

19713-363

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

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Attn: Luz Chan  
Drexel Chemical Company  
P.O. Box 13327  
Memphis, TN 38113-0327

NOV 20 2009

Subject: DREXEL Carbaryl 85 Sprayable  
EPA Reg. No. 19713-363  
Your Application Dated November 12, 2009  
Minor Label Corrections  
(Remove CA Restrictions, Clarify Brassica Leafy Vegetables Group,  
Clarify Bee Statements for Apple Thinning Use, Revise Storage/Disposal  
Statements)

Dear Ms. Chan;

The label referred to above, submitted in connection with the registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. Within 45 days from the date of this notice, two copies of a final printed label must be submitted. You may distribute products bearing the old label for twelve months from receipt of this letter or your next printing of the label, whichever comes first.

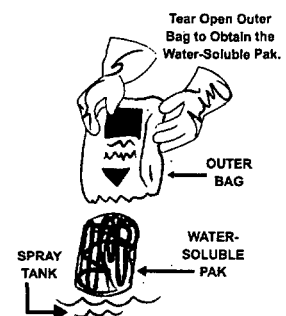
A copy of the stamped label is enclosed for your records.

Sincerely yours,

A handwritten signature in black ink that reads "Joanne S. Edwards".

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

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# Carbaryl 85 Sprayable

Intended for Agricultural or Commercial Use  
**ACTIVE INGREDIENT:**  
 Carbaryl (1-naphthyl N-methylcarbamate)..... 85.0%  
**OTHER INGREDIENTS:** ..... 15.0%  
**TOTAL:** ..... 100.0%

## KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

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

See **FIRST AID** Below

EPA Reg. No. 19713-363  
 EPA Est. No. 19713-XX-XXX      Net Content: 1.177 LBS.

FIRST AID	
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious or convulsing person.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.	
<b>NOTE TO PHYSICIAN:</b> 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**  
**WARNING:** May be fatal if swallowed. Causes moderate eye irritation. Avoid contact with 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 and headaches. In severe cases, convulsions, unconsciousness and respiratory failure may occur. Signs and symptoms occur rapidly following overexposure to this product.  
**PERSONAL PROTECTIVE EQUIPMENT (PPE)**  
 Some materials that are chemical-resistant to this product are made of any waterproof material. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.  
**Handlers applying with open cab airblast equipment at application rates equal to or greater than 5.9 lbs. of this product (5 lbs. a.i.) must wear:** Coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, chemical-resistant footwear plus socks, chemical-resistant headgear, and a NIOSH-approved dust/mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any N, R, P or HE filter.  
**All other mixers, loaders, applicators, and handlers must wear:** Long-sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves, and chemical-resistant apron when mixing, loading, or cleaning up spills or equipment.  
 Application by air or through chemigation is prohibited. 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.

**ACCEPTED**  
 NOV 20 2009  
 Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide Registered under EPA Reg. No. 19713-363



Manufactured By:  
**Drexel Chemical Company**  
 P.O. BOX 13327, MEMPHIS, TN 38113-0327  
**SINCE 1972**

## ENGINEERING CONTROLS

Water-soluble packaging when used correctly qualifies as a closed mixing/loading system under the Worker Protection Standard (WPS) for agricultural pesticides [40CFR 170.240(d)(4)]. Mixers and loaders using water soluble packets must: Wear the personal protective equipment on this labeling for mixers/ loaders, and be provided, have immediately available, and use in an emergency, such as a broken package, spill, or equipment breakdown, chemical-resistant footwear and a NIOSH-approved dust/mist filtering respirator with NIOSH/MSHA approval number prefix TC-21C or a NIOSH-approved respirator with any N, R, P, or HE filter.

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

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 equipment washwaters.

**BEE CAUTION:** May kill honeybees and other bees in substantial numbers. This product is highly toxic to bees exposed to direct treatment or residues on crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

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.

**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 pesticide regulation.

## AGRICULTURAL USE REQUIREMENTS

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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 of 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 that 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 85 Sprayable is a dry powder formulation packaged in water soluble bag. It readily disperses in water to form a spray which may be applied by ground equipment. Aerial and chemigation applications are prohibited.

## DIRECTIONS FOR WATER-SOLUBLE BAGS

EACH WATER SOLUBLE PAK CONTAINS 1.177 POUNDS OF THIS PRODUCT. Do not sell individual water soluble paks.

Paks containing this product are water-soluble. Do not allow pak to become wet prior to adding to the spray tank. Do not handle paks with wet hands. Use the entire contents of a water soluble pak. Do not break open to use partial contents of a water soluble pak.

**Note:** Products containing boron and/or fertilizers will prevent the water-soluble packet from dissolving. Boron and/or fertilizer products must only be added after packet(s) have completely dissolved.

**PLANT RESPONSE PRECAUTIONS:** Application to wet foliage or during periods of high humidity may cause injury to tender foliage.

Do not use on Boston ivy, Maidenhair fern and Virginia creeper as injury may result. Carbaryl may also injure Sand and Virginia 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 crops for which carbaryl tolerances are not established.

## APPLICATION STATEMENTS

Calibrate and adjust application equipment to ensure proper rate and accurate placement. To clean spray system after use, drain and flush with water and detergent mixture. Rinse thoroughly with clean water. Refer to the "STORAGE AND DISPOSAL" section for disposal instructions.

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

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this product is not registered for control of other Armyworm species. Regional differences have been noted in the susceptibility of certain strains of Colorado potato beetles, Diamondback moth, 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**

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. With the agitator on, slowly add the required number of paks into the mixing tank. Allow all the paks to dissolve and completely disperse. Continue agitation while adding the remainder of the water. Do not put the paks close to the recirculating inlet or outlet as they may block the line before completely dissolved. Prepare only as much spray mixture as can be applied on the day of mixing. Maintain continuous agitation during mixing and application to assure a uniform suspension. Do not store spray mixture for prolonged periods or degradation of Carbaryl may occur. Local water conditions may also accelerate the degradation of spray mixtures containing carbaryl. See "COMPATIBILITY STATEMENT" below.

**Tank Mixing Instructions**

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

**COMPATIBILITY STATEMENT**

This product, when diluted with at least an equal volume of water, is compatible with a wide range of pesticides. It is not compatible with diesel fuel, kerosene, fuel oil or aromatic solvents. If compatibility with another product and the resulting crop response is unknown, the mixture should be tested on a small scale. Curdling, precipitation, greasing, layer formation or increased viscosity are symptoms of incompatibility. Incompatibility will reduce 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 mixture with strong bases, such as Bordeaux, lime-sulfur and casein-lime spreaders, will result in chemical degradation of the insecticide. Do not use this product in water with pH values above 8.0 unless a buffer is added. If necessary, water should be buffered to neutral (pH = 7.0) before adding this product to the spray tank. Overhead irrigation with alkaline or muddy water after application will also accelerate chemical degradation and may result in reduced product performance.

**APPLICATION PROCEDURES**

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

**Ground Application:** Apply in sufficient volume for adequate coverage on all crops and sites.

**SPECIFIC USE DIRECTIONS**

**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, Leafy vegetables, Legume vegetables (such as edible-podded legume vegetables, Dried shelled pea and beans (except soybeans), Soybeans, Foliage of legume vegetables), Non-cropland (such as Conservation Reserve Program, Ditchbanks, Hedgerows, Rights-of-way, Roadsides, Set-Aside Program acreage, Wasteland), Okra, Peanuts, Prickly pear cactus, Root and Tuber crops (except Sugar beets and Sweet Potatoes), Sugar beets, Sweet potatoes, Small fruits and berries (Bushberries, Caneberries, Cranberries, Grapes, Strawberries), Sunflower, Tobacco, Tree fruit crops (Citrus fruits, Olives, Pome fruits, Stone fruits), Tree nut crops (Pistachios, Tree nuts), Forested areas and Rangeland trees, Ornamental trees and plants, Turfgrass, Specific pests across multiple sites (Grasshoppers, Imported fire ants, Ticks which may vector Lyme disease, Nuisance pests).

