

19713-363

4-2-2008

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

April 2, 2008

Drexel Chemical Company  
P.O. Box 13327  
Memphis, TN 38113

Subject: Drexel Carbaryl 85 Sprayable  
EPA Reg. No. 19713-363  
Application for Amended Registration-Cotton Removal  
Your Application Dated February 20, 2008

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 with the following changes:

- Under PPE specify "Some materials that are chemical-resistant to this product are waterproof materials. . . If you want more options, follow the instructions for category A on the EPA chemical resistance category selection chart.
- Under DIRECTIONS FOR USE, specify how much product each packet contains. Specify not to break open or use partial contents of packets. Add a chart providing general guidance as to how many packets needed to treat x acres at x application rate, *e.g.*, at an application rate of 1.2 pounds of product per acre, XX packets in XX water will treat XX acres.
- On the front panel specify "For control of the listed insect pests."
- Under SPRAY PREPARATION revise to read "...add the required number of packets."
- Under SPRAY PREPARATION delete the sentence "Do not store spray mixture for prolonged periods." Alternatively, define what is meant by the term "prolonged."

- Revise the heading GENERAL INFORMATION to read USE INFORMATION.
- Under DIRECTIONS FOR USE add the statement “Do not apply this product through any type of irrigation system.
- Under DIRECTIONS FOR USE add the sentence “Do not apply by air.”
- Revise the sentence “Apply when insects or their damage appear and repeat 7 to 14 days later if necessary.” to read “Apply when insects or their damage appear and repeat 7 to 14 days later if necessary, unless otherwise indicated in the directions for use.
- Revise PRE-HARVEST AND GRAZING USE INFORMATION AND LIMITATIONS to read PRE-HARVEST AND GRAZING USE INFORMATION AND RESTRICTIONS.
- Under the heading PRE-HARVEST AND GRAZING USE... add “Do not plant rotational food and feed crops not listed on this label or other carbaryl labels in carbaryl treated soil.”
- Under the heading PRE-HARVEST AND GRAZING USE... delete the sentence “Application may be made without removing livestock from the area treated.”
- Under the heading PRE-HARVEST AND GRAZING USE... change “Do not use reclaimed irrigation water from crops treated with carbaryl on upland crops for which carbaryl tolerances are not established.: to read “Do not use reclaimed irrigation water from crops treated with carbaryl on crops for which carbaryl tolerances are not established.”
- For each crop, under RESTRICTIONS AND PRECAUTIONS specify “Do not apply more than *xx* lb a/A **per year.**”
- Under FORESTED AREAS AND RANGELAND TREES and TREES AND ORNAMENTALS, revise “\*\*Will only kill ticks present at the time...” to read “Non-residual treatment. Will only kill ticks present at the time...”
- Under TURFGRASS, add directions for use in terms of *XX* per 1000 sq. ft for the spot treatment.
- Under TICKS WHICH MAY VECTOR LYME DISEASE add “Non-residual treatment”.
- Under TICKS WHICH MAY VECTOR LYME DISEASE, substitute the word “control” with “kill”.

- Under NUISANCE PEST CONTROL, revise the directions for use to specify how many soluble packets in XX amount of water to make a 1% solution.
- Under NUISANCE PEST CONTROL revise “For use as a perimeter treatment to kill...” to read “For use as a non-residual perimeter treatment to kill...”
- Under NUISANCE PEST CONTROL, revise fleas, scorpions and spiders to read fleas\*\*, scorpions\*\*, and spiders\*\*.
- Under NUISANCE PEST CONTROL revise \*\*Will only kill pests present at the time of application... to read “\*\*Non-residential treatment. Will only kill pests present at the time of application...”
- Under ADULT MOSQUITO add “Non-residual treatment.” Revise the application rate to reflect a maximum of 0.2 lb ai/A, or delete the entire section. Specify number of packets etc to treat X acres. Must add “Do not apply more than 0.2 pounds active ingredient per acre per application. Do not apply in public health programs.”
- Under IMPORTED FIRE ANTS, since packets cannot be opened, instead of stating 8 grams per gallon, revise to reflect x packets in y amount of water will treat z mounds. Alternatively, delete the directions for use.
- Under IMPORTED FIRE ANTS, delete the directions for use at 1.8 pounds per 100 gallons. There are no use sites given. The product cannot be used as a broadcast treatment for fire ants.
- Under lawns, revise “”Except pharaoh and carpenter ants” to read “Except pharaoh ants and carpenter ants.”
- Under WARRANTY, revise “OUR RECOMMENDATIONS FOR USE...” to read “The directions for use...”
- Specify the net contents of the product on the label.

A stamped copy is enclosed for your records. Please submit on copy of the final printed label before releasing the product for shipment.

Approval of this label does not constitute approval of your application for reregistration of this product. Product reregistration is currently pending, and future labeling changes and/or additional data may be required.

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If you have questions, contact me at [Edwards.joanne@epa.gov](mailto:Edwards.joanne@epa.gov), or by telephone at (703) 305-6736.

Sincerely,



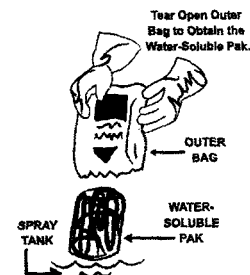
Joanne S. Edwards, Entomologist  
Insecticide-Rodenticide Branch  
Registration Division (7505C)

ACCOUNTED  
WITH COMMENTS  
In EPA Letter Dated

7-2-08

19713-363

Drexel



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# Carbaryl 85 Sprayable

For Agricultural or Commercial Use Only

For control of insect pests.

<b>ACTIVE INGREDIENT:</b>	<b>By Wt.</b>
Carbaryl .....	85.0%
<b>OTHER INGREDIENTS:</b> .....	<b>15.0%</b>
<b>TOTAL:</b> .....	<b>100.0%</b>

## 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 this label, find someone to explain it to you in detail.)

See **FIRST AID** Below

EPA Reg. No. 19713-363

EPA Est. No. 19713-GA-001 Net Contents: \_\_\_\_\_

FIRST AID
<p><b>IF SWALLOWED:</b></p> <ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately 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>
<p><b>IF IN EYES:</b></p> <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> </ul>
<p><b>IF ON SKIN OR CLOTHING:</b></p> <ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> </ul>
<p><b>IF INHALED:</b></p> <ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> </ul>
<p>Call a poison control center or doctor for treatment advice. 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.</p>
<p><b>GENERAL</b></p> <p>Contact a physician immediately in all cases of suspected poisoning. Transport to a physician or hospital immediately and show a copy of this label to the physician. If poisoning is suspected in animals, contact a veterinarian.</p>
<p><b>ANTIDOTE STATEMENT</b></p> <p>Atropine sulfate is highly effective as an antidote. Narcotics and other sedatives should not be used. Further, drugs like 2-PAM (pyridine-2-aldoxime methiodide) are NOT recommended. See <b>NOTE TO PHYSICIAN</b>.</p>
<p><b>NOTE TO PHYSICIAN:</b> Treat symptomatically. Overexposure to materials other than this product may have occurred.</p> <p>Carbaryl is an N-methyl carbamate insecticide, which is a cholinesterase inhibitor. Overexposure to this substance may cause toxic signs and symptoms due to stimulation of the cholinergic nervous system. These effects of overexposure are spontaneously and rapidly reversible. Gastric lavage may be used if this product has been swallowed. Carbaryl poisoning may occur rapidly after ingestion and prompt removal of stomach contents is indicated.</p>

(Continued)

### NOTE TO PHYSICIAN

Specific treatment consists of parenteral atropine sulfate. Caution should be maintained to prevent over-atropinization. Improve tissue oxygenation as much as possible before administering atropine to minimize the risk of ventricular fibrillation. Mild cases may be given 1 to 2 mg intramuscularly every 10 minutes until full atropinization has been achieved and repeated thereafter whenever symptoms reappear. Severe cases should be given 2 to 4 mg intravenously every 10 minutes until fully atropinized, then intramuscularly every 30 to 60 minutes as needed to maintain the effect for at least 12 hours. Dosages for children should be appropriately reduced. Complete recovery from overexposure is to be expected within 24 hours. Narcotics and other sedatives should not be used. Further, drugs like 2-PAM (pyridine-2-aldoxime methiodide) are NOT recommended. To aid in confirmation of diagnosis, urine sample should be obtained within 24 hours of exposure and immediately frozen.

### PRECAUTIONARY STATEMENTS

#### Hazards to Humans and Domestic Animals

**WARNING:** May be fatal if swallowed. Causes moderate eye irritation. Do not get in eyes or on clothing.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart. **Handlers using airblast equipment or high pressure handwand equipment must wear:** Coveralls over long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride, 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 made of any waterproof material such as polyethylene or polyvinyl chloride, chemical-resistant apron, if mixing, loading, drenching, dipping, or cleaning equipment or spills; plus 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 for all handlers, except mixers and loaders.

