.)

Crop / Site	Pest	This Product Per Acre (Qts.)
(Cont.) Forests, Tree plantations, Planted Christmas trees.	Ticks SPECIFIC DIRECTIONS: Will only kill Ticks pre	1 (0.75 fl. oz. per 1,000 sq. ft.)
Parks, Rural shelter	application and directly contacted by product.	Sent at the time of
belts, Rangeland trees	Elm bark beetles, Ips engraver beetles, Mountain pine beetles, Roundheaded pine beetles, Spruce beetles, Western pine beetles	5 fl. ozs. per gal.
	SPECIFIC DIRECTIONS: Direct Trunk Treatme preventative treatment only. Treat annually as rebeelle attacks. Apply 1 gal. of spray per 50 sq. Beetle flight or host-tree attack. Treat tree trunk frountil trunk diameter is less than 5 inches. For Elm approximately 20 to 30 gals. of spray mixture for for thorough coverage of all bark surfaces on trunk	equired to prevent ft. of bark prior to m ground level up, bark beetles, apply each 50 ft. of bark

RESTRICTIONS: BEE CAUTION: Do not apply this product to target crops or weeds in bloom. Do not use on syrup-producing Sugar maples where sap is harvested. Do not enter or allow others to enter treated areas until sprays have dried.

ORNAMENTAL TREES AND PLANTS

(REI = 12 hours; EXCEPTION: The REI is 18 days for ornamentals grown for cuttings (cut flowers or cut foliage) where production is in outdoor areas and where average annual rainfall is less than 25 inches a year. Notify workers of the application and REI by warning them orally and by posting warning signs at entrances to treated area. Note: Information on average annual rainfall for your area is available from any nearby weather bureau, such as one located at a local airport or one affiliated with the National Oceanographic and Atmospheric Administration (NOAA).

Up to 6 spray applications can be made per year at minimum 7 day intervals. Up to 2 direct trunk treatments can be made per year at minimum 6 month intervals.

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

Trees and Plants: Roses, Flowers, Other Herbaceous plants, Evergreens and Woody plants, Shrubs (Continued) Woody plants, Flowers, Combinued) Woody plants, Flowers, Flowers	Crop / Site	Pest	This Product Per Acre (Qts.)
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, (Continued)	Trees and Plants: Roses, Flowers, Other Herbaceous plants, Evergreens and Woody plants, Shrubs	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 moth, Eastern spruce gall adelgids, Elm leaf aphids, Elm leaf aphids, Elm leaf sphids, Funders, 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	1 qt. per acre -OR- per 100 gals. (0.75 fl. oz. per 1,000 sq. ft.)

ORNAMENTAL TREES AND PLANTS (Cont.)

Crop / Site	Pest	This Product Per Acre (Qts.)
(Cont.) Ornamental Trees and Plants: Roses, Flowers, Other Herbaceous plants, Evergreens, and Woody plants, Shrubs	(Cont.) Orange-striped oakworms, Periodical cicadas, Pine loopers, Pine sawflies, Pine spittlebugs, Pitch pine tip moths, Plant bugs, Poinsettia hormworms, 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, Thorbugs, Thips (exposed), Walnut caterpillars, Webworms, Western spruce budworms, Willow leaf beetles, Woolly gall aphids, Yellow poplar weevils SPECIFIC DIRECTIONS: Observe "PLA PRECAUTIONS". Obtain thorough coverage of the sawflight of the property of the sawflight of the s	ipper and lower leaf
	surfaces. The addition of a sticker may improve p To kill Scale insects, treat trunks, stems and twigs foliage. For best results on Worms, treat when pe application for Maple leafcutters on Sugar maple wi instar after mining and as cases are being formed. * Except Carpenter, Harvester and Pharaoh.	s in addition to plant ests are small. Make
	** Will only kill pests that are present at the time directly contacted by product.	e of application and
	Gypsy moths	0.75 to 1 qt. per acre or per 100 gals. (0.5 to 0.75 fl. oz. per 1,000 sq. ft.)
	SPECIFIC DIRECTIONS: For Gypsy moth, use heavy infestations.	the higher rate for
	Ticks	1 qt. per acre or per 100 gals. (0.75 fl. oz. per 1,000 sq. ft.)
	SPECIFIC DIRECTIONS: Will only kill Ticks application and directly contacted by product.	present at time of
	Elm bark beetles, Ips engraver beetles, Mountain pine beetles, Roundheaded pine beetles, Spruce beetles, Western pine beetles	5 fl. ozs. per gal.
	SPECIFIC DIRECTIONS: Direct Trunk Treatme preventative treatment only. Treat annually to pre Apply 1 gal. of spray per 50 sq. ft. of bark prior to tree attack. Treat tree trunk from ground level up, u less than 5 inches. For Elm bark beetles, apply ap gals. of spray mixture for each 50 ft. of Elm tree for t all bark surfaces on trunks, limbs, and twigs.	event Beetle attacks. Beetle flight or host- intil trunk diameter is proximately 20 to 30
RESTRICTIONS: BE	E CAUTION: Do not apply this product to target crop	s or weeds in bloom