**APPLICATION TIMING AND DIRECTIONS**

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

**REI = Restricted Entry Interval**

**ASPARGUS**

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Asparagus	Apache cicadas, Asparagus beetles, Cutworms	1.2 (1)
	SPECIFIC DIRECTIONS: Repeat application as necessary up to a total of 3 times prior to harvest, but not more often than once every 3 days, or a total of 5 applications per year to spears and ferns combined. For Cutworm, this product is most effective against species which feed on the upper portions of the plant. Do not apply within 1 day of harvest.	
Asparagus	Apache cicadas, Asparagus beetles, Cutworms	2.4 (0.5)
	SPECIFIC DIRECTIONS: Application to ferns or brush growth following harvest of spears: Repeat applications as necessary but not more often than once every 3 days. Do not make more than a total of 5 applications per year to spears and ferns combined.	
RESTRICTIONS: For preharvest application, do not apply more than 3.75 lbs. of this product (3 paks) per acre per year. Do not apply more than 6.25 lbs. of this product (5 paks) per acre per year. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.		

**BRASSICA LEAFY VEGETABLES PLUS TURNIP GREENS**

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
All members of the Brassica Leafy Vegetables	Flea beetles, Harlequin bugs, Leafhoppers	0.6 to 1.2 (2 to 1)
Crop Group 5 including: Broccoli, Broccoli raab (rapini), Brussel sprouts, Cabbage, Cauliflower, Cavalo broccolo, Chinese broccoli (gai lon), Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens; Turnip greens	Armyworms, Aster leafhoppers, Corn earworms, Diamondback moth, Fall armyworms, Imported cabbageworms, Lygus bugs, Spittlebugs, Stink bugs, Tarnished plant bugs	1.2 to 2.4 (1 to 0.5)

**RESTRICTIONS:** Application is permitted only within 30 days from the date of crop emergence or the date of transplanting. Do not apply within 3 days of harvest of Head and Stern Brassica Subgroup 5A including Broccoli, Chinese broccoli (gai lon), Brussels sprouts, Cabbage, Chinese cabbage (napa), Chinese mustard cabbage (gai choy), Cauliflower, Cavalo broccolo, and Kohlrabi. 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. Do not apply more than a total of 7 lbs. of this product (6 paks) per acre per crop per year. **BEE CAUTION:** Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**CEREAL GRAIN CROPS**

**Corn (Field, Pop, Seed) (REI = 24 hours)**

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Corn (Field, Pop, Seed)	Armyworms, Chinch bugs, Corn earworms, Corn rootworm adults, Fall armyworms, Flea beetles, Japanese beetles, Sap beetles, Southwestern corn borers, Leafhoppers	1.2 to 2.4 (1 to 0.5)
	SPECIFIC DIRECTIONS: For best results on Chinch bug, use ground equipment to apply at least 20 gals. of water per acre and direct spray toward stalk to provide thorough coverage.	
	European corn borers	1.8 to 2.4 (0.67 to 0.5)
	SPECIFIC DIRECTIONS: For best results on European corn borer, do not apply in less than 15 gals. of water by ground.	
	Cutworms, Western bean cutworms	2.4 (0.5)
	SPECIFIC DIRECTIONS: For best results on Cutworm, apply in a 12-inch band over the row, using sufficient volume of water to obtain thorough coverage. For broadcast application, use at least 20 gals. of water by ground 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.	
<b>RESTRICTIONS:</b> Do not apply more than a total of 9.4 lbs. of this product (8 paks) 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 of forage or silage. <b>BEE CAUTION:</b> 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 to target crop 4 days prior to bloom. <b>Prohibitions:</b> Do not enter or allow workers to enter treated areas to perform hand detasseling tasks until 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, but not more than once every 3 days. Good timing and good coverage are essential for effective product performance.

For insects attacking silks and ears, insecticide sprays should be applied starting when first silks appear and continuing until silks begin to dry. During silking, the minimum retreatment interval of 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	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Sweet corn	Armyworms, Chinch bugs, Corn earworms, Corn rootworm adults, Fall armyworms, Flea beetles, Japanese beetles, Leafhoppers, Sap beetles, Southwestern corn borers	1.2 to 2.4 (1 to 0.5)
	SPECIFIC DIRECTIONS: For best results on Chinch bug, use ground equipment to apply at least 20 gals. of water per acre and direct spray toward stalk to provide thorough coverage.	
	European corn borers	1.8 to 2.4 (0.67 to 0.5)
	SPECIFIC DIRECTIONS: For best results on European corn borer, do not apply in less than 15 gals. of water per acre by ground.	

(Continued)

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Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Sweet corn	Cutworms, Western bean cutworms	2.4 (0.5)
	SPECIFIC DIRECTIONS: For best results on Cutworm, apply in a 12-inch band over the row, using sufficient volume of water to obtain thorough coverage. For broadcast application, use at least 20 gals. of water per acre by ground. 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.	
<b>RESTRICTIONS:</b> 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 18.8 lbs. of this product (16 paks) per acre per crop per year. <b>BEE CAUTION:</b> 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 to target crop 4 days prior to bloom. <b>Prohibitions:</b> Do not enter or allow workers to enter treated areas to perform hand detasseling 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, but not more often than once every 7 days. Direct spray into forming heads for best results on insects attacking heads.

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Grain sorghum	Armyworms, Chinch bugs, Corn earworms, Fall armyworms, Stink bugs, Webworms	1.2 to 2.4 (1 to 0.5)
	SPECIFIC DIRECTIONS: For best results on Ching bug, use high gallonage ground application at the base of the plants.	
	Southwestern corn borers	1.8 (0.67)
	Cutworms	2.4 (0.5)
<b>RESTRICTIONS:</b> Do not apply within 21 days of harvest for grain or fodder or within 14 days of harvest or grazing of forage or silage. Do not apply more than a total of 7 lbs. of this product (6 paks) per acre per crop per year. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.		

**Rice**

Repeat applications as necessary up to a total of 2 times per crop per year, but not more often than once every 7 days.

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Rice	Armyworms, Chinch bugs, Fall armyworms, Leafhoppers, Stink bugs	1.2 to 1.8 (1 to 0.67)
	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)	1.8 (0.67)
	SPECIFIC DIRECTIONS: For best results on tadpole shrimp, apply to water when pest first appears. Up to 2 applications can be made per year at minimum 7-day intervals.	
<b>RESTRICTIONS:</b> Do not apply within 14 days of harvest for grain or straw. Do not apply more than a total of 3.5 lbs. of this product (3 paks) per acre per crop per year. Discharge from treated rice fields may kill shrimp, crabs, and crayfish. Do not apply propanil herbicides with 15 days before or after application of this product or plant injury may result. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.		

**CUCURBIT VEGETABLES**

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
All members of the Cucurbit Vegetables Crop Group 9 including: <i>Momordica</i> spp. (includes Balsam apple, balsam pear, bitter melon, Chinese cucumber), Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Edible gourd (includes hyotan, cucuzza, hechima, Chinese okra), Muskmelon (hybrids and/or cultivars of <i>Cucumis melo</i> 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), Pumpkin, Summer squash types (such as crookneck squash, scallop squash, straightneck squash, vegetable marrow and zucchini), Watermelon (including hybrids and/or varieties of <i>Citrullus lanatus</i> ), Winter squash types (such as acorn squash, butternut squash, calabaza, cushaw, Hubbard squash, and spaghetti squash)	Melonworms, Pickleworms	0.6 to 1.2 (2 to 1)
	Cucumber beetles, Flea beetles, Leafhoppers, Squash bugs	1.2 (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.	