Application by air or through irrigation system is prohibited. See engineering controls for additional requirements and exceptions.

Follow manufacturer's instructions for cleaning/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.

Manufactured By:

**Drexel Chemical Company**

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

SINCE 1972

363SP-0907 Pending (RED)

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### ENGINEERING CONTROLS

Water-soluble packaging when used correctly qualifies as a closed mixing/loading system under the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)].

#### Mixers and loaders using water-soluble packets must:

- wear the PPE on this labeling for mixers/loaders, however, they do NOT need to wear a respirator, and
- be provided and have immediately available for 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** or to **Olives in any state** 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-sleeve shirt, long pants, shoes, and socks.
- either wear the respirator specified for handlers on this label 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 the respirator specified for handlers,
- be provided and have immediately available for use in an emergency when they must exit the cab in the treated area coveralls, chemical-resistant gloves, and chemical-resistant footwear and - if not already using one - the respirator specified for handlers,
- take off any PPE that was worn in the treated area before reentering the cab, and
- store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab.

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. Do not contaminate water by cleaning equipment or disposal of wastes. Do not contaminate water when disposing of equipment washwaters.

**BEE CAUTION:** This product is highly toxic to bees exposed to direct treatment on blooming crops and weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Contact your Cooperative Agricultural Extension Service for further information.

### GENERAL INFORMATION

**CARBARYL 85 SPRAYABLE** is a microfine powder for dispersion to water and application as an insecticidal spray in hydraulic sprayers, mist blowers, low-volume ground equipment and aircraft. Read this label before use. Strictly observe label directions and precautions and applicable Federal and State regulations.

### DIRECTIONS FOR WATER-SOLUBLE BAGS

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. To prepare the spray mixture, drop the required number of unopened paks into spray tank while filling with the appropriate amount of water. Operate the agitator while mixing. Depending on the water temperature and the degree of agitation, the paks should be completely dissolved in approximately 5 minutes from the time they are added to the water. Use the specified dosage of this product in the amount of water necessary to give complete coverage. Determine the total amount to be added to the spray tank based on the rates in the "CROP" section.

**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.

### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), 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 each crop is listed 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, chemical-resistant gloves made of any waterproof material, and shoes plus socks.

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. The area being treated must be vacated by unprotected persons. Do not enter or allow others to enter the treated area until sprays have dried.

### PRE-HARVEST AND GRAZING USE INFORMATION AND LIMITATIONS

Tolerances established under the Federal Food, Drug and Cosmetics Act permit the sale of crops bearing probable carbaryl residues when this product is used in accordance with the label directions. If used as directed, treated forage may be grazed or used as feed for dairy and meat animals, without causing illegal residues in meat and milk. This product may be applied up to and including the day of harvest or grazing of forage crops. Application may be made without removing livestock from area being treated. Do not plant rotational food and feed crops not listed on this or other carbaryl labels in carbaryl treated soil. Do not use reclaimed irrigation water from crops treated with carbaryl on upland crops for which carbaryl tolerances are not established.

### PLANT RESPONSE PRECAUTIONS

To avoid possible injury to tender foliage, do not apply to wet foliage or when rain or high humidity is expected during the next two days. Do not use on Boston ivy, Maidenhair fern and Virginia creeper as injury will result. During early season, it may also injure Virginia and Sand pines. Observe label instructions on Apple thinning and on combinations with certain herbicides on Rice.

### SPRAY PREPARATION

To assure a uniform suspension, agitate, stir or recirculate all spray mixtures prior to and during 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 desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of this product and then the remaining volume of water. 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.

### COMPATIBILITY

Compatibility of this product with spray formulations of other pesticides is not fully known. Before preparing large amounts, combinations should be tested on a small scale. Curdling, precipitation, greasing, layer formation or increased viscosity are symptoms of incompatibility. Incompatibility will reduce insect control and may cause mechanical difficulties or plant injury. Observe all precautions and limitations on labeling of all products used in mixture. When preparing combination sprays, first add this product to at least half the desired amount 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, excessive residues or plant injury. Unstable under highly alkaline conditions. Not effective if used with alkaline materials such as Bordeaux, lime-sulfur and casein-lime spreaders.

### APPLICATION PROCEDURES AND PRECAUTIONS

On all crops use sufficient gallonage to obtain thorough and uniform coverage. Calibrate spray equipment to deliver the required volume. Use 50-mesh slotted strainers in spray system and 25-mesh slotted strainers behind nozzles. Avoid application just before rainfall as poor insect control may result.

**Aerial application is prohibited.**

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

**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

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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.) If you should have any other questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

**SPECIFIC USE DIRECTIONS**

**Crop/Site Groupings:** Brassica leafy vegetable crops, Cereal grain crops (Field and Popcorn, Grain sorghum, Rice, Sweet corn); Cucurbit vegetables, Forage crops, Fruiting vegetables, Leafy vegetables, Legume vegetables, Okra, Root and Tuber crops, Sugar beets, small Fruits and Berries, Tobacco, Tree fruit crops, Tree nut crops, Forested areas and Rangeland trees, Trees and Ornamentals, Turfgrass, Grasshoppers, Ticks which may vector Lyme disease, and other listed specific pests across multiple sites.

**INSECT CONTROL**

Apply when insects or their damage appear. To maintain control repeat at 7 to 14 day intervals as necessary unless a shorter interval is specified below. Where a dosage range is indicated, use lower rate on young plants and early instars and higher rates on mature plants, advanced instars and adults. Thorough and uniform spray coverage is essential for effective control. This product does not control Spider mites. If Spider mites are a problem, use a registered miticide. Regional differences have been noted in the susceptibility of certain strains of Fall armyworms to this product. If local experience indicates inadequate control, use an alternative pesticide.

Use sufficient spray volume to ensure thorough coverage. This will usually vary per acre depending on equipment, degree of insect infestation and stage of crop growth. Keep spray mixtures well agitated. Apply when insects or their damage appear and repeat 7 to 14 days later if necessary. See specific directions below for Grasshopper control.

Restricted Entry Interval=REI

**ASPARAGUS (REI = 1 day)**

Crop	Pest	This Product Per Acre (lbs.)
Asparagus	Apache cicada	1.2
	Asparagus beetle Cutworms	2.4
<p><b>SPECIFIC DIRECTIONS:</b> Repeat applications as necessary up to a total of 3 times prior to harvest or a total of 5 times per crop but not more than once every 3 days.</p> <p>For cutworm control, this product is most effective against species which feed on the upper portions of the plant.</p> <p><b>Application to ferns or brush growth following harvest of spears:</b> Repeat applications as necessary but not more often than every 7 days. Do not make more than a total of 5 applications per year to spears and ferns combined.</p>		

**PRECAUTIONS AND RESTRICTIONS:** Do not apply within 1 day of harvest. Apply a maximum of 3 lbs. a.i. (3.5 lbs. of this product) per acre during the harvest/pre-harvest period, and if needed, up to an additional 7 lbs. a.i. (8.2 lbs. of this product) per acre during the post-harvest period. Apply a maximum of 10 lbs. a.i. (11.7 lbs. of this product) per acre per year.

**BRASSICA LEAFY VEGETABLE CROPS (REI = 5 days)**

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

Crop	Pest	This Product Per Acre (lbs.)
<p><b>All members of the Brassica (Cole) Leafy Vegetables Crop Group 5 including:</b> Broccoli, Broccoli raab (rapini), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccolo, Chinese broccoli (gai lon), Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens, Turnip greens.</p>	Flea beetles, Harlequin bug, Leafhopper	0.6 to 1.5
	Amyworm, Aster leafhopper, Corn earworm, Diamondback moth, Fall armyworm, Imported cabbageworm, Lygus bugs, Spittle bugs, Stink bugs, Tarnished plant bug	1.5 to 2.4

**PRECAUTIONS AND RESTRICTIONS:** Application is permitted only within 30 days from the date of crop emergence or the date of transplanting. Do not apply within 5 days of harvest of Broccoli, Chinese broccoli (gai lon), Brussels sprouts, Cabbage, Chinese cabbage (napa), Chinese mustard cabbage (gai choy), Cauliflower, Cavalo broccolo, and Kohlrabi. For 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 pounds per acre per crop.

