

5905-526

12/13/2001

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Ms. Emily Smathers Ratliff
Helena Chemical Company
6075 Poplar Avenue, Suite 500
Memphis, TN 38119-4702

DEC 13 2001

Dear Ms. Ratliff:

Subject: Amendment - Comply with 2000 Diazinon MOA;
Delete Beans, Cucumbers, Parsley, Parsnips,
Peas, Peppers, Potatoes, Summer Squash,
Winter Squash, Sweet Potatoes, Swiss Chard,
Lawn Pest Control, Livestock Insects (sheep)
Livestock Structures, Nuisance Pests in
Outside Areas, Grassland Insects (Roadsides,
Ditch Banks, Wasteland, Non-crop Areas, &
Barrier Strips), Ornamentals except those
Grown Outdoors in Nurseries
Update First Aid per PR Notice 2001-1; and
Update CSF/replacement diazinon source
Diazinon 50 WP Insecticide
EPA Registration Number 5905-526
Your submission dated June 18, 2001

The amendment referred to above, submitted in connection with registration under FIFRA section 3(c)(7)(a), is acceptable provided that you:

1. Submit and/or cite all data or other material required for registration/reregistration of your product under FIFRA section 3(c)(5) or FIFRA section 4 when the Agency requires all registrants of similar products to submit such data.
2. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:
 - a. Delete directions for use on the crop Cucumbers. Under the diazinon MOA, and as stipulated on the labeling for the replacement diazinon manufacturing-use products from which agricultural end-use products may be formulated, use on cucumbers is no longer permitted. Also, be sure to delete "cucumbers" from the minimum gallonage and PHI tables.
 - b. Under the heading General Information, replace the sentence beginning "Diazinon 50W is a..." with the following:
"Diazinon 50 W is a wettable powder which, when diluted with water according to the directions, is intended for control of insect pests of agricultural crops, and other plants."

- c. Also under the heading General Information, replace the sentence "Do not use on food crops grown in greenhouses." with "Do not use this product in greenhouse, dwellings, or barns. Do not use on livestock."
 - d. For the crop Cranberries, in Note "2" replace "Do not use water." with "Do not use water from irrigated or flooded cranberry beds for drinking purposes or to irrigate crops other than those appearing on EPA-approved diazinon labels."
 - e. For the crop Plums, add a space between "summer" and "horticultural".
 - f. For the crop Strawberries, in item 2 iof the Notes add "To avoid illegal residues," before "allow a minimum of...".
 - g. For the crop Walnuts, for both sets of pest directions, delete "Do not apply within 45 days of harvest or after husks open or illegal residues may occur.". Then, add a Notes section for this crop as follows:

Notes: (1) Do not apply more than 6 lbs. of product per acre per application and no more than 18 pounds of product per acre per season. (2) To avoid illegal residues, allow a minimum of 45 days between the last application and harvest, and do not apply after husks open.
 - h. In the minimum gallonage table and the PHI table revise "casabas" to read "casaba melons" and revise "crenshaws" to read "crenshaw melons".
3. Submit three (3) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

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

The Basic Confidential Statement of Formula (CSF) dated June 14, 2001 which identifies a replacement diazinon source Manufacturing Use Product is acceptable and has been added to this product's registration file.

Sincerely,

George T. LaRocca
Product Manager 13
Insecticide Branch
Registration Division (7505C)

RESTRICTED USE PESTICIDE
Due to Avian and Aquatic Toxicity
For retail sale to and use by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's Certification.

DIAZINON 5OWP
INSECTICIDE

For Control of Certain Insects and Mites on Agricultural Fruits, Nuts, Vegetables, Field Crops and Ornamentals (Grown in Outdoor Nurseries ONLY) and in Mushroom Houses
For specific pests, refer to use directions in booklet.

THIS PRODUCT MUST NOT BE USED ON GOLF COURSES AND SOD FARMS.

ACTIVE INGREDIENT:

Diazinon: O,O-Diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl) phosphorothioate.....50.00%

INERT INGREDIENTS.....50.00%

TOTAL.....100.00%

Diazinon 5OWP is a wettable powder.

KEEP OUT OF REACH OF CHILDREN
CAUTION
See Additional Precautionary Statements Inside Booklet

SN:

EPA REG. NO.: 5905-526
EPA EST. NO.:

NET CONTENTS:

ACCEPTED
with COMMENTS
In EPA Letter Dated:
DEC 13 2001
under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 5905-526

MANUFACTURED FOR
HELENA CHEMICAL COMPANY
6075 POPLAR AVENUE, SUITE 500
MEMPHIS, TN 38119

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed, inhaled or absorbed through skin. Avoid breathing dust or spray mist. Avoid contact with skin, eyes, and clothing. Avoid contamination of food and feed. Keep out of reach of domestic animals. Food utensils, such as teaspoons or measuring cups, must not be used for food purposes after use in measuring pesticides. Do not use on humans or pets. Do not contaminate ornamental fish ponds. Be sure to read and follow "Work Safety Rules" and Worker Protection precautions that appear in this booklet.