**RESTRICTIONS:** Do not apply within 3 days of harvest. Do not apply more than a total of 7 lbs. of this product (6 paks) per acre per crop per year. Observe "Plant Response Precautions". **BEE CAUTION:** Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**FLAX**

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Flax (Except CA)	Armyworm	1.2 to 1.8 (1 to 0.67)

**RESTRICTIONS:** Do not apply within 42 days of harvest for seed or straw. Do not apply more than a total of 3.5 lbs. of this product (3 paks) per acre per crop per year. **BEE CAUTION:** Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**FORAGE CROPS**

**Alfalfa, Birdsfoot Trefoil, Clovers**

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Alfalfa, Birdsfoot trefoil, Clovers	Blister beetles, Mexican bean beetles	0.6 to 1.2 (2 to 1)
	Alfalfa caterpillars, Bean leaf beetles, Cucumber beetles, Green cloverworms, Japanese beetles, Leafhoppers, Potato leafhoppers, Threecornered alfalfa hoppers, Thrips, Velvetbean caterpillars	1.2 (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	1.2 to 1.5 (1 to 0.77)
	SPECIFIC DIRECTIONS: For Cutworm, this product is most effective against species which feed on the upper portions of the plant.	
	Alfalfa weevil larvae (West of the Rocky Mountains)	1.2 to 1.8 (1 to 0.67)
	SPECIFIC DIRECTIONS: If pre-treatment damage is extensive, cut Alfalfa and treat the stubble. This product is not effective against adult Alfalfa weevils.	
Alfalfa weevil larvae (East of the Rocky Mountains)	1.8 (0.67)	
SPECIFIC DIRECTIONS: If pre-treatment damage is extensive, cut Alfalfa and treat the stubble. This product is not effective against adult Alfalfa weevils.		

**RESTRICTIONS:** Observe "Plant Response Precautions". Do not apply more than once per cutting. Do not apply within 7 days of harvest or grazing. Do not exceed 1.8 lbs. of this product (1.5 paks) per acre per cutting. Carbaryl may cause temporary bleaching of tender Alfalfa foliage. **BEE CAUTION:** Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

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

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Pasture and Grasses grown for hay and/or seed	Armyworms, Chinch bugs, Essex skippers, Fall armyworms, Striped grass loopers, Thrips, Range caterpillars, Range crane flies	1.2 to 1.8 (1 to 0.67)
	SPECIFIC DIRECTIONS: To kill Thrips, use high spray pressure to improve penetration into the boot. Accurately mark swaths to avoid over-application.	
	Ticks	1.2 (1)
SPECIFIC DIRECTIONS: This product will kill only Ticks present at the time of application and directly contacted by product.		

**RESTRICTIONS:** Do not apply within 14 days of harvest or grazing. Do not exceed a total of 3.5 lbs. of this product (3 paks) per acre per year. **BEE CAUTION:** Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

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## RANGELAND

Do not make more than 1 application per year. Accurately mark swaths to avoid over-application.

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Rangeland	Black grass bugs, Range caterpillars, Range crane flies	0.6 to 1.2 (2 to 1)
	Grasshoppers, Mormon crickets	0.6 (2)
	Ticks	1.2 (1)
	SPECIFIC DIRECTIONS: This product will kill only Ticks present at the time of application directly contacted by product.	
<b>RESTRICTIONS:</b> May be harvested or grazed the same day of treatment. Do not apply more than 1.2 lbs. of this product (1 pak) per acre per year. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.		

## FRUITING VEGETABLES

Repeat application as necessary up to a total of 7 times per year, but not more often than once every 7 days. 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	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
All members of the Fruiting Vegetable Crop Group 8 including: Eggplant, Groundcherry, Pepinos, Pepper (includes: bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Tomato	Colorado potato beetles, European corn borers, Fall armyworms, Lace bugs, Stink bugs (suppression), Tarnished plant bugs, Thrips (suppression), Tomato fruitworms, Tomato hornworms, Tomato pinworms	1.2 to 2.4 (1 to 0.5)
	SPECIFIC DIRECTIONS: Thorough coverage is essential to effectively suppress Stink bugs.	
	Flea beetles, Leafhoppers	0.6 to 1.2 (2 to 1)
	Cutworms	2.4 (0.5)
	SPECIFIC DIRECTIONS: For Cutworm, this product is most effective against species which feed on the upper portions of the plant.	
<b>RESTRICTIONS:</b> Do not apply within 3 days of harvest. Do not apply more than a total of 9.4 lbs. of this product (8 paks) per acre per crop per year. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.		

## LEAFY VEGETABLES

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Dandelion, Endive (escarole); Lettuce (head and leaf); Parsley; Spinach; All members of the Leaf Petioles Vegetable Subgroup 4B including: Cardoon, Celery, Celtuce, Chinese celery, Florence fennel (including sweet anise, sweet fennel, Finocchio), Rhubarb, Swiss chard	Flea beetles, Harlequin bugs, Leafhoppers	0.6 to 1.2 (2 to 1)
	Armyworms, Aster leafhoppers, Corn earworms, Fall armyworms, Imported cabbageworms, Lygus bugs, Spittlebugs, Stink bugs, Tarnished plant bugs	1.2 to 2.4 (1 to 0.5)
<b>RESTRICTIONS:</b> Do not apply within 14 days of harvest. Do not apply more than a total of 7 lbs. of this product (6 paks) per acre per crop per year. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.		

## LEGUME VEGETABLES

**All members of the Edible Podded Legume Vegetables Crop Subgroup 6A including:** *Phaseolus* spp. including runner bean, snap bean, and wax bean; *Vigna* spp. including Asparagus bean, Chinese longbean, Moth bean and Yardlong bean; *Pisum* spp. including Dwarf pea, Edible-pod pea, Snow pea, Sugar snap pea; Jackbean; Pigeon pea; Soybean (immature seed); Sword bean;

**All members of the Dried Shelled Legume Vegetables (except soybeans) Crop Subgroup 6C including:** *Lupinus* spp. including Grain lupin, Sweet lupin, White lupin and White sweet lupin; *Phaseolus* spp. including Field bean, Kidney bean, Dry lima bean, Navy bean, Pinto bean, Tepary bean; *Vigna* spp. including Adzuki bean, Black-eyed pea, Catjang, Cowpea, Crowder pea, moth bean, Mung bean, Rice bean, Southern pea, Urd bean; *Pisum* spp. including dwarf pea, edible-podded pea, English pea, field pea, garden pea, Green pea, Snow pea, Sugar snap pea; Broad bean (dry); Chickpea (dry); Guar (dry); Lablab bean (dry); Lentil (dry); Pigeon pea (dry)

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

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
See crop listing above	Bean leaf beetles, Blister beetles, Cucumber beetles, Grape colaspis, Green cloverworms, Japanese beetles, Mexican bean beetles, Velvetbean caterpillars	0.6 to 1.2 (2 to 1)
	Corn earworms	0.6 to 1.8 (2 to 0.67)
	Alfalfa caterpillars, Colorado potato beetles, Flea beetles, Leafhoppers, Threecornered alfalfa hoppers, Thrips, Western bean cutworms	1.2 (1)
	Armyworms, Cutworms, European corn borers, Fall armyworms, Stink bugs, Tarnished plant bugs, Webworms	1.2 to 1.8 (1 to 0.67)
SPECIFIC DIRECTIONS: For Cutworm, this product is most effective against species which feed on the upper portions of the plant.		
	Alfalfa loopers (suppression), Cowpea curculios (suppression), Painted ladies (Thistle caterpillars), Pea leaf weevils, Pea weevils, Saltmarsh caterpillars, Woollybear caterpillars, Yellowstriped armyworms	1.8 (0.67)
	CA ONLY: Corn earworms (suppression), Limbean podborers (suppression), Lygus bugs (suppression), Stink bugs (suppression)	1.8 (0.67)

**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 7 lbs. of this product (6 paks) per acre per crop per year. Use on succulent, shelled peas and beans, (Crop Subgroup 6B) is prohibited. 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 crop or weeds are in bloom, limiting applications to times when bees are least active, e.g., within 2 hours of sunrise or sunset, will minimize risk to bees. Notifying beekeepers within 1 mile of treatment area at least 48 hours before product is applied will allow them to take additional steps to protect their bees. Do not apply to target crop 4 days prior to bloom.