**CEREAL GRAIN CROPS**

**Corn (Field, Seed, Pop) (REI = 4 days)**

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

Crop	Pest	This Product Per Acre (lbs.)
Corn (Field, Seed, Pop)	Amyworms, Chinch bugs, Corn earworms, Corn rootworm adults, Fall armyworms, Flea beetles, Japanese beetles, Leafhoppers, Sap beetles, Southwestern corn borer	1.4 to 2.4
	<p><b>SPECIFIC DIRECTIONS:</b> For optimum Chinch bug control, use ground equipment to apply at least 20 gallons of water per acre and direct spray toward stalk to provide thorough coverage.</p>	
	European corn borers	1.8 to 2.4
	<p><b>SPECIFIC DIRECTIONS:</b> For optimum European corn borer control, do not apply in less than 15 gallons of water per acre by ground.</p>	
	Western bean cutworm, Cutworms	2.4
<p><b>SPECIFIC DIRECTIONS:</b> For Western bean cutworm, treat when infestation averages 15% and at 90 to 100% tassel emergence. Treatment after 100% silk emergence will reduce effectiveness. For optimum Cutworm control, apply in a 12-inch band, over the row, using sufficient volume of water to obtain thorough coverage. For broadcast application, use at least 20 gallons of water per acre by ground. For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.</p>		

**PRECAUTIONS AND RESTRICTIONS:** Application of this product to the tassel region of Corn during the pollen shed period will seriously reduce bee populations. Do not apply within 48 days of harvest of grain and fodder or within 14 days of harvest or grazing of forage or silage. Do not apply more than a total of 9.4 pounds per acre per crop. For Field corn, the maximum ground application rate is 2 lbs. a.i. (2.4 lbs. of this product) per acre per application.

**Prohibitions:** Do not enter or allow workers to enter treated areas to perform hand detasselling tasks until 30 days after application. Hand harvesting is prohibited. You must notify workers of these prohibitions.

**Corn (Sweet) (REI = 4 days)**

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

For insects attacking silks and ears, insecticide sprays should be applied starting when first silks appear and continuing until silks begin to dry. During silking, the minimum 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 (lbs.)
Corn (Sweet)	Amyworms, Chinch bugs, Corn earworms, Corn rootworm adults, Fall armyworms, Flea beetles, Japanese beetles, Leafhoppers, Sap beetles, Southwestern corn borer	1.2 to 2.4
	<p><b>SPECIFIC DIRECTIONS:</b> For optimum Chinch bug control, use ground equipment to apply at least 20 gallons of water per acre and direct spray toward stalk to provide thorough coverage.</p>	
	European corn borers	1.8 to 2.4
	<p><b>SPECIFIC DIRECTIONS:</b> For optimum European corn borer control, do not apply in less than 15 gallons of water per acre by ground.</p>	
	Western bean cutworm, Cutworms	2.4
<p><b>SPECIFIC DIRECTIONS:</b> For Western bean cutworm, treat when infestation averages 15% and at 90 to 100% tassel emergence. Treatment after 100% silk emergence will reduce effectiveness. For optimum Cutworm control, apply in a 12-inch band, over the row, using sufficient volume of water to obtain thorough coverage. For broadcast application, use at least 20 gallons of water per acre by ground. For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.</p>		

**PRECAUTIONS AND RESTRICTIONS:** 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 pounds per acre per crop.

**Prohibitions:** Do not enter or allow workers to enter treated areas to perform hand detasselling tasks until 30 days after application. Hand harvesting is prohibited. You must notify workers of these prohibitions.

**Rice (REI = 2 days)**

Crop	Pest	This Product Per Acre (lbs.)
Rice	Armyworms, Chinch bugs, Fall armyworms, Leafhoppers, Stink bugs	1.2 to 1.8
	SPECIFIC DIRECTIONS: Up to 2 applications per crop may be made but not more often than once every 7 days.	
	Tadpole shrimp	1.8
	SPECIFIC DIRECTIONS: <b>California only:</b> For optimum Tadpole shrimp control, apply to water when pest first appears.	
<b>PRECAUTIONS AND RESTRICTIONS:</b> Do not apply within 14 days of grain or straw. Do not apply more than a total of 4.7 pounds per acre per crop. Do not apply propanil herbicides within 15 days before or after application of this product or plant injury will result. <b>NOTE:</b> May kill Shrimp, Crabs and Crayfish. Do not use in areas where these are important resources. Do not use on Rice fields in which Crayfish and/or Catfish farming is included in the cultural practice.		

**Sorghum (REI = 4 days)**

Crop	Pest	This Product Per Acre (lbs.)
Sorghum (including Milo and Grain Sorghum)	Armyworms, Chinch bugs, Corn earworms, Fall armyworms, Stink bugs, Webworms	1.2 to 2.4
	SPECIFIC DIRECTIONS: Repeat applications as necessary up to a total of 4 times but not more often than once every 7 days. Direct spray into forming heads for optimum control of insects attacking heads. For optimum Chinch bug control, use high gallonage ground application at the base of plants.	
	Sorghum midge, Southwestern corn borer	1.8
	Cutworms	2.4
SPECIFIC DIRECTIONS: Repeat applications as necessary up to a total of 4 times but not more often than once every 7 days. Direct spray into forming heads for optimum control of insects attacking heads. For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.		
<b>PRECAUTIONS AND 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 pounds per acre per crop.		

**CUCURBIT VEGETABLES (REI = 3 DAYS)**

Crop	Pest	This Product Per Acre (lbs.)
All members of the Cucurbit Vegetables Crop Group 9 including: balsam apple, balsam pear, bitter melon, Chayote, Chinese cucumber, Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Edible gourd (includes hyotan, cucuzza, hechima, Chinese okra), Muskmelon (includes 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 (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, and zucchini), Watermelon, Winter squash (includes acorn squash, butternut squash, calabaza, Hubbard squash, and spaghetti squash).	Melonworms, Pickleworms	0.6 to 1.2
	SPECIFIC DIRECTIONS: Repeat applications as necessary up to a total of 6 times but not more often than once every 7 days.	
	Cucumber beetles, Flea beetles, Leafhoppers, Squash bugs	1.2
	SPECIFIC DIRECTIONS: Repeat applications as necessary up to a total of 6 times but not more often than once every 7 days. For optimum control of Squash bugs, apply sufficient spray volume for thorough coverage and time sprays for early morning or late afternoon.	
<b>PRECAUTIONS AND RESTRICTIONS:</b> Do not apply within 3 days of harvest. Do not apply more than a total of 7 pounds per acre per crop. Observe plant response precautions.		

**FLAX (REI = 2 days)**

Crop	Pest	This Product Per Acre (lbs.)
Flax (Except CA)	Armyworm	1.2 to 1.8
	SPECIFIC DIRECTIONS: Up to 2 applications per crop may be made but not more often than once every 14 days.	
Do not apply within 42 days of harvest for seed or straw. Do not apply more than a total of 3.5 pounds per acre per crop.		

**FORAGE CROPS**

Observe Bee Caution. Observe plant response precautions. On dense growth, use 25 to 40 gallons of water per acre with ground equipment to ensure adequate coverage.

**Alfalfa, Birdsfoot Trefoil, Clovers (REI = 2 days)**

Crop	Pest	This Product Per Acre (lbs.)
Alfalfa, Birdsfoot trefoil, Clovers	Blister beetles, Mexican bean beetles	0.6 to 1.5
	Alfalfa caterpillars, Bean leaf beetles, Cucumber beetles, Green cloverworms, Japanese beetles, Leafhoppers, Potato leafhoppers, Three-cornered alfalfa hoppers, Thrips, Velvetbean caterpillars	1.5
	Armyworms, Corn earworms, Stink bugs, Webworms, Alfalfa blotch leafminer, Cloverhead weevil, Cutworms, Egyptian alfalfa weevil larvae, Essex skipper, European alfalfa beetle, Fall armyworm, Lygus bugs, Yellowstriped armyworm	1.2 to 1.5
	SPECIFIC DIRECTIONS: For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.	
	Alfalfa weevil larvae (west of the Rocky Mountains)	1.2 to 1.8
	Alfalfa weevil larvae (east of the Rocky Mountains)	1.8
	SPECIFIC DIRECTIONS: For Alfalfa weevil larvae, if pretreatment damage is extensive, cut Alfalfa and treat the stubble. This product is not effective against adult Alfalfa weevils.	

**PRECAUTIONS AND RESTRICTIONS:** Carbaryl may cause temporary bleaching of tender Alfalfa foliage. Do not apply more than once per cutting. Do not apply within 7 days of harvest or grazing. Do not exceed 1.8 pounds per acre per cutting.