RESTRICTIONS: BEE CAUTION: Do not apply this product to target crops or weeds in bloom. Do not use on syrup-producing Sugar maples where sap is harvested. Do not enter or allow others to enter treated area until sorays have dried.

TURFGRASS

(REI for Turf grown for Sod production = 24 hours)

Do not apply more than a total of 16 qts. per acre per year. Do not apply by air or by chemigation. Broadcast applications to Turfgrass are permitted only on Golf courses, Sod farms, Cemeteries and Commercial landscapes. Applications to all other lawns or turf (residential settings) are limited to spot treatments. Apply the specified rates using ground pressure-type equipment in sufficient spray volume for thorough coverage and thatch penetration.

Site	Pest	This Product Per Acre (Qts.)	
Golf turf, Sports fields, Sod farms, Domestic and Commercial lawns, Cemeteries, Parks,	Ants (except Carpenter, Harvester and Pharaoh)*, Armyworms, Cutwoms, Essex skippers, European chaffers, Fall armyworms, Fiery skippers, Grasshoppers, Green June beetle larvae, Leafhoppers, Lucerne moths, Millipedes, Mosquitoes (adults)*, Scarab beetle adults (May beetles, June beetles, Japanese beetles, Green June beetles), Sowbugs, Spittlebugs, Springtalis, Yellowstriped armyworms	2 to 4 (1.5 to 3 fl. ozs. per 1,000 sq. ft.)	
Campsites, Recreational areas	SPECIFIC DIRECTIONS: For Armyworm, Cutworm and Fall armyworm: Do not irrigate treated areas within 24 hours following insecticide application. For Green June beetle grub (larvae): Make applications when grubs are feeding near the soil surface. Water or irrigate Turfgrass within 48 hours after treatment.		
	Ticks*	1 (0.75 fl. oz. per 1,000 sq. ft.)	
	Centipedes*, Chigger*, Earwigs*	4 (3 fl. ozs. per 1,000 sq. ft.)	

RESTRICTIONS: BEE CAUTION: Do not apply this product to plants in bloom. Repeat applications as necessary up to 4 times per year but not more often than once every 7 days. Do not allow public use of treated areas during applications or until sprays have dried.

* Will kill only pests that are present at the time of application and directly contacted by product.

Golf turf, Sports fields, Sod farms,	Chinch bugs, Sod webworms (Lawn moths)	6 to 8 (4.4 to 6 fl. ozs. per 1,000 sq. ft.)	
Domestic and Commercial lawns, Cemeteries, Parks, Campsites, Recreational areas	SPECIFIC DIRECTIONS: For Chinch bug: Treat entire grass area rather than just damaged areas. Irrigation prior to treatment will aid in penetration of insecticide into Turfgrass. Do not irrigate treated areas within 24 hours following insecticide application.		
	Bluegrass billbug larvae, European crane flies, White grubs (such as Japanese beetles, Chafer beetles and <i>Phyllophaga</i> spp. larvae), Black turfgrass ataenius beetle larvae, Hyperodes weevils (Bluegrass weevil) larvae, Springtails	8 (6 fl. ozs. per 1,000 sq. ft.)	
	SPECIFIC DIRECTIONS: For European Crane Fly: Apply in early Sprin (April 16 April 15) or at timing recommended by local Agricultural Extension Service Agents. Water or irrigate Turfgrass within 48 hours after treatment For White grub: Apply when Grubs are feeding near the soil surface usually during late March through May or July through early Septembe or at timing as recommended by local Agricultural Extension Service Agents. Water or irrigate Turfgrass within 48 hours after treatment.		
	Fleas*	8 (6 fl. ozs. per 1,000 sq. ft.)	