**NON-CROPLAND**

Up to 2 applications can be made per year, but not more often than once every 14 days. Accurately mark swath to avoid over-application.

Site	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Conservation Reserve Program Acreage, Set-Aside Program Acreage, Wasteland, Rights-of-Way, Hedgerows, Ditchbanks, Roadsides	Black grass bugs	0.3 to 0.6 (3.7 to 2)
	Range caterpillars, Range crane flies	0.6 to 1.2 (2 to 1)
	Mormon crickets	0.6 (2)
	Ticks	1.2 (1)
SPECIFIC DIRECTIONS: This product will kill only Ticks present at the time of application and directly contacted by product.		

**RESTRICTIONS:** Do not apply within 14 days of grazing or harvest for forage or hay. Do not apply more than a total of 3.5 lbs. of this product (3 paks) per acre per year. **BEE CAUTION:** Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**OKRA**

Up to 4 applications can be made per year, but not more often than once every 6 days. Apply using ground equipment in sufficient volume to ensure good coverage. For Grasshopper, refer to "SPECIFIC PESTS ACROSS MULTIPLE SITES" section.

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Okra	Corn earworms, Stink bugs	1.2 to 1.8 (1 to 0.67)

**RESTRICTIONS:** Do not apply within 3 days of harvest. Do not apply more than a total of 7 lbs. of this product (6 paks) per acre per crop per year. **BEE CAUTION:** Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**PEANUTS**

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Peanuts	Blister beetles, Mexican bean beetles	0.6 to 1.2 (2 to 1)
	Alfalfa caterpillars, Bean leaf beetles, Cucumber beetles, Green cloverworms, Japanese beetles, Leafhoppers, Rednecked peanutworms, Threecornered alfalfa hoppers, Thrips, Velvetbean caterpillars	1.2 (1)
	SPECIFIC DIRECTIONS: For best results on Thrips, use directed or banded spray with hollow cone spray nozzles. Ensure adequate coverage for the underside of leaves.	
	Armyworms, Corn earworms, Fall armyworms, Stink bugs, Webworms	1.2 to 1.8 (1 to 0.67)
	Whitefringed beetle adults, Cutworms	2.4 (0.5)
SPECIFIC DIRECTIONS: For Cutworm, this product is most effective against species which feed on the upper portions of the plant.		
<b>RESTRICTIONS:</b> Observe "Plant Response Precautions". Do not apply within 14 days of harvest. Do not apply more than a total of 9.4 lbs. of this product (8 paks) per acre per crop per year. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.		

**PRICKLY PEAR CACTUS**

Up to 3 applications can be made per year, but not more often than once every 7 days. Apply using ground equipment in sufficient volume to ensure good coverage. For Grasshopper, refer to "SPECIFIC PESTS ACROSS MULTIPLE SITES" section.

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Prickly pear cactus	Cochineal scales (crawlers)	2.4 (0.5)

**RESTRICTIONS:** Do not apply within 3 days of harvest. Do not apply more than 7 lbs. of this product (6 paks) per acre per year. **BEE CAUTION:** Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**ROOT AND TUBER CROPS**

(Except Sugar beets and Sweet potatoes)

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
All members of the Root and Tuber Vegetables Crop Group 1 except Sugar beets and Sweet potatoes: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (garden), Beet (sugar, root), Burdock (edible), Canna (edible, Queensland arrowroot), Carrot, Cassava (bitter & sweet), Celeriac (celery root), Chayote (root), Chervil (turnip-rooted), Chicory, Chufa, Dasheen (taro), Ginger, Ginseng, Horseradish, Leren, Parsley (turnip-rooted), Parsnip, Potato, Radish, Oriental radish (daikon), Rutabaga, Salsify (black), Salsify (oyster plant), Salsify (Spanish), Skirret, Tanier (cocoyam), Turmeric, Turnip, Yam bean (jicama, manioc pea), Yam (true)	Flea beetles, Leafhoppers	0.6 to 1.2 (2 to 1)
	Armyworms, Aster leafhoppers, Colorado potato beetles, Corn earworms, Cutworms, European corn borers, Fall armyworms, Lace bugs, Lygus bugs, Spittlebugs, Stink bugs, Tarnished plant bugs	1.2 to 2.4 (1 to 0.5)
SPECIFIC DIRECTIONS: For Cutworm, this product is most effective against species which feed on the upper portions of the plant.		

**RESTRICTIONS:** Do not apply within 7 days of harvest. Do not apply more than 7 lbs. of this product (6 paks) per acre per crop per year. **BEE CAUTION:** Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**SUGAR BEETS**

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Sugar beets	Armyworms, Beet leaf beetles, Fall armyworms, Flea beetles, Leafhoppers, Webworms	1.2 to 1.8 (1 to 0.67)

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Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Sugar beets	Cutworms	1.8 (0.67)
	SPECIFIC DIRECTIONS: For Cutworm, this product is most effective against species which feed on the upper portions of the plant.	
<b>RESTRICTIONS:</b> Do not apply within 28 days of harvest for roots or forage. Do not apply more than a total of 3.5 lbs. of this product (3 paks) per acre per crop per year. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.		

**SWEET POTATOES**

For foliar spray, repeat applications as necessary up to a total of 8 times per year, but no more often than once every 7 days.

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Sweet potatoes	Com earworms, Cucumber beetles, Flea beetles, Sweet potato hornworms, Sweet potato weevils, Tortoise beetles, Whitefringed beetles	1.2 to 2.4 (1 to 0.5)
	Yellowstriped armyworms	2.4 (0.5)
<b>RESTRICTIONS:</b> Do not apply within 7 days of harvest. Do not apply more than a total of 9.4 lbs. of this product (8 paks) per acre per crop per year. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.		

**SMALL FRUITS AND BERRIES**

(REI : Grapes [East of the Rocky Mountains] 2 days for all activities except grape girdling and cane turning. EXCEPTION: The REI is 6 days for grape girdling and cane turning; Grapes [West of the Rocky Mountains] 6 days)

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
All members of the Caneberry Crop Subgroup 13-07A including: Blackberry ( <i>Rubus</i> spp. including Andean blackberry, Artic 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, Northern dewberry, olallieberry, Oregon evergreen berry, phenomenalberry,	European fruit lecaniums, European raspberry aphids, Flea beetles, Grape leaffolders, Grape leafrollers, Japanese beetles, Leafhoppers, Leafrollers, Meadow spittlebugs, Omnivorous leafliers, Rose chafers, Snowy tree crickets, Strawberry bud weevils, Strawberry clippers, Strawberry fruitworms, Strawberry leafrollers, Strawberry weevils, Western grapeleaf skeletonizers, Western yellowstriped armyworms	1.2 to 2.4 (1 to 0.5)
	SPECIFIC DIRECTIONS: In Grapes for Grape leaf folder, apply before the first brood larvae emerge from rolls.	