**Pasture and Grasses Grown for Hay and/or Seed (REI = 12 hours; 2 days for Grass grown for Seed)**

Crop	Pest	This Product Per Acre (lbs.)
Pasture and Grasses Grown for Hay and/or Seed	Armyworm, Chinch bugs, Essex skipper, Fall armyworm, Striped grass looper, Thrips, Range Caterpillar, Range crane fly, Ticks	1.2 to 1.8
	SPECIFIC DIRECTIONS: Up to 2 applications per year may be made but not more often than once every 14 days. To control Thrips in grasses grown for seed, use high spray pressure to improve penetration into boot. Carefully mark swaths to avoid over-application.	
<b>PRECAUTIONS AND RESTRICTIONS:</b> Do not apply within 14 days of harvest or grazing. Do not exceed a total of 3.5 pounds per acre per year.		



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**FRUITING VEGETABLES (REI = 2 days)**

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

Crop	Pest	This Product Per Acre (lbs.)
<b>All members of the Fruiting Vegetables Crop Group 8</b> <b>Including:</b> 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*, Tarnished plant bugs, <i>Thrips</i> *, Tomato fruitworms, Tomato hornworms, Tomato pinworm	1.2 to 2.4
	SPECIFIC DIRECTIONS: * Suppression only. Thorough coverage is essential to effectively suppress Stink bugs.	
	Flea beetles, Leafhoppers	0.6 to 1.2
	Cutworm	2.4

**PRECAUTIONS AND RESTRICTIONS:** Do not apply within 3 days of harvest. Do not apply more than a total of 9.4 pounds per crop.

**LEAFY VEGETABLES (REI = 12 hours)**

Crop	Pest	This Product Per Acre (lbs.)
Dandelion, Endive (escarole), Lettuce (head and leaf), Parsley, Spinach; <b>All members of the Leaf Petioles Vegetables Crop Subgroup 4B</b> <b>including:</b> 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
	Amyworms, Aster leafhopper, Corn earworm, Fall armyworm, Imported cabbageworm, Lygus bugs, Spittlebugs, Stink bugs, Tarnished plant bug	1.2 to 2.4

**PRECAUTIONS AND RESTRICTIONS:** Do not apply within 14 days of harvest. Do not apply more than a total of 7 pounds per acre per crop. Application is only permitted within 30 days of crop emergence or the date of transplanting.

**LEGUME VEGETABLES (REI) = 12 hours except for: Stringbeans, dried shelled legume vegetables (crop subgroup 6C): REI = 5 days. Pole beans, soybeans: REI = 2 days.**

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

Crop	Pest	This Product Per Acre (lbs.)
<b>All members of the Edible Podded Legume Vegetables Crop Subgroup 6A</b> <b>including:</b> <i>Phaseolus</i> sp. including runner bean, snap bean, and wax bean; <i>Vigna</i> sp. including asparagus bean, Chinese longbean, moth bean, and yardlong bean; <i>Pisum</i> sp. including dwarf pea, edible-pod pea, snow pea, sugar snap pea; Jackbean; Pigeon pea; Soybean (immature seed); Sword bean;	Bean leaf beetle, Blister beetle, Cucumber beetles, Grape colapsis, Green cloverworm, Japanese beetle, Mexican bean beetle, Velvetbean caterpillar	0.6 to 1.2
	Corn earworm	0.6 to 1.8
	Alfalfa caterpillar, Colorado potato beetle, Flea beetles, Leafhoppers, Three-cornered alfalfa hopper, <i>Thrips</i> , Western bean cutworm	1.2
	Amyworm, Cutworms, European corn borer, Fall armyworm, Stink bugs, Tarnished plant bug, <i>Webworms</i>	1.2 to 1.8

SPECIFIC DIRECTIONS: For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.

(Continued)

Crop	Pest	This Product Per Acre (lbs.)
<b>All members of the Dried Shelled Legume Vegetables (except soybeans) Crop Subgroup 6C</b> <b>including:</b> <i>Lupinus</i> sp. including grain lupin, sweet lupin, white lupin, and white sweet lupin; <i>Phaseolus</i> sp. including field bean, kidney bean, dry lima bean, navy bean, pinto bean, tepary bean; <i>Vigna</i> sp. including adzuki bean, blackeyed pea, caljang, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, Urd bean; <i>Pisum</i> sp. including dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea; Broad bean (dry); Chickpea (dry); Guar (dry); Lablab bean (dry); Lentil (dry) (except CA); Pigeon pea (dry); <b>All members of the Foliage of Legume Vegetables Crop Group 7:</b> Plant parts of any legume vegetables included in the legume vegetable (Crop Group 6) that will be used as animal feed; <b>Soybeans</b>	Alfalfa looper*, Cowpea curculio*, Painted lady (Thistle caterpillar), Pea leaf weevil, Pea weevil, Saltmarsh caterpillar, Woollybear caterpillar, Yellowstriped armyworm <b>California only:</b> Corn earworm*, Limabean podborer*, Lygus bugs*, Stink bugs*	1.8

**PRECAUTIONS AND RESTRICTIONS:** Do not apply within 14 days of grazing or harvest for forage or within 3 days of harvest of Fresh Beans or Peas or within 21 days of harvest of Dried Beans or Peas, seed or hay. Do not apply more than a total of 7 pounds per acre per crop. Do not apply a combination of this product and 2,4-DB herbicides to Soybeans as crop injury may result. Observe plant response precautions. \* Suppression only.

**NONCROPLAND**

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

Crop	Pest	This Product Per Acre (lbs.)
Conservation Reserve Program Acreage, Set-Aside Program Acreage, Wasteland, Rights-of-Way, Hedgeregrows, Ditchbanks, Roadsides	Black grass bug	0.3 to 0.6
	Mormon cricket, Range caterpillar, Range crane fly	0.6 to 1.2
	Ticks	1.2 to 1.8

**PRECAUTIONS AND RESTRICTIONS:** Will only kill ticks present at time of application. Ticks must be directly contacted to be effective. Contact as many ticks as possible. Do not apply within 14 days of grazing or harvest for forage or hay. Do not apply more than a total of 3.5 pounds per acre per year.

**OKRA (REI = 12 hours)**

Crop	Pest	This Product Per Acre (lbs.)
Okra	Corn earworms, Stink bugs	1.25 to 2.32

SPECIFIC DIRECTIONS: Repeat at 5 to 7 day intervals or as necessary. Do not apply more than a total of 7 pounds per acre for season.

**PEANUTS (REI = 2 DAYS)**

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

Crop	Pest	This Product Per Acre (lbs.)
Peanuts	Blister beetles, Mexican bean beetle	0.6 to 1.2
	Alfalfa caterpillar, Bean leaf beetle, Cucumber beetle, green cloverworm, Japanese beetle, Leafhoppers, Rednecked peanutworm, Three-cornered alfalfa hopper, Thrips, Velvetbean caterpillar	1.2
	Armyworm, Corn earworm, Fall armyworm, Stink bugs, Webworms	1.2 to 1.8
	Whitefringed beetle adults, Cutworms	2.4
<p><b>SPECIFIC DIRECTIONS:</b> For optimum control of thrips, use directed or banded sprays with hollow cone spray nozzles. Ensure adequate coverage for the underside of leaves. For cutworm control, this product is most effective against species which feed on the upper portions of the plant.</p>		

**PRECAUTIONS AND RESTRICTIONS:** Do not apply within 14 days of harvest. Do not apply more than a total of 9.4 pounds per acre per crop. Observe plant response precautions.

**RANGELAND**

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

Crop	Pest	This Product Per Acre (lbs.)
Rangeland	Black grass bug, Grasshoppers, Mormon cricket, Range caterpillar, Range crane fly	0.6 to 1.2
	Ticks	1.2
<p><b>SPECIFIC DIRECTIONS:</b> Will only kill ticks present at time of application. Ticks must be directly contacted to be effective. Contact as many ticks as possible.</p>		

**PRECAUTIONS AND RESTRICTIONS:** May be harvested or grazed the same day as treatment. Do not apply more than 1.2 pounds per acre per year.

**ROOT and TUBER CROPS (except Sugar Beets and Sweet Potatoes) (REI = 4 days; Carrots and Turnips harvested for tops 12 hours)**

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

Crop	Pest	This Product Per Acre (lbs.)
<p><b>All members of the Root and Tuber Vegetables Crop Group 1 except sugar beets and sweet potatoes:</b>                      Arracha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (garden), Burdock (edible), Canna (edible, Queensland arrowroot), Carrot, Cassava (bitter &amp; 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)</p>	Flea beetles, Harlequin bugs, Leafhoppers	0.6 to 1.5
	Armyworms, Aster leafhopper, Colorado potato beetle, Cabbage caterpillars, Corn earworms, Cutworms, European corn borer, Fall armyworm, Lace bugs, Lygus bugs, Spittlebugs, Tarnished plant bugs, Stink bugs,	1.25
<p><b>SPECIFIC DIRECTIONS:</b> For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.</p>		

**PRECAUTIONS AND RESTRICTIONS:** Do not apply within 7 days of harvest. Do not apply more than a total of 7 pounds per acre per crop. For Carrots and Turnips harvested for tops, application is permitted only within 30 days from date of crop emergence or the date of transplanting.