FIRST AID
Organophosphate

IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

IF INHALED:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
- Call a poison control center or doctor for further treatment advice.

IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

IF ON SKIN:

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

Have the product container with you when calling a poison control center or doctor, or going for treatment.

Note to Physician: If symptoms of cholinesterase inhibition are present, atropine sulfate by injection is antidotal. 2-PAM is also antidotal and may be administered, but only in conjunction with atropine.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves

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

Engineering Controls Statements

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

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

This product is highly toxic to birds, fish and other wildlife. Birds, especially waterfowl, feeding or drinking on treated areas may be killed. Do not exceed maximum permitted label rates. Rates above those recommended significantly increase potential hazards to birds and waterfowl. Avoid overlapping of sprays. On lawns, if waterfowl (ducks or geese) can be expected in the treated area after treatment (except spot treatments), apply a minimum of 1/4 inch of water immediately after applying this product. Stop irrigation before puddling occurs. Keep out of lakes, streams, ponds, tidal marshes and estuaries. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Shrimp and crab may be killed at application rates recommended on this label. Do not apply where fish, shrimp, crab, and other aquatic life are important resources.

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

This pesticide is highly toxic to bees exposed to direct treatment or to residues on blooming crops or weeds. Do not apply this pesticide or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Reformulation or repackaging of this product is prohibited.

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.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR INSECT CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval. Exception: If the product is soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

Coveralls

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Waterproof gloves
Shoes plus socks

Note: The California Department of Agriculture has set a 5-day reentry period for diazinon on grapes, peaches, and nectarines. Five days should elapse between the time of application and the time a worker may enter the field to engage in any activity requiring substantial contact with treated foliage. When a mixture of two or more organophosphate pesticides are applied in combination, the interval should be prolonged by adding to the largest applicable interval an additional 50% of that interval.

STORAGE AND DISPOSAL

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

Pesticide:

Pesticide wastes are toxic. To avoid harming aquatic organisms in rivers and other surface waters, do not pour spray mixture or rinse water into sanitary drains (for example, toilets, floor drains, and sinks) or into storm water sewers (for example, street drains.) Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If pesticide, spray mixture or rinsate cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container:

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. Stay out of smoke from burning container.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup and disposal of wastes. In the event of a major spill, fire, or other emergency, call Chemtrec, 1-800-424-9300 day or night.

GENERAL INFORMATION

Diazinon 50WP is a wettable powder which should be mixed with sufficient water to assure thorough coverage unless otherwise noted in the Directions for Use. Best control is obtained when application is made at first sign of pest. Application should be repeated only as directed to maintain control.

Since **Diazinon 50WP** is a wettable powder formulation, constant agitation is necessary during application.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap, since crop or plant injury may result.

Do not use on food crops grown in greenhouses.

Work Safety Rules

REPEATED EXPOSURES TO CHOLINESTERASE INHIBITORS SUCH AS ARE CONTAINED IN THIS PRODUCT MAY, WITHOUT WARNING, CAUSE PROLONGED SUSCEPTIBILITY TO VERY SMALL DOSES OF ANY CHOLINESTERASE INHIBITOR.

When handling **Diazinon 50WP**, do not rub eyes or mouth with hands. If you feel sick in any way, STOP work and get help right away. See Practical Treatment section of this label.

CHEMIGATION APPLICATION THROUGH AN IRRIGATION SYSTEM (CHEMIGATION) - CRANBERRIES ONLY.

Diazinon 50WP may be applied alone or in combination with other pesticides registered for application through sprinkler irrigation systems to cranberries. To insure compatibility, pour the products into a small container of water in the correct proportions. After thorough mixing, let stand for five minutes. If the combination remains mixed, or can be remixed readily, the mixture is compatible.

Do not apply this product through any type of irrigation system to other crops. For chemigation, apply this product to cranberries only through sprinkler irrigation systems. Do not apply this product to cranberries through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

Do not connect the irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments if the need arises.

Chemigation System Connected to Public Water Systems

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction.. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

Sprinkler Chemigation

1. The system must contain a functional check valve, a vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

Operating Instructions

1. Determine the acreage to be treated by the sprinkler system.
2. Measure the appropriate amount of **Diazinon 5OWP** needed to treat the acreage to be treated. Refer to the specific directions for use for cranberries for the application rate and the amount of water per acre.
3. Add the pre-measured **Diazinon 5OWP** to the chemigation system supply tank and dilute with water if needed. Proper agitation is needed if **Diazinon 5OWP** is tank mixed with other pesticides registered for sprinkler chemigation application to cranberries.
4. Start the irrigation system and bring the system up to full pressure, making certain that all sprinkler heads are functioning properly.
5. Engage the chemigation injection or venturi system to add the diazinon to the irrigation lines.
6. Continue to run irrigation system for a few minutes after supply tank is empty to allow material in the irrigation lines to reach the sprinkler heads further from the chemigation injection point.