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Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
rangeberry, ravenberry, rossberry, Shawnee blackberry, Southern dewberry, Tayberry, Youngberry, Zazzamora, plus cultivars, varieties and/or hybrids of these); Raspberry ( <i>Rubus</i> spp. including Bababerry, Black raspberry, Black cap, Caneberry, Framboise, Frambueso, Himbeere, Keriberry, Mayberry, Purple raspberry, Red raspberry, Thimbleberry, Tulameen, Wild raspberry, Yellow raspberry, plus cultivars, varieties and/or hybrids of these). All members of the Bushberry Crop Subgroup 13-07B including: Aronia berry, Blueberry ( <i>Vaccinium</i> spp. - highbush, lowbush and cultivars and/or hybrids of these [= all blueberry species], chilean guava, Currant (black, buffalo, native, red), Elderberry, European barberry, Gooseberry, Highbrush cranberry, Honeysuckle (edible), Huckleberry, Jostaberry, Juneberry, Lingonberry, Salal, sea buckthorn, plus cultivars, varieties and/or hybrids of these. Cranberries; Grapes; Strawberries	Blueberry maggots, Cherry fruitworms, Cranberry fireworms, Cranberry fruitworms, Cranberry twig girdlers, Elm spanworms, Gypsy moths, Sparganothis worms, Tarnished plant bugs	1.8 to 2.4 (0.67 to 0.5)
	Eightspotted foresters, Cutworms, Grape berry moths, June beetles, Omnivorous leafrollers, Orange tortrix, Raspberry fruitworms, Raspberry sawflies, Redbanded leafrollers, Saltmarsh caterpillars	2.4 (0.5)
<b>RESTRICTIONS:</b> Do not apply within 7 days of harvest. Do not apply more than a total of 11.75 lbs. of this product (10 paks) per acre per crop per year. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. If weed or cover crop bloom is present, mow orchard floor or between rows prior to applying this product. Do not apply to target crop 4 days prior to bloom. <b>Note:</b> Use in Cranberries may kill shrimp and crabs. Do not use in areas where these are important resources. Carbaryl may injure Early dawn and Sunrise varieties of Strawberries. In Grapes, do not concentrate spray on the bunch or visible residues may result.		

**SUNFLOWERS**

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Sunflowers	Stem weevils, Sunflower beetles	1.2 to 1.8 (1 to 0.67)
	Armyworms, Cutworms, Fall armyworms, Sunflower moths	1.8 (0.67)
<b>SPECIFIC DIRECTIONS:</b> For Cutworm, this product is most effective against species which feed on the upper portions of the plant.		

**RESTRICTIONS:** 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 3.5 lbs. of this product (3 paks) per acre per crop per year. **BEE CAUTION:** Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.

**TOBACCO**

(REI = 48 hours)

**Plant Bed and Field Treatments** — Repeat treatments as necessary up to a total of 4 times per crop per year, but not more often than once every 7 days.

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Tobacco	Budworms, Fall armyworms, Hornworms, Japanese beetles, June beetles, Suckflies, Tobacco flea beetles	1.2 to 2.4 (1 to 0.5)
<p><b>SPECIFIC DIRECTIONS:</b> 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.</p>		
<p><b>RESTRICTIONS:</b> Do not apply within 2 days of harvest. Do not apply more than a total of 9.4 lbs. of this product (8 paks) per acre per crop per year. Observe "Plant Response Precautions". <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. Do not apply to target crop 4 days prior to bloom.</p>		

**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.

**Citrus**

(REI: All States except CA = 12 hours; CA = 3 days for application rates greater than or equal to 6.25 lbs. of this product (5 paks) per acre.)

Repeat applications as necessary up to a total of 8 times per year, but not more often than once every 14 days.

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
All members of the Citrus Fruits Crop Group 10 including: Calamondin, Citrus citron, Citrus hybrids ( <i>Citrus</i> spp., includes chironja, tangelo, and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (sweet and sour), Pummelo, Satsuma mandarin, White sapote ( <i>Casimiroa</i> spp.), and other cultivars and/or hybrids of these.	Avocado leafrollers, California orangedogs, Citrus cutworms, Fruitree leafrollers, Orange tortrix, Western tussock moths	2.4 to 3.5 (0.5 to 0.3)
	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])	3.5 to 5.9 (0.3 to 0.2)
	<b>SPECIFIC DIRECTIONS:</b> For Scale, apply when crawlers are present. For best results on Eriophyid mites, including Citrus rust mites, apply when pest populations are low.	
	Apopka weevils (adult), Citrus root weevils (adults), Fuller rose beetles, Little leaf notchers (adult)	5.9 (0.2)
	CA Only: California red scales, Yellow scales	5.9 to 14.1 (0.2 to 0.08)
<p><b>SPECIFIC DIRECTIONS:</b> Do not make more than 1 application per crop per year in California for California red scale. Apply when crawlers are present.</p>		
<p><b>RESTRICTIONS:</b> Do not apply within 5 days of harvest. In California, do not apply more than 14.1 lbs. of this product (12 paks) per acre per application. For all other states, do not apply more than 5.9 lbs. of this product (5 paks) per acre per application. Do not apply more than a total of 23.5 lbs. of this product (20 paks) per acre per crop per year in all states including California. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. Mowing weed or cover crop bloom prior to applying this product will reduce hazard to bees. Do not apply to target crop 4 days prior to bloom.</p>		

**Olives**

(REI = 72 hours)

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Olives	Scale insects (Black scales, Olive scales)	5.9 to 8.8 (0.2 to 0.13)
<p><b>RESTRICTIONS:</b> Do not apply within 14 days of harvest. Do not apply more than a total of 17.6 lbs. of this product (15 paks) per acre per crop per year. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. If weed or cover crop bloom is present, mow orchard floor or between rows prior to applying this product. Do not apply to target crop 4 days prior to bloom.</p>		

**Pome Fruits**

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Members of the Pome Fruits Group 11 including: Apples, Crabapples, Pears, Loquats, Mayhaw, Oriental pears	White apple leafhoppers	0.6 to 1.8 (2 to 0.67)
	Apple aphids, Codling moths	1.2 to 3.5 (1 to 0.3)
	Apple aphids, Apple maggots, Apple mealybugs, Apple rust mites, Bagworms, California pearslugs (Pear sawflies), European apple sawflies, Eyespotted bud moths, Fruitree leafrollers, Gypsy moths, Japanese beetles, Lesser appleworms, Lygus bugs, Orange tortrix, Pearleaf blister mites, Pear psyllas, Pear rust mites, Periodical cicadas, Plum curculios, Redbanded leafrollers, Rosy apple aphids, Scale insects (Forbes scales, Lecanium scales, San Jose scales), Tarnished plant bugs, Tentiform leafminers, Woolly apple aphids, Yellowheaded fireworms	1.8 to 3.5 (0.67 to 0.3)
<p><b>SPECIFIC DIRECTIONS:</b> On Apples, avoid use during the period from full bloom until 30 days after full bloom unless fruit thinning is desired. Use for pesticial activity during this period also may result in fruit removal. For Psylla, apply when eggs hatch or young nymphs are present. For Scale, apply when crawlers are present.</p>		
Apples Only, for fruit thinning	—	1.2 to 3.5 (1 to 0.3)
<p><b>SPECIFIC DIRECTIONS:</b> For easily thinned varieties, apply 0.3 to 0.6 lb. per 100 gals. of spray mixture. For difficult-to-thin varieties, apply 0.6 to 1.2 lbs. per 100 gals. of spray mixture. Apply between 10 and 25 days after full bloom. Factors such as tree age, variety, nutrition, previous crop, pruning, bloom and degree of set favor excessive fruit thinning with this product. Exercise caution to avoid possible yield reduction. Rates may vary depending on variety and local orchard conditions.</p> <p><b>PRECAUTIONS:</b> The use of this product may result in fruit deformity under certain environmental conditions. Before using on any variety of Apples, the user must weigh the risk versus benefits when using this product, particularly when using between 80% petal fall and 6 mm fruit size. Red Delicious are more sensitive to this phenomenon and in particular, the varieties Bisbee, Red Chief and Vallee Spur are very susceptible to conditions causing fruit deformity. Precipitation and temperatures below 65°F increases the possibility of fruit deformity. The use with Summer spray oils</p>		