**Small Fruits and Berries (REI for Blueberries-lowbush, Cranberries = 12 hours) (REI for Blueberries-highbush, Caneberries, Blackberries, Raspberries, Currants, Elderberry, Gooseberry, Huckleberry, Juneberry, Lingonberry, Salal, and Grapes-East of the Rocky Mountains = 2 days) (REI for Strawberries = 4 days) (REI for Grapes-West of the Rocky Mountains = 7 days)**

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

Crop	Pest	This Product Per Acre (lbs.)
<p><b>All members of the Caneberry Crop Subgroup 13A including:</b> Blackberry (<i>Rubus eubatus</i>, including bingleberry, black satin berry, boysenberry, Cherokee blackberry, Chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, Lavacaberry, Loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, youngberry, and varieties and/or hybrids of these); Raspberry (black and red, <i>Rubus occidentalis</i>, <i>Rubus strigosus</i>, <i>Rubus idaeus</i>).</p> <p><b>All members of the Bushberry Crop Subgroup 13B including:</b> Blueberry (highbush and lowbush), Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Lingonberry, Salal and varieties and/or hybrids of these.</p> <p><b>Cranberries; Grapes; Strawberries</b></p>	European fruit lecanium, European raspberry aphid, Flea beetles, Grape leafhopper, Grape leafroller, Japanese beetle, Leafhoppers, Leafrollers, Meadow spittlebug, Omnivorous leaflier, Rose chafer, Snowy tree cricket, Strawberry bud weevil, Strawberry clipper, Strawberry fruitworm, Strawberry leafroller, Strawberry weevil, Western grapeleaf skeletonizer, Western yellowstriped armyworm	1.2 to 2.4
	<p><b>SPECIFIC DIRECTIONS:</b> In Grapes, for Grape leafhopper control, apply before first brood larvae emerge from rolls.</p>	Blueberry maggot, Cherry fruitworm, Cranberry fireworm, Cranberry fruitworms, Cranberry twig girdler, Elm spanworm, Gypsy moth, Spaganothus worm, Tarnished plant bug
<p><b>SPECIFIC DIRECTIONS:</b> For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.</p>	Eightspotted forester, Cutworms, Grape berry moth, June beetles, Omnivorous leafroller, Orange tortrix, Raspberry fruitworm, Raspberry sawfly, Redbanded leafroller, Saltmarsh caterpillar	2.4

**PRECAUTIONS AND RESTRICTIONS:** Do not apply with 7 days of harvest. Do not apply more than a total of 11.75 pounds per acre per crop.

**Note:** Use in Cranberries may kill Shrimp and Crabs. Do not use in areas where these are important resources. In Grapes, do not concentrate spray on the bunch or visible residues may result. Carbaryl may injure Early Dawn and Sunrise varieties of Strawberries.

**SUGAR BEETS (REI = 2 days)**

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

Crop	Pest	This Product Per Acre (lbs.)
Sugar beets	Armyworms, Beet leaf beetles, Leafhoppers, Fall armyworms, Flea beetles, Webworms	1.2 to 1.8
	Cutworms	1.8
<p><b>SPECIFIC DIRECTIONS:</b> For Cutworm control, this product is most effective against species which feed on the upper portions of the plant.</p>		

**PRECAUTIONS AND RESTRICTIONS:** Do not apply within 28 days of harvest for roots or forage. Do not apply more than a total of 4.7 pounds per acre per crop.

**SUNFLOWERS (REI = 1 day)**

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

Crop	Pest	This Product Per Acre (lbs.)
Sunflowers (Except CA)	Stern weevil, Sunflower beetle	1.2 to 1.8
	Armyworm, Cutworms, Fall armyworm, Sunflower moth	1.8
SPECIFIC DIRECTIONS: For Cutworm control this product is most effective against species which feed on the upper portions of the plant.		
PRECAUTIONS AND 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 pounds per acre per crop.		

**SWEET POTATOES (REI = 4 days)**

Preplant dip for control of sweet potato weevil: Just prior to planting, dip sweet potato cuttings in a suspension containing 9.5 pounds of this product in 100 gallons of water (1.5 ounces per gallon of water). For foliar sprays, repeat applications as necessary up to a total of 8 times but not more often than once every 7 days.

Crop	Pest	This Product Per Acre (lbs.)
Sweet Potatoes	Corn earworm, Cucumber beetles, Flea beetles, Sweet potato hornworm, Sweet potato weevil, Tortoise beetles, Whitefringed beetles	1.2 to 2.4
	Yellowstriped armyworm	2.4
PRECAUTIONS AND RESTRICTIONS: Do not apply within 7 days of harvest. Do not apply more than a total of 9.25 pounds per acre per crop with in-season sprays. Do not apply more than a total of 1.25 pounds per acre as a preplant dip treatment.		

**TOBACCO (REI = 8 days)**

Crop	Pest	This Product Per Acre (lbs.)
Tobacco	Budworms, Fall armyworm, Tobacco flea beetles, Hornworms, Japanese beetle, June beetle, Suckfly	1.2 to 2.4
SPECIFIC DIRECTIONS: Plant bed and Field Treatment: Repeat treatments as necessary up to a total of 4 times per crop but not more often than once every 7 days. Use lower rate on young plants (up to knee height). Use at least 10 gallons of prepared spray per acre. Begin treatments when worms are small.		
PRECAUTIONS AND RESTRICTIONS: Tobacco may be harvested on the day of treatment. Do not apply more than a total of 9.4 pounds per acre per crop. Observe plant response precautions.		

**TREE FRUIT CROPS**

On all tree fruit crops, apply in sufficient volume for adequate coverage. This will vary depending on the pest and its severity, the tree condition, size, and density, and other factors.

**Citrus Fruits (REI = CA 5 days; All Other States 1 day)**

Observe Bee Caution. Repeat applications as necessary up to a total of 8 times but not more often than once every 14 days. Apply lower dosage early in the season or against light infestation and the higher dosage late in the season or against heavy infestation and situations involving infested fruit. May be used with petroleum oil as used in common practice on Citrus.

Crop	Pest	This Product Per Acre (lbs.)
All members of the Citrus Fruits Crop Group 10 including: Calamondin, Citrus citron, Citrus hybrids (Citrus spp., includes chironja, tangelo and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (sweet and sour), Pummelo, Tangelo, Satsuma mandarin, White sapote (Casimiroa spp.), and other cultivars and/or hybrids of these.	Avocado leafroller, California orangedog, Citrus cutworm, Fruitree leafroller, Orange Tortrix, Western tussock moth	2.4 to 3.5
	Citrus rust mite, Eriophyd mites Plant bugs, Scale insects (Black scale, Brown soft scale, California red scale (except in CA), Citrus snow scale, Yellow scale (except in CA))	3.5 to 5.9
SPECIFIC DIRECTIONS: For scale control, apply when crawlers are present. For best control of Eriophyd mites including Citrus rust mite, apply when pest populations are low. (Continued)		

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Crop	Pest	This Product Per Acre (lbs.)
	Apopka weevil (adult), Citrus root weevils (adult), Fuller rose beetle, Little leaf notcher (adult)	5.9 to 8.8
	California only: California red scale, Yellow scale	5.9 to 18.9
	SPECIFIC DIRECTIONS: Do not make more than 1 application per season for California red scale. Apply when crawlers are present.	

PRECAUTIONS AND RESTRICTIONS: Do not apply within 5 days of fruit harvest.  
**All States Except CA:** Do not apply more than 5 pounds of active ingredient (5.8 pounds of this product) per acre per application.  
**CA Only:** Do not apply more than 12 pounds of active ingredient (10.2 pounds of this product) per acre per application.  
**All States Including CA:** Do not apply more than a total of 23.5 pounds of this product per acre per crop.

**OLIVES (REI = 14 days)**

Crop	Pest	This Product Per Acre (lbs.)
Olives	Scale insects (olive scale, black scale)	5.9 to 8.8
	SPECIFIC DIRECTIONS: Up to 2 applications per crop may be made but not more often than once every 14 days.	
PRECAUTIONS AND RESTRICTIONS: Do not apply within 14 days of harvest. Do not apply more than a total of 17.6 pounds per acre per crop.		

**POME FRUITS (REI = 12 hours)**

Observe Bee Caution. On Apples, avoid use during the period from full bloom until 30 days after full bloom unless fruit thinning is desired. Use for pest control during this period may result in fruit removal. Repeat applications as necessary up to a total of 8 times per crop (including thinning sprays on Apples) but not more often than once every 14 days.