RESTRICTIONS: BEE CAUTION: Do not apply this product to plants in bloom.

Repeat applications as necessary up to 2 times per year but no more often than once every 7 days. Do not enter or allow others to enter treated areas until sprays have dried.

* Will kill only pests present at the time of application and directly contacted by product.

SPECIFIC PESTS ACROSS MULTIPLE SITES

Grasshoppers

Crop	Pest	This Product Per Acre (Qts.)
All crops on	Grasshoppers	0.5 to 1.5
this label	SPECIFIC DIRECTIONS: Apply 0.5 to 0.75 qt. per ac small plants or sparse vegetation. Apply 1 to 1.5 qts. prograshoppers or applications to dense foliage. Be certa are appropriate to assure adequate coverage.	er acre for mature

RESTRICTIONS: 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. Observe all use restrictions.

Imported Fire Ants

Crop / Site	Pest This Pro Gallon (
All	Imported fire ants	0.75 fl. oz. per gal.
crops / sites on this label	SPECIFIC DIRECTIONS: Drench Application : To kill a a total of 2 gals. of the diluted solution over the surfac at least 1 qt. per 6 inches of mound diameter using a appropriate equipment. Thoroughly wet mound and sur ft. diameter (12 sq. ft.). Do not disturb mound prior to tres from a height of about 3 ft. to give sufficient force to bre flow into Ant tunnels. For best results, apply in cool we: in early morning or late evening hours. Repeat applicar resumes after 30 days. Treat new mounds as they appea may disturb the Ants and cause migration, reducing proc	ee of each mound or bucket, can or other ounding areas to a 4 atment. Pour solution eak mound apex and ather (65 to 80°F) or tion if mound activity r. Pressurized sprays
	Imported fire ants (foraging)	1.5 fl. ozs. per gal.
	SPECIFIC DIRECTIONS: Broadcast Application (outdoor use only)*: Treat only the growing media when using on bedding plants and avoid contact with foliage. Do not make more than 1 application per year.	

RESTRICTIONS: Do not enter or allow others to enter treated areas until sprays have dried. For outdoor use only. Do not use in greenhouses.

* Broadcast applications to Turfgrass are permitted only on Golf courses, Sod farms, Cemeteries and Commercial landscapes. Applications to all other Lawns or Turf (residential settings) are limited to spot treatments.

Note: Do not use on any food crop not listed on this label. Refer to specific site use directions elsewhere on this label for additional restrictions.

Ticks which may Vector Lyme Disease

To kill juvenile and adult Ticks which may vector Lyme Disease, apply the specified amount in sufficient volume for thorough coverage. This product will kill only Ticks that are present at the time of application and directly contacted by product. Up to 4 applications per year can be made.

	Crop / Site	Pest	This Product Per Acre (Qts.)
	All crops on this label, Pastures, Forested areas, Wasteland, Rights-of-Way, Hedgerows, Ditchbanks, Roadsides, Set-Aside and Conservation Reserve Program Acreage, Ornamental trees and plants, Turfgrass*	Ixodes spp. (Deer ticks, Bear ticks, Black legged ticks), Amblyomma spp. (Lone star ticks)	1 (0.75 fl. oz. per 1,000 sq. ft.)
		SPECIFIC DIRECTIONS: To kill juvenile T Spring or early Summer. To kill adult Tik Summer to Fall. Treat entire area and perimeter areas to Ticks may occur. Ticks may be n surrounding areas on host animals. Retrea maintain low population levels.	where exposure eintroduced from

RESTRICTIONS: Do not enter or allow others to enter treated areas until sprays have dried. 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. If product is used to kill Ticks on any use site listed on this label, the use rate must not exceed 1 qt. per acre (0.75 fl. oz. per 1,000 sq. ft.). Observe all use restrictions.

 Broadcast applications to Turfgrass are permitted only on Golf courses, Sod farms, Cemeteries and Commercial landscapes. Applications to all other lawns or turf (residential settings) are limited to spot treatments.