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Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Apples Only, for fruit thinning (Cont.)	and wetting agents may increase the risk of fruit deformity and injury. Consult with fruit thinning experts in your area for advice on using this product on specific apple varieties under local growing conditions or other questions. Observe all restrictions on the use of this product for apple thinning.	
<p><b>RESTRICTIONS:</b> 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 17.6 lbs. of this product (15 paks) per acre per crop per year. Do not make more than a total of 8 applications per crop per year.</p> <p><b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. If weed or cover crop bloom is present, mow orchard floor or between rows prior to applying this product. Do not apply to target crop 4 days prior to bloom.</p> <p><b>FOR APPLE THINNING USE:</b> Do not apply during bloom. Remove bee hives from orchard to be treated before applying this product. Removing bee hives from adjacent orchards will further minimize risk to bees.</p>		

**SPRAY DRIFT MANAGEMENT**

For airblast application, follow the following drift management practices:

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

**Stone Fruits**

Repeat applications as necessary up to a total of 3 times per crop per year, but not more often than once every 7 days. An additional application at the dormant or delayed dormant timing may be made.

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
All members of the Stone Fruit Crop Group 12 including: Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune (fresh)	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, Redbanded leafrollers, Rose chafers, Scale insects (Brown soft scales, Forbes scales, Lecanium scales, Olive scales, Oystershell scales, San Jose scales), Tarnished plant bugs, Tussock moths, Variegated leafrollers	2.4 to 3.5 (0.5 to 0.3)
	<p><b>SPECIFIC DIRECTIONS:</b> For best results on Scale, apply when crawlers are present. For Lesser peachtree borers, best results have been found by thoroughly spraying limbs and tree trunks at weekly intervals during moth flight.</p>	
	Peach twig borers, Scale insects (Brown soft scales, Forbes scales, Lecanium scales, Olive scales, Oystershell scales, San Jose scales)	4.7 to 5.9 (0.25 to 2)

(Continued)

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
All members of the Stone Fruit Crop Group 12 including: Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune (fresh and dried) (Cont.)	<p><b>SPECIFIC DIRECTIONS:</b> Apply in combination with a recommended dormant oil at the dormant or delayed dormant timing. Refer to the dormant oil product label for additional use directions and restrictions.</p> <p><b>CA ONLY:</b> 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</p>	3.5 to 4.7 (0.3 to 0.25)
	<p><b>SPECIFIC DIRECTIONS:</b> Repeat applications as necessary up to a total of 3 times per crop per year but no more often than once every 14 days. An additional application at the dormant or delayed dormant timing may be made. For best results on Scale, apply when crawlers are present.</p>	
<p><b>RESTRICTIONS:</b> Do not apply more than a total of 10.6 lbs. of this product (9 paks) per acre per crop per year during the production season. Do not apply more than a total of 5.9 lbs. of this product (5 paks) per acre at the dormant or delayed dormant timing. Do not apply more than a total of 16.2 lbs. of this product (14 paks) per acre per crop per year.</p> <p><b>All States except CA:</b> Do not apply more than 3.5 lbs. of this product (3 paks) per acre per application during the production season. Do not apply within 3 days of harvest.</p> <p><b>CA Only:</b> Do not apply more than 4.7 lbs. of this product (4 paks) per acre per application during the production season. Do not apply within 1 day of harvest.</p> <p><b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. If weed or cover crop bloom is present, mow orchard floor or between rows prior to applying this product. Do not apply to target crop 4 days prior to bloom.</p>		

**TREE NUT CROPS**

Repeat applications as necessary up to a total of 4 times per crop per year (including any applications at the dormant or delayed dormant timing) at minimum 7-day intervals.

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, density and other factors.

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Pistachios	Brown soft scales, Lecanium scales, Navel orangeworms	3.5 to 5.9 (0.3 to 0.2)
	<p><b>SPECIFIC DIRECTIONS:</b> For Scale, apply when crawlers are present.</p>	
	Scale insects	4.7 to 5.9 (0.25 to 0.2)
<p><b>SPECIFIC DIRECTIONS:</b> For dormant or delayed dormant timing, apply in combination with a recommended oil. Refer to the dormant oil product label for additional use directions and restrictions.</p>		
<p><b>RESTRICTIONS:</b> Do not apply within 14 days of harvest. Do not apply more than 5.9 lbs. of this product (5 paks) per acre per application. Do not apply more than a total of 17.6 lbs. of this product (15 paks) per acre per crop per year, including any application at the dormant or delayed dormant timing. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. If weed or cover crop bloom is present, mow orchard floor or between rows prior to applying this product. Do not apply to target crop 4 days prior to bloom.</p>		

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**TREE NUT CROPS (Cont.)**

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
All members of the Tree Nuts Crop Group 14 including: Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, Walnut (including black and English (Persian) walnuts).	Black margined aphids, Calico scales, Codling moths, European fruit lecaniums, Fall webworms, Filbert aphids, Filbert leafrollers, Filbertworms, Frosted scales, Fruittree leafrollers, Hickory shuckworms, Lesser webworms, Navel orangeworms, Peach twig borers, Pecan leaf phylloxeras, Pecan stem phylloxeras, Pecan nut casebearers, Pecan spittlebugs, Pecan weevils, San Jose scales, Twig girdlers, Walnut caterpillars	2.4 to 5.9 (0.5 to 0.2)
	SPECIFIC DIRECTIONS: 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 average cross-sectional diameters of developing nuts are 0.5 to 0.75 inch and again during middle or late June as needed.	
	Chestnut weevils, European earwigs	4.7 to 5.9 (0.25 to 0.2)
SPECIFIC DIRECTIONS: For Chestnut weevils, best results have been found with 4 applications at weekly intervals beginning in late July. The last application should be made prior to shuck split. For European earwigs, thorough coverage of trunks, branches and nuts is needed for best results.		
Almonds	Peach twig borers, Scale insects	4.7 to 5.9 (0.25 to 0.2)
	SPECIFIC DIRECTIONS: For dormant or delayed dormant timing, apply in combination with a recommended dormant oil. Refer to the dormant oil product label for additional use directions and restrictions.	
<b>RESTRICTIONS:</b> Do not apply within 14 days of harvest. Do not apply more than a total of 17.6 lbs. of this product (15 paks) per acre per crop per year. <b>BEE CAUTION:</b> Do not apply this product to target crops or weeds in bloom. If weed or cover crop bloom is present, mow orchard floor or between rows prior to applying this product. Do not apply to target crop 4 days prior to bloom.		

**FORESTED AREA AND RANGELAND TREES**

Repeat applications as needed up to a total of 2 times per year at minimum 7-day (for foliar) and 6-month (for direct trunk treatment) intervals.