Crop	Pest	This Product Per Acre (lbs.)
Apples, Crabapple, Loquat, Pears, Oriental pear	White apple leafhopper	0.6 to 1.8
	Apple aphid, Codling moth	1.2 to 3.5
	Apple aphid, Apple maggots, Apple mealybugs, Apple rust mites, Bagworms, California pearslugs (pear sawfly), European apple sawflies, Eyespotted budmoths, Fruitree leafrollers, Green apple aphids, Gypsy moth, Japanese beetles, Lesser appleworm, Lygus bugs, Orange tortrix, Pearleaf blister mites, Pear psyllas, Pear rust mites, Periodical cicadas, Plum curculios, Redbanded leafrollers, Rosy apple aphids, Scale insects (Forbes scale, Lecanium scale, San Jose scale), Tarnished plant bugs, Tentiform leafminers, Woolly apple aphids, Yellowheaded fireworm	1.8 to 3.5
SPECIFIC DIRECTIONS: For psylla control, apply when eggs hatch or young nymphs are present. For scale control, apply when crawlers are present. (Continued)		

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Crop	Pest	This Product Per Acre (lbs.)
Apples Only, for Fruit Thinning	-	1.2 to 3.5
<p><b>SPECIFIC DIRECTIONS:</b> OBSERVE BEE CAUTION: For easily thinned varieties, apply 0.3 to 0.6 pounds per 100 gal. of spray mixture. For difficult to thin varieties, apply 0.6 to 1.2 pounds per 100 gal. 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. Consult with your County Extension Service or other experts for advice on the proper use of this product. <b>PRECAUTION:</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 the 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. The use with summer spray oils and wetting agents may increase the risk of fruit deformity and injury.</p> <p><b>PRECAUTIONS AND 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 pounds per acre per crop. Do not make more than a total of 8 applications per crop.</p> <p><b>FOR PROTECTION OF HONEY BEES:</b> Remove all bee hives from the orchard to be treated prior to application. Do not apply this product if bees are actively foraging in orchard. If weed bloom is present, mow the cover crop on the orchard floor prior to applying this product.</p>		

**STONE FRUITS (REI = CA 3 days; All Other States 12 hours)**

Crop	Pest	This Product Per Acre (lbs.)
All members of the Stone Fruits Crop Group 12 including: Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune (fresh and dried)	Apple pandemis, Black cherry aphid, Cherry fruitworm, Cherry maggot (Cherry fruit fly), Codling moths, Cucumber beetles, Eastern tent caterpillar, European earwigs, Eyespotted bud moth, Fruittree leafrollers, Green fruitworm, Gypsy moth, Japanese beetles, June beetles, Lesser peachtree borers, Mealy plum aphid, Orange tortrix, Oriental fruit moths, Peach twig borers, Periodical cicadas, Plum curculios, Prune leafhopper, Redbanded leafrollers, Rose chafer, Scale insects (Brown soft scale, Forbes scale, Lecanium scale, Olive scale, Oystershell scale, San Jose scales), Tarnished plant bugs, Tussock moths, Variegated leafroller	2.4 to 3.5
<p><b>SPECIFIC DIRECTIONS:</b> Observe Bee Caution. Repeat applications as necessary up to a total of 3 times per crop but not more often than once every 7 days. An additional application at the dormant or delayed dormant timing may be made. For optimum Scale control, apply when crawlers are present. For Lesser peachtree borer control, spray limbs and trunk thoroughly at weekly intervals during moth flight.</p> <p style="text-align: right;"><b>(Continued)</b></p>		

Crop	Pest	This Product Per Acre (lbs.)
	California Only: Black cherry aphid, Cherry fruitworm, Cherry maggot (Cherry fruit fly), Codling moth, Cucumber beetles, Eyespotted bud moth, European earwig, Fruittree leafroller, Green fruitworm, Mealy plum aphid, Orange tortrix, Oriental fruit moth, Peach twig borer, Scale insects (Brown soft scale, Forbes scale, Lecanium scale, Olive scale, Oystershell scale, San Jose scale), Tarnished plant bug, Tussock moth	3.5 to 4.7
<p><b>SPECIFIC DIRECTIONS:</b> Observe Bee Caution. Repeat applications as necessary up to a total of 3 times per crop but not more often than once every 14 days. An additional application at the dormant or delayed dormant timing may be made. For optimum scale control, apply when crawlers are present.</p>		
	Peach twig borer, Scale insects (Brown soft scale, Forbes scale, Lecanium scale, Olive scale, Oystershell scale, San Jose scale)	4.7 to 5.9
<p><b>SPECIFIC DIRECTIONS:</b> For dormant or delayed dormant timing, apply in combination with a recommended dormant oil. Refer to the dormant oil product label for additional use directions and restrictions.</p>		
<p><b>RESTRICTIONS AND PRECAUTIONS: All States except CA:</b> Do not apply within 3 days of harvest. Do not apply more than 3 lbs. of active ingredient (3.75 pounds of this product) per acre per application. <b>CA Only:</b> Do not apply within 1 day of harvest. Do not apply more than 4 lbs. of active ingredient (5 pounds of this product) per acre per application. <b>All States including CA:</b> Do not apply more than a total of 16.5 lbs. of this product per acre per crop. Do not apply more than a total of 5.9 lbs. of this product per acre at the dormant or delayed dormant timing. Do not apply more than a total of 10.6 lbs. of this product during the production season. <b>Prohibition:</b> Do not allow workers to enter treated areas to hand thin until 7 days after application. You must notify workers of this prohibition.</p>		

**TREE NUT CROPS (REI = Pecans 12 hours; All Others 10 days)**

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 (lbs.)
Almond, Filbert (Hazelnut), Chestnut, Pecans, Walnut	Black margined aphid, Calico scale, Codling moth, European fruit lecanium, Fall webworm, Filbert aphid, Filbert leafroller, Filbertworm, Frosted scale, Fruittree leafroller, Hickory shuckworm, Lesser webworm, Navel orangeworm, Peach twig borer, San Jose scale, Twig girdler, Walnut caterpillar	2.4 to 5.9
<p><b>SPECIFIC DIRECTIONS:</b> Observe Bee Caution. Repeat applications as necessary up to a total of 4 times per crop (including any applications at the dormant or delayed dormant timing) but not more often than once every 7 days. Use lower rates for pests attacking leaves. Use higher rates for pests attacking fruit and for higher infestations. For scale control, apply when crawlers are present. For Peach twig borer, best results with foliar applications have been found by making applications in popcorn or petal fall stages when the May brood begins to hatch. For Navel orangeworm in Almonds and Walnuts, best results have been found by timing early and midseason applications to correspond with moth flight peaks. For Filbert leafroller, best results have been found by making applications when eggs are hatching, repeating application on first appearance of moths and again 3 to 4 weeks later. For Codling moth in Walnuts, best results have been found by making applications when average cross-sectional diameters of developing nuts are 0.5 to 0.75 inches and again during middle or late June as needed.</p>		
	European earwig	4.7 to 5.9
<p><b>SPECIFIC DIRECTIONS:</b> For European earwig, thorough coverage of trunks, branches, and nuts is needed for best results.</p> <p style="text-align: right;"><b>(Continued)</b></p>		

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Crop	Pest	This Product Per Acre (lbs.)
Almonds Only	Peach twig borers, Scale insects	4.7 to 5.9
	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.	
Pistachios	Brown soft scale, Lecanium scale, Navel orangeworm	3.5 to 5.9
	SPECIFIC DIRECTIONS: Repeat applications as necessary up to a total of 4 times per crop (including any applications at the dormant or delayed dormant timing) but not more often than once every 7 days. For scale control, apply when crawlers are present.	
	Scale insects	4.7 to 5.9
	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 AND PRECAUTIONS:</b> Do not apply within 14 days of harvest. Do not apply more than a total of 17.6 pounds per acre per crop, including any application at the dormant or delayed dormant timing.		

**FORESTED AREAS AND RANGELAND TREES**

(REI = Conifers, Forest Trees, Christmas Trees 12 hours)  
Observe plant response precautions. Obtain thorough coverage of upper and lower leaf surfaces. The addition of a sticker may improve residual control.