NUISANCE PESTS

PERIMETER TREATMENT - To kill Ants*, Bees* and Wasps*, Brown dog ticks*, Centipedes*, Cockroaches*, Crickets, Darkling beetles (Lesser mealworms or Litter beetles), Earwigs, Firebrats, Silverfish, Fleas*, Millipedes, Scorpions* and Spiders*, mix 2.5 fluid ounces of this product per gallon of water and apply as a coarse wet spray in a band of 6 to 10 feet wide around the outside perimeter of buildings contacting as many pests as possible. Confine to areas immediately adjacent to the structure. Direct applications to the outside of the structure should be minimal and restricted to cracks and crevices and areas where insects tend to congregate.

For use in and around flower beds and ornamental plantings, apply as a coarse wet spray in and around plant beds.

RESTRICTIONS:

- · Do not enter or allow others to enter treated areas until sprays have dried.
- Do not make more than 4 applications per year. Do not apply more often than once every 7 days.
 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. For outdoor use only.
- Observe "PLANT RESPONSE PRECAUTIONS".
- * Will kill only pests present at time of application and directly contacted by product.

STORAGE AND DISPOSAL

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

Open dumping is prohibited.

PESTICIDE STORAGE: Store unused product in original container only, in cool, dry area out of reach of children and animals. Do not store in areas where temperatures frequently exceed 100°F. If container is damaged, before cleaning up put on Personal Protective Equipment (PPE). PESTICIDE DISPOSAL: To avoid waste, use all materials in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often, such programs are run by state or local governments or by industry).

CONTAINER DISPOSAL:

Nonrefillable Container (rigid material; less than 5 gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container 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 one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration or, if allowed by state and local authorities. by burning. If burned, stay out of smoke.

Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning, If burned, stay out of smoke.

Refillable Container (≥ 250 gallons & Bulk): Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

WARRANTY — CONDITIONS OF SALE

OUR DIRECTIONS 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 specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith.

To the extent consistent with applicable law, 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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GROUP 1A INSECTICIDE



Intended For Agricultural or Commercial Use.

ACTIV	/F	INGREDIENT:

Carbaryl	42.6%
OTHER INGREDIENTS:	57.4%
TOTAL:	100.0%

This product contains 4 pounds of Carbaryl per gallon.

CAUTION

See Booklet for Full Use Instructions SHAKE WELL BEFORE USING

ATTENTION: This product contains a chemical known to the State of California to cause cancer and reproductive harm in laboratory animals.

EPA Reg. No. 19713-49 EPA Est. No. 19713-GA-2 Net Content: 2.5 Gals. (9.46 L) 49PS2-0417(0417*)•G2

FIRST AID

IF SWALLOWED:

- Immediately call a poison control center or doctor 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 ON SKIN OR CLOTHING:

- · Take off contaminated clothing.
- · Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

IF INHALED:

- · 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 FYES:

- 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.
- · 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. You may also call CHEMTREC at 800-424-9300 for medical emergency.

Note to Physician: Carbaryl is an N-methyl carbamate that inhibits cholinesterase. Drugs like 2-PAM (pyridine-2-aldoxime methiodide) are NOT recommended.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed, absorbed through 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 or headache.

IN SEVERE CASES, CONVULSIONS, UNCONSCIOUSNESS AND RESPIRATORY FAILURE MAY OCCUR. SIGNS AND SYMPTOMS MAY OCCUR RAPIDLY FOLLOWING OVEREXPOSURE TO THIS PRODUCT.

See Booklet for Full Precautionary Statements.

ENGINEERING CONTROLS

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides I40 CFR 170.240(d)(6)1.

Applicators using airblast equipment for application to Citrus in California and for wide area mosquito adulticide applications must use an enclosed cab that meets the definition in the WPS for Agricultural Pesticides [40 CFR 170.240(d)[5]] for dermal protection. See Booklet for Full Engineering Controls

USER SAFETY RECOMMENDATIONS

Users should: 1) Wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing /PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) 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 then disposing of 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 applications 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 Corn and Soybeans):

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

For Corn and Sovbeans:

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.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store unused product in original container only, in cool, dry area out of reach of children and animals. Do not store in areas where temperatures frequently exceed 100°F. If container is damaged, before cleaning up, put on Personal Protective Equipment (PPE).

PESTICIDE DISPOSAL: To avoid waste, use all materials in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often, such programs are run by state or local governments or by industry).

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container 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 one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration or, if allowed by State and local authorities, by burning, if burned, stay out of smoke.



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