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Non-urban forests, Tree plantations, Planted Christmas trees, Parks, Rural shelter belts, Rangeland trees	Ants*, Apple aphids, Armyworms, Ash whiteflies, Azalea leafminers, Bagworms, Balsam twig aphids, Birch leafminers, Blister beetles, Boxelder bugs, Boxwood leafminers, Brown tail moths, Cankerworms, Catalpa sphinx, Chiggers**, Cooley spruce gall adelgids, Cutworms, Cypress tip moths, Douglas-fir tussock moths, Eastern spruce gall adelgids, Elm leaf aphids, Elm leaf beetles, Elm spanworms, Eriophyid mites, European pine shoot moths, Fall armyworms, Flea beetles, Fuchsia gall mites, Fuller rose beetles, Gall midges, Gall wasps, Greenstriped mapleworms, Grasshoppers, Hackberry nipplegall makers, Holly bud moths, Holly leafminers, Jackpine budworms, Japanese beetles, Jeffrey pine needleminers, June beetles, Lace bugs, Leafhoppers, Leafrollers, Locust borers, Maple leafcutters, Mealybugs, Mimosa webworms, Nantucket pine tip moths, Oak leafminers, Oak moths, Oak skeletonizers, Oakworm complex, Oleander caterpillars, Olive ash borers, Orangestriped oakworms, Periodical cicadas, Pine loopers, Pine sawflies, Pine spittlebugs, Pitch pine tip moths, Plant bugs, Poinsettia hornworms, Psyllids, Puss caterpillars, Redhumped oakworms, Rose aphids, Rose chafers, Rose slugs, Saddled prominents, Sawflies (exposed), Scale insects (crawlers), Sowbugs, Spiney elm caterpillars, Springtails, Spruce budworms, Spruce needleminers, 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	1.2 (1)
SPECIFIC DIRECTIONS: Obtain thorough coverage of upper and lower leaf surfaces. The addition of a sticker may improve product performance. To kill Scale insects, treat trunks, stems and twigs in addition to plant foliage. For best results on Worm, treat when pests are small. Applications against Maple leafcutters on Sugar maple should be made when larvae are in 2nd instar after mining and as cases are being formed.		

(Continued)

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Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Non-urban forests, Tree plantations, Planted Christmas trees, Parks, Rural shelter belts, Rangeland trees	Gypsy moths	0.8 to 1.2 (1.4 to 1)
	SPECIFIC DIRECTIONS: Use the higher rate for heavy infestations of Gypsy moths. Obtain thorough coverage of upper and lower leaf surfaces. The addition of a sticker may improve product performance.	
	Ticks	1.2 (1)
	SPECIFIC DIRECTIONS: Will kill only Ticks present at time of application and directly contacted by product.	
	Elm bark beetles, Ips engraver beetles, Mountain pine beetles, Roundheaded pine beetles, Spruce beetles, Western pine beetles	2.8 ozs. per gal. (1 pak per 6.7 gals.)
SPECIFIC DIRECTIONS: <b>Direct Trunk Treatment</b> - Effective as a preventative treatment only. Apply 1 gal. of spray per 50 sq. ft. of bark prior to Beetle flight or host-tree attack. Treat tree trunk from ground level up, until trunk diameter is less than 5 inches. For Elm bark beetles, apply approximately 20 to 30 gals. of spray mixture for each 50 ft. of Elm tree for thorough coverage of all bark surfaces on trunks, limbs, and twigs.		
<b>RESTRICTIONS:</b> Observe "Plant Response Precautions". Do not use on syrup-producing Sugar maples where sap is harvested. Do not make more than 2 foliar applications and 2 direct trunk treatments per year. Do not enter or allow others to enter treated areas until sprays have dried. <b>BEE CAUTION:</b> Do not apply this product to plants in bloom. * Except carpenter, harvester and Pharaoh. ** Will kill only pests that are present at the time of application and directly contacted by this product.		

**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 rainfall is less than 25 inches a year. Notify workers of the application and restricted entry interval by warning them orally and by posting warning signs at entrances to treated area. Note: Information on average annual rainfall for your area is available from any nearby weather bureau, such as one located at a local airport or one affiliated with the National Oceanographic and Atmospheric Administration (NOAA).)

Repeat applications as necessary up to a total of 6 times per year for foliar application and 2 times per year for direct trunk treatment at 7-day and 6-month intervals, respectively.

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

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Ornamental Trees and Plants: Roses, Flowers, Other Herbaceous plants, Woody plants, Evergreens, Shrubs	Ants*, Apple aphids, Armyworms, Ash whiteflies, Azalea leafminers, Bagworms, Balsam twig aphids, Birch leafminers, Blister beetles, Boxelder bugs, Boxwood leafminers, Browntail moths, Cankerworms, Catalpa sphinx, Chiggers**, Cooley spruce gall adelgids, Cutworms, Cypress tip moths, Douglas-fir tussock moths, Eastern spruce gall adelgids, Elm leaf aphids, Elm leaf beetles, Elm spanworms, Eriophyid mites, European pine shoot moths, Fall armyworms, Flea beetles, Fuchsia gall mites, Fuller rose beetles, Gall midges, Gall wasps, Greenstriped mapleworms, Grasshoppers, Hackberry nipplegall makers, Holly bud moths, Holly leafminers,	1.2 (1)

(Continued)

**ORNAMENTAL TREE AND PLANTS (Cont.)**

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Ornamental Trees and Plants: Roses, Flowers, Other Herbaceous plants, Woody plants, Evergreens, Shrubs (Cont.)	Jackpine budworms, Japanese beetles, Jeffrey pine needleminers, June beetles, Lace bugs, Leafhoppers, Leafrollers, Locust borers, Maple leafcutters, Mealybugs, Mimosa webworms, Nantucket pine tip moths, Oak leafminers, Oak moths, Oak skeletonizers, Oakworm complex, Oleander caterpillars, Olive ash borers, Orange-striped oakworms, Periodical cicadas, Pine loopers, Pine sawflies, Pine spittlebugs, Pitch pine tip moths, Plant bugs, Poinsettia hornworms, Psyllids, Puss caterpillars, Redhumped oakworms, Rose aphids, Rose chafers, Rose slugs, Saddle prominent, Sawflies (exposed), Scale insects (crawlers), Sowbugs, Spiney elm caterpillars, Springtails, Spruce budworms, Spruce needleminers, 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	1.2 (1)
	SPECIFIC DIRECTIONS: Obtain thorough coverage of upper and lower leaf surfaces. The addition of a sticker may improve product performance. To kill Scale insects, treat trunks, stems and twigs in addition to plant foliage. For best results on Worm, treat when pests are small. Applications against Maple leafcutters on Sugar maple should be made when larvae are in 2nd instar after mining and as cases are being formed.	
	Gypsy moths	0.8 to 1.2 (1.4 to 1)
	SPECIFIC DIRECTIONS: For Gypsy moth, use the higher rate for heavy infestations. Obtain thorough coverage of upper and lower leaf surfaces. The addition of a sticker may improve product performance.	
	Ticks**	1.2 (1)
Elm bark beetles, Ips engraver beetles, Mountain pine beetles, Roundheaded pine beetles, Spruce beetles, Western pine beetles	2.8 ozs. per gal. (1 pak per 6.7 gals.)	
	SPECIFIC DIRECTIONS: <b>Direct Trunk Treatment</b> - Effective as a preventative treatment only. Apply 1 gal. of spray per 50 sq. ft. of bark prior to Beetle flight or host-tree attack. Treat tree trunk from ground level up, until trunk diameter is less than 5 inches. For Elm bark beetle, apply approximately 20 to 30 gals. of spray mixture for each 50 ft. of Elm tree for thorough coverage of all bark surfaces on trunks, limbs, and twigs.	
<b>RESTRICTIONS:</b> Observe "Plant Response Precautions". Do not use on syrup-producing Sugar maples where sap is harvested. Do not make more than a total of 6 foliar and 2 direct trunk treatments per year. Do not enter or allow others to enter treated areas until sprays have dried. <b>BEE CAUTION:</b> Do not apply this product to plants in bloom. * Except carpenter, harvester and Pharaoh. ** Will kill only pests that are present at the time of application and directly contacted by this product.		