Crop	Pest	This Product Per Acre (lbs.)
Forested areas: Non-urban Forests, Tree Plantations, Planted Christmas Trees, Parks, Rural Shelter Belts, Rangeland Trees	Ants*, Apple aphid, Armyworm, Ash whitefly, Azalea leafminer, Bagworms, Balsam twig aphid, Birch leafminer, Blister beetle, Boxelder bug, Boxwood leafminer, Brown tail moth, Cankerworms, Catalpa sphinx, Chiggers, Cooley spruce gall adelgid, Cutworms, Cypress tip moth, Douglas-fir tussock moth, Eastern spruce gall adelgid, Elm leaf aphid, Elm leaf beetle, Elm spanworm, Eriophyid mites, European pine shoot moth, Fall armyworm, Flea beetle, Fuschia gall mite, Fuller rose beetle, Gall midges, Gall wasps, Greenstriped mapleworm, Grasshopper, Hackberry nipplegall maker, Holly bud moth, Holly leafminer, Jackpine budworm, Japanese beetle, Jeffrey pine needleminer, June beetles, Lace bugs, Leafhoppers, Leafrollers, Locust borer, Maple leafcutter, Mealy bugs, Mimosa webworm, Nantucket pine tip moth, Oak leafminers, Oak moth, Oak skeletonizer, Oakworm complex, Oleander caterpillar, Olive ash borer, Orange-striped oakworm, Periodical cicada, Pine looper, Pine sawfly, Pine spittlebug, Pitch pine tip moth, Spruce budworm, Plant bugs, Poinsettia hornworm, Psyllids, Puss caterpillar, Redhumped oakworm, Rose aphid, Rose chafer, Rose slug, Saddled prominent, Sawflies (exposed), Scale insects (crawlers), Sowbugs, Spiney elm caterpillar, Springtails, Spruce needleminer, Subtropical pine tip moth, Tent caterpillars, Thorn bug, Thrips (exposed), Ticks**, Walnut caterpillar, Webworms, Western hemlock looper, Western spruce budworm, Willow leaf beetles, Woolly gall aphid, Yellow poplar weevil	1.2
<b>(Continued)</b>		

Crop	Pest	This Product Per Acre (lbs.)
	SPECIFIC DIRECTIONS: To control scale insects, treat trunks, stems and twigs in addition to plant foliage. For optimum worm control, treat when pests are small. Do not use on syrup-producing sugar maples where sap is harvested. Applications for control of maple leafcutter on sugar maple should be made when larvae are in 2nd instar after mining and as cases are being formed. Repeat treatments as necessary up to a total of 2 times per year but not more often than once every 7 days.	
	Gypsy Moth	0.8 to 1.2
	SPECIFIC DIRECTIONS: For gypsy moth control, use higher rate for heavy infestations.	
	Elm bark beetle, Ips engraver beetles, Mountain pine beetle, Roundheaded pine beetle, Spruce beetle, Western pine beetle	2% solution
	SPECIFIC DIRECTIONS: <b>Direct Trunk Treatment:</b> Effective as a preventative treatment only. Repeat annually as required to prevent beetle attacks. Apply 1 gallon of spray per 50 square feet of bark prior to beetle flight or host-tree attack. Treat tree trunk from ground level up, until trunk diameter is less than 5 inches. For elm bark beetle: apply approximately 20 to 30 gallons of spray mixture for each 50 feet of elm tree for thorough coverage of all bark surfaces on trunks, limbs and twigs. Do not make more than 2 applications per year or repeat applications more often than once every six months.	

**RESTRICTIONS AND PRECAUTIONS:** Do not make more than 2 applications per year. Do not allow public use of treated areas during applications or until sprays have dried.  
\* Except Pharaoh, Carpenter, Harvester, and Fire ants.  
\*\* Will only kill Ticks present at the time of application. Ticks must be directly contacted to be effective. Contact as many Ticks as possible.

**TREES AND ORNAMENTALS (REI = Roses grown for cuttings 7 days; All Others 12 hours)**  
This product at recommended concentrations can be safely used on a wide range of ornamental plants, flowers, shrubs and shade trees.

Crop	Pest	This Product Per Acre (lbs.)
Trees, Ornamentals	Gypsy Moth	0.8 to 1.2
(Roses, Flowers, Other Herbaceous Plants), Woody Plants, Shrubs in Commercial and Residential Areas and in Nursery Production Areas	Ants*, Apple aphid, Armyworm, Ash whitefly, Azalea leafminer, Bagworms, Balsam twig aphid, Birch leafminer, Blister beetle, Boxelder bug, Boxwood leafminer, Brown tail moth, Cankerworms, Catalpa sphinx, Chiggers, Cooley spruce gall adelgid, Cutworms, Cypress tip moth, Douglas-fir tussock moth, Eastern spruce gall adelgid, Elm leaf aphid, Elm leaf beetle, Elm spanworm, Eriophyid mites, European pine shoot moth, Fall armyworm, Flea beetle, Fuschia gall mite, Fuller rose	1.2

**RESTRICTIONS AND PRECAUTIONS:** Do not make more than a total of 6 foliar and 2 direct trunk treatments per year. DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATION OR UNTIL SPRAYS HAVE DRIED.  
\* Except Pharaoh, Carpenter, Fire and Harvester ants.  
\*\* Will only kill Ticks present at the time of application. Ticks must be directly contacted to be effective. Contact as many Ticks as possible.

**(Continued)**

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Crop	Pest	This Product Per Acre (lbs.)
	beetle, Gall midges, Gall wasps, Greenstriped mapleworm, Grasshoppers, Hackberry nipplegall maker, Holly bud moth, Holly leafminer, Jackpine budworm, Japanese beetle, Jeffrey pine needleminer, June beetles, Lace bugs, Leafhoppers, Leafrollers Locust borer, Maple leafcutter, Mealy bugs, Mimosa webworm, Nantucket pine tip moth, Oak leafminers, Oak moth, Oak skeletonizer, Oakworm complex, Oleander caterpillar, Olive ash borer, Orange-striped oakworm, Periodical cicada, Pine looper, Pine sawfly, Pine spittlebug, Pitch pine tip moth, Spruce budworm, Plant bugs, Poinsettia hornworm, Psyllids, Puss caterpillar, Redhumped oakworm, Rose aphid, Rose chafer, Rose slug, Saddled prominent, Sawflies (exposed), Scale insects (crawlers), Sowbugs, Spiny elm caterpillar, Springtails, Spruce needleminer, Subtropical pine tip moth, Tent caterpillars, Thorn bug, Thrips (exposed), Ticks**, Walnut caterpillar, Webworms, Western hemlock looper, Western spruce budworm, Willow leaf beetles, Woolly gall aphid, Yellow poplar weevil	1.2
	SPECIFIC DIRECTIONS: Observe plant response precautions. Obtain thorough coverage of upper and lower leaf surfaces. The addition of a sticker may improve residual control. To control scale insects, treat trunks, stems and twigs in addition to plant foliage. For optimum worm control, treat when pests are small. Do not use on syrup-producing Sugar maples where sap is harvested. Applications for control of Maple leafcutter on Sugar maple should be made when larvae are in 2nd instar after mining and as cases are being formed. Repeat treatments as necessary up to a total of 6 times per year but not more often than once every 7 days. For Gypsy moth control, use the higher rate for heavy infestation.	
	Elm bark beetle, Ips engraver beetles, Mountain pine beetle, Roundheaded pine beetle, Spruce beetle, Western pine beetle	2% solution
	SPECIFIC DIRECTIONS: Direct Trunk Treatment: Effective as a preventative treatment only. Repeat annually as required to prevent beetle attacks. Apply 1 gallon of spray per 50 square feet of bark prior to beetle flight or host-tree attack. Treat tree trunk from ground level up, until trunk diameter is less than 5 inches. For Elm bark beetle: apply approximately 20 to 30 gallons of spray mixture for each 50 feet of Elm tree for thorough coverage of all bark surfaces on trunks, limbs and twigs. Do not make more than 2 applications per year or repeat applications more often than once every six months.	
<p><b>RESTRICTIONS AND PRECAUTIONS:</b> Do not make more than a total of 6 foliar and 2 direct trunk treatments per year. DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATION OR UNTIL SPRAYS HAVE DRIED.</p> <p>* Except Pharaoh, Carpenter, Fire and Harvester ants.</p> <p>** Will only kill Ticks present at the time of application. Ticks must be directly contacted to be effective. Contact as many Ticks as possible.</p>		

**TURFGRASS (RE - Turf Grown for Sod 12 hours)**

Crop	Pest	This Product Per Acre (lbs.)
Turfgrass: Golf turf, Sports fields, Sod farms, Domestic and Commercial lawns, Cemeteries, Parks, Campsites, Recreational areas	Ants*, Armyworm, Centipedes**, Chiggers, Cutworms, Earwigs, Essex skipper, European chafer, Fall armyworm, Fiery skipper, Grasshoppers, Green June beetle larvae, Leafhoppers, Lucerne moth, Millipedes, Mosquitoes (adults)**, Scarab beetle adults (May beetle, June beetle, Japanese beetle, Green June beetle), Sowbugs, Spittlebugs, Springtails, Ticks**, Yellowstriped armyworm	2.4 to 4.7
	SPECIFIC DIRECTIONS: Repeat applications as necessary up to a total of 4 times per year but not more often than once every 7 days. For Armyworm, Cutworm, and Fall armyworm control, do not irrigate treated areas within 24 hours following insecticide application. For Green June Beetle Grub (larvae) control, make applications when Grubs are feeding near the soil surface. Water or irrigate Turfgrass soon after treatment.	
	Chinch bugs, Sod Webworm (lawn moths)	7 to 9.4
	SPECIFIC DIRECTIONS: Repeat applications as necessary up to 2 times per year but not more often than once every 7 days. For Chinch bug control, treat entire grass area rather than just damaged areas. Irrigation prior to treatment will aid in penetration of insecticide into Turfgrass. Do not irrigate treated areas within 24 hours following insecticide application.	
	Bluegrass billbug larvae, European crane fly, Fleas, White grubs (Japanese beetle, Chafer beetle, and <i>Phyllophaga</i> spp. larvae), Black turfgrass ataenius beetle larvae, Hyperoides weevil (Bluegrass weevil larvae)	9.4
	SPECIFIC DIRECTIONS: Repeat applications as necessary up to 2 times per year but not more often than once every 7 days. For European Crane Fly control, treatments should be applied in early Spring, April 1 to April 15, or as recommended by local Agricultural Extension Service agents. Water or irrigate Turfgrass soon after treatment. For White Grub control, applications should be made when Grubs are feeding near the soil surface, usually during late March through May, or July through early September, or as recommended by local Agricultural Extension Service agents. Water or irrigate Turfgrass soon after treatment. Repeat applications as necessary up to 2 times per year but not more often than once every 7 days.	
<p><b>PRECAUTIONS AND RESTRICTIONS:</b> Broadcast applications to Turfgrass are permitted only on Golf courses, Sod farms, Cemeteries, and Commercial landscapes. Applications to all other Turfgrass or Lawns are limited to spot treatments of less than 1,000 square feet. DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.</p>		

**GRASSHOPPERS**

Crop	Pest	This Product Per Acre (lbs.)
All crops on this label	Grasshoppers	0.6 to 1.8
	SPECIFIC DIRECTIONS: Apply 0.6 to 0.8 pounds per acre of this product for nymphs on small plants or sparse vegetation. Apply 1.2 to 1.8 pounds per acre for mature Grasshoppers or applications to dense foliage or if extended residual control is desired. Be certain spray volumes are appropriate to assure adequate coverage.	
<p><b>PRECAUTIONS AND RESTRICTIONS:</b> Do not use rates higher than listed for the site or exceed other use restrictions. (Refer to individual site listings elsewhere on this label for use limitations and restrictions.)</p>		

**TICKS WHICH MAY VECTOR LYME DISEASE**

To kill juvenile and adult ticks which may vector Lyme Disease, apply the recommended amount is sufficient volume for thorough coverage. Will only kill Ticks present at the time of application. Ticks must be directly contacted to be effective. Contact as many Ticks as possible.

Crop/Site	Pest	This Product Per Acre (lbs.)
All crops on this label Pastures, Forested Areas, Wasteland, Rights-of-Way, Hedgegroves, Ditchbanks, Roadsides, Set-Aside and Conservation Reserve Program Acreage, Trees and Ornamentals, Turfgrass	<i>Ixodes</i> spp. (Deer tick, Bear tick, Black legged tick)	1.2 to 2.4
	<i>Amblyomma</i> spp. (Lone star tick)	

**SPECIFIC DIRECTIONS:** Use the high rate for heavy tick infestations.\* Use higher spray volumes for dense ground cover or heavy leaf litter. Target applications for nymphal control in late spring or early summer. Control of adult tick can be obtained with late summer and fall applications. Do not use spot treatments. Treat entire area and perimeter areas where exposure to ticks may occur. Ticks may be reintroduced from surrounding areas on host animals. Retreat as necessary to maintain adequate control levels.\*

**PRECAUTIONS AND RESTRICTIONS:**  
\*NOTE: Refer to individual site listings elsewhere on this label for use limitations and restrictions. Do not use rates higher than listed for the site or exceed other use restrictions.  
DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATION OR UNTIL SPRAYS HAVE DRIED.

**ADULT MOSQUITO**

Apply in sufficient gallonage for thorough coverage. Will only kill Mosquitoes present at the time of application. Mosquitoes must be directly contacted to be effective. Contact as many Mosquitoes as possible.

Crop	Pest	This Product Per Acre (lbs.)
Pastures, Rangeland, Forested Lands, Trees and Ornamentals, Turfgrass, Wastelands	Mosquitoes (adults)	0.3 to 1.2*
	<b>SPECIFIC DIRECTIONS:</b> OBSERVE BEE CAUTION. Treat shrubbery and areas where adult mosquito congregate. Treat when adult mosquitoes are active in early mornings or late evenings. Repeat applications as necessary.* Use 0.3 to 0.6 pounds per 100 gallons in mistblowers, and 1.2 pounds per acre in low pressure ground sprayers.	

**PRECAUTIONS AND RESTRICTIONS:**  
DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATION OR UNTIL SPRAYS HAVE DRIED.  
CAUTION: May kill shrimp and crabs. Do not use in areas where these are important resources.  
\*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.

**NUISANCE PEST CONTROL**

For use as a perimeter treatment to kill listed pests, apply the specified dosage in a band 6 to 10 feet wide around the outside perimeter of the structure.

Pest	This Product
Ants*, Bees**, Brown dog tick**, Centipedes**, Cockroaches**, Crickets, Darkling beetle (lesser mealworm or litter beetle), Earwigs, Firebrats, Fleas, Millipedes, Scorpions*, Silverfish, Spiders, Wasps**	1% solution

**SPECIFIC DIRECTIONS:** Observe plant response precautions. Apply as a coarse wet spray in a band 6 to 10 feet wide around the outside perimeter of buildings. 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 congregate. For use in and around flower beds and ornamental plantings, apply as a coarse wet spray in and around plant beds. May be applied to outdoor sleeping quarters of pets. Do not treat animals. Do not allow animals to use treated area until sprays have dried.

**PRECAUTIONS AND RESTRICTIONS:**  
DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATION OR UNTIL SPRAYS HAVE DRIED.  
NOTE: Staining may occur on certain surfaces such as stucco, brick, cinder block, wood fabrics, and carpet. Spray deposits on painted or stained surfaced of finishes (eg. cars, house trailers, boats, etc.) should be removed immediately by washing to prevent discoloration. Avoid application to surfaces where visible spray residues are objectionable. Staining of fabrics and carpet may be permanent.  
\* Except Pharaoh, Carpenter, Fire and Harvester ants.  
\*\* Will only kill pests present at the time of application. Pests must be directly contacted to be effective. Contact as many pests as possible.

**IMPORTED FIRE ANTS**

Crop/Site	Pest	This Product
Pasture, Rangeland, Forested Areas, Trees and Ornamentals, Turfgrass, Wasteland	Imported fire ants	8 grams per gallon
	<b>SPECIFIC DIRECTIONS:</b> <b>DRENCH APPLICATION:</b> Apply a total of 2 gallons of the diluted solution over the surface of each mound or at least 1 quart per 6 inches of mound diameter using a bucket, can or other appropriate equipment. Thoroughly wet mound and surrounding areas to a 4 ft. diameter (12 sq. ft.). Do not disturb mound prior to treatment. Pour solution from a height of about three feet to give sufficient force to break mound apex and flow into ant tunnels. For best results apply in cool weather (65 to 80°F) or in early morning or late evening hours. Repeat application if mound activity resumes after 7 days. Treat new mounds as they appear. Pressurized sprays may disturb the ants and cause migration, reducing product effectiveness.	
	Imported fire ants	1.8 pounds per 100 gallons

**SPECIFIC DIRECTIONS:** Avoid contact with foliage and treat only the growing media when using on bedding plants. Do not make more than one application, either as a root dip or drench treatments (applied to the point of saturation).

**PRECAUTIONS AND RESTRICTIONS:**  
DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATION OR UNTIL DRENCH HAVE DRIED. DO NOT USE IN GREENHOUSES.  
\*NOTE: DO NOT USE ON ANY FOOD CROP NOT LISTED ON THIS LABEL. Refer to the specific crop section for additional restrictions and precautions.

**STORAGE AND DISPOSAL**

**PESTICIDE STORAGE:** Store in original container only. Store in cool, dry area out of reach of children and animals. Do not store in areas where temperatures frequently exceed 100°F.

**PESTICIDE DISPOSAL:** Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and Local authorities, by burning. If bag is burned, stay out of smoke.

**WARRANTY—CONDITIONS OF SALE**

OUR RECOMMENDATIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. 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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