**TURFGRASS**

(REI: Turfgrass grown for Sod production [Sod farms] = 24 hours)  
 Do not apply more than a total of 18.8 lbs. of this product (16 paks) per acre per year. Do not apply by air or chemigation.  
 Broadcast applications to Turfgrass are permitted only on golf courses, 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.

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
Golf turf, Sports fields, Sod farms, Domestic and Commercial lawns, Cemeteries, Parks, Campsites, Recreational areas	Ants*, Armyworms, Centipedes, Chiggers, Cutworms, Earwigs, Essex skippers, European chafers, Fall armyworms, Fiery skippers, Grasshoppers, Green June beetle larvae, Leafhoppers, Lucerne moths, Millipedes, Mosquitoes (adults)**, Scarab beetle adults (May beetles, June beetles, Japanese beetles, Green June beetles), Sowbugs, Spittlebugs, Springtails, Yellowstriped armyworms	2.4 to 4.75 (0.5 to 0.25)
	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), apply when Grubs are feeding near the soil surface. Water or irrigate Turfgrass soon after treatment.	
	Ticks**	1.2 (1)
	Centipedes**, Chiggers**, Earwigs**	4.75 (0.25)

**RESTRICTION:** Repeat applications as necessary up to a total of 4 times per year but not more often than once every 7 days. Do not enter or allow others to enter treated areas until sprays have dried. **BEE CAUTION:** Do not apply this product to plants in bloom.

\* Except carpenter, harvester and Pharaoh.

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

Golf turf, Sports fields, Sod farms, Domestic and Commercial lawns, Cemeteries, Parks, Campsites, Recreational areas	Chinch bugs, Sod webworms (Lawn moths)	7 to 9.4 (1/6 to 1/6)
	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 ateniens beetle larvae, Hyperodes weevils (Bluegrass weevil) larvae, Springtails	9.4 (1/6)
	SPECIFIC DIRECTIONS: For European crane fly: Treatments should be applied in early Spring (April 1 to April 15) or at timing as recommended by local Agricultural Extension Service Agents. For White grub: Apply when Grubs are feeding near the soil surface, usually during late March through May or July through early September or at timing as recommended by local Agricultural Extension Service Agent. Water or irrigate turfgrass within 48 hours after treatment.	
	Fleas*	9.4 (1/6)

**RESTRICTIONS:** Repeat applications as necessary up to 2 times per year but not more than once every 7 days. Do not enter or allow others to enter treated areas until sprays have dried. **BEE CAUTION:** Do not apply this product to plants in bloom.

\* Will kill only pest present at time of application and directly contacted by product.

**SPECIFIC PESTS CROSS MULTIPLE SITES**

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**Grasshoppers**

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
All crops on this label	Grasshoppers	0.6 to 1.8 (2 to 0.67)
SPECIFIC DIRECTIONS: Apply 0.6 to 0.8 lb. of this product per acre for nymphs on small plants or sparse vegetation. Apply 1.2 to 1.8 lbs. of this product per acre for mature grasshoppers or applications to dense foliage. Be certain spray volumes are appropriate to assure adequate coverage.		

**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.

**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. Will kill only Ticks present at the time of application and directly contacted by product. Only up to 4 applications per year can be made.

Crop	Pest	Lbs. of This Product Per Acre (Acres Treated per Water Soluble Pak)
All crops/sites on this label including: Pastures, Forested areas, Wasteland, Rights-of-Way, Hedgerows, Ditchbanks, Roadsides, Set-Aside and Conservation Reserve Program acreage, Ornamental Trees and Plants, Turfgrass*	<i>Ixodes</i> spp. (Deer ticks, Bear ticks, Black legged ticks), <i>Amblyomma</i> spp. (Lone star ticks)	1.2 (1)
SPECIFIC DIRECTIONS: To kill juvenile Ticks, apply in late Spring or early Summer. Kill of Adult Ticks can be obtained with late Summer of Fall applications. Treat entire area and perimeter areas where exposure to Ticks may occur. Ticks may be reintroduced from surrounding areas on host animals. Retreat as necessary to maintain low population levels.		

**RESTRICTIONS:** 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 1.2 lbs. of this product per acre (1 pak/A). Observe all use restrictions. Do not enter or allow others to enter treated areas until sprays have dried. Do not make more than 4 applications per year for Ticks.

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

**Imported Fire Ants**

Crop/Site	Pest	This Product Per Volume of Water
All crops/sites on this label	Imported fire ants	1 pak per 66.7 gals.
SPECIFIC DIRECTIONS: Drench Application - To kill active mounds, apply a total of 2 gals. of the diluted solution over the surface of each mound or at least 1 quart per 6 inches of mound diameter using a bucket, can or other appropriate equipment. Thoroughly wet mound and surrounding areas to a 4-ft. diameter (12 sq. ft.). Do not disturb mound prior to treatment. Pour solution from a height of about 3 ft. to give sufficient force to break mound apex and flow into ant tunnels. For best results, apply in cool weather (65 to 80°F) or in early morning or late evening hours. Repeat application if mound activity resumes after 30 days. Treat new mounds as they appear. Pressurized sprays may disturb the Ants and cause migration, reducing product effectiveness.		

(Continued)

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**Imported Fire Ants (Cont.)**

Crop/Site	Pest	This Product Per Volume of Water
All crops/sites on this label	Imported fire ants (foraging)	1 pak per 66.7 gals.
	SPECIFIC DIRECTIONS: <b>Broadcast Application (Outdoor Use Only)*</b> : Avoid contact with foliage and treat only the growing media when using on bedding plants. Do not make more than one application per year.	
<b>RESTRICTIONS</b> : Do not enter or allow others to enter treated areas until sprays have dried. For outdoor use only. Do not use in greenhouses. <b>Note</b> : Do not use on any food crop not listed on this label. Refer to specific crop section for additional restrictions. * Broadcast applications to Turfgrass are permitted only on golf courses, cemeteries, and commercial landscapes. Applications to all other lawns or turf (residential settings) are limited to spot treatments.		

**NUISANCE PESTS**

For use as a perimeter treatment to kill the listed nuisance pests. Up to 4 applications can be made per year at minimum 7-day intervals.

Pest	Rate of This Product
Ants*, Bees*, Brown dog ticks*, Centipedes*, Cockroaches*, Crickets, Darkling beetles (Lesser mealworms or Litter beetles), Earwigs, Firebrats, Fleas*, Millipedes, Scorpions*, Silverfish*, Spiders*, Wasps*	1 pak per 13 gals.
<b>SPECIFIC DIRECTIONS</b> : Observe "Plant Response Precautions". Apply as a coarse, wet spray in a band 6 to 10 ft. wide around the outside perimeter of buildings contacting as many pests as possible. Confine applications to areas immediately adjacent to the building. Direct application to the structure should be minimal and restricted to cracks, crevices and areas where insects tend to congregat�. For use in and around flower beds and ornamental plantings, apply as a coarse, wet spray in and around plant beds.	
<b>RESTRICTIONS</b> : Do not make more than 4 applications per year. Do not enter or allow others to enter treated areas until sprays have dried. <b>Note</b> : Staining may occur on certain surfaces such as stucco, brick, cinder block, wood, fabrics and carpet. Spray deposits on painted or stained surfaces of finishes (e.g., cars, house trailers, boats, etc.) should be removed immediately by washing to prevent discoloration. Avoid application to surfaces where visible spray residues are objectionable. Staining of fabrics and carpet may be permanent. For outdoor use only. * Will kill only pest present at time of application and directly contacted by product.	

**STORAGE AND DISPOSAL**

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

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

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

**CONTAINER DISPOSAL:**

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

**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 not 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.