FRUIT AND NUT CROPS

REI - 24 hours

Diazinon 5OWP may be applied using ground or aerial application equipment as specified in the following Table. This Table indicates the *minimum* amount of water that can be used for various methods of application. The rate of **Diazinon 5OWP** for aerial spray or concentrated spray applied by ground equipment is based on a dilute full cover spray applied to fruit or nut trees with conventional ground equipment at a rate of 300-400 gals. of water per acre. The specific amount of product to be used appears under separate directions for use for each crop. (**Note:** "lbs." or "lbs. of product" in the direction means pounds of this product, not pounds of active ingredient). If the Rate calls for 1 lb. of **Diazinon 5OWP** per 100 gallons of water, this amounts to 3-4 lbs. of product per acre when applied to fruit trees at the usual dilute ground spray volumes of 300-400 gals. of water per acre. In no case should the amount of product used per acre exceed the maximum amount per acre per application that is specified in the directions for use for individual crops.

Crop	Aerial application Minimum Gals./Acre	Ground Application Minimum Gals./Acre	
		Dilute	Concentrate
Almonds*	20	100	20
Apples	20	100	20
Apricots	20	100	20
Blackberries**	20	100	20
Blueberries	20	100	20
Boysenberries**	20	100	20
Cherries	20	100	20
Cranberries	20	15	-
Dewberries**	20	100	20
Grapes	20	100	20
Loganberries**	20	100	20
Nectarines	20	100	20
Peaches	20	100	20
Pears	20	100	20
Pineapple	20	200	-
Plums	20	100	20
Prunes	20	100	20
Raspberries**	20	100	20
Strawberries	20	100	20
Walnuts*	20	100	20

*CA only.

**CA, OR, or WA only.

Observe stated time intervals between last application and harvest, as well as intervals between applications and total amount of product that can be applied per season:

Crop	PHI*
Almonds	**
Apples	21
Apricots	21
Blackberries	7
Blueberries	7
Boysenberries	7
Cherries	21
Cranberries	7
Dewberries	7
Grapes	28
Loganberries	7
Nectarines	21
Peaches	21
Pears	21
Pineapple	7
Plums, Prunes	21
Raspberries	7
Strawberries	5
Walnuts	45

*PHI = Pre-Harvest Interval, or the number of days to wait between the last application and harvest.

** = Dormant spray only.

Note: To protect bees, do not apply to fruit trees when trees or substantial numbers of weeds in the orchard are in bloom.

ALMONDS (CA only): San Jose Scale, Parlatoria Scale, Black Scale, Brown Scale, Apricot Scale, European Red Mite Eggs, Brown Mite Eggs, Twig Borers, Apple Aphid Eggs, Black Cherry Aphid Eggs, Mealy Plum Aphid Eggs, Mealybugs - 1-1½ lbs. + 2-3 gallons dormant oil or 1-1½ gallons superior type oil in 100 gallons of water. Apply as a single dormant spray. Do not apply more than 6 lbs. of diazinon or 9 gallons of oil per acre.

APPLES: San Jose Scale, Parlatoria Scale, Black Scale, Brown Scale, Apricot Scale, European Red Mite Eggs, Brown Mite Eggs, Twig Borers, Apple Aphid Eggs, Black Cherry Aphid Eggs, Mealy Plum Aphid Eggs, Mealybugs - 1 lb. + 2 gals. dormant oil or 1-1½ gals. superior type oil in 100 gals. of water. Apply as a dormant or delayed dormant spray. Do not apply more than 4 lbs. of product or 6 gals. of oil per acre. **Leafhopper** - 1 lb. in 100 gals. of water. Apply, beginning at petal fall, as infestations develop. Repeat application in 14 days, if necessary. **Eyespotted Bud Moths, Fruit Tree Leafrollers, Mealybugs** - 1 lb. in 100 gals. of water. Make 3 cover sprays beginning at pink stage. Do not repeat applications closer than 14 days. **Codling Moths, Rosy Apple Aphids, Green Apple Aphids, Woolly Apple Aphids, Spider Mites** - 1 lb. in 100 gals. of water. Make 3 cover sprays beginning when infestations occur. Do not repeat applications closer than 14 days. **Note:** Mites will be suppressed if diazinon is used in the regular cover spray program. Slight russetting may occur on some varieties of apples such as Golden Delicious. **Apple Maggots** - 1 lb. in 100 gals. of water. Make 3 cover sprays when flies are active and laying eggs. Do not repeat applications closer than 14 days. **Note:** Diazinon may not control organophosphate-resistant apple maggots. **San Jose Scale Crawlers, Forbes Scale Crawlers:** 1 lb. in 100 gals. of water. Apply early in the season when crawlers first appear. If infestation warrants, make a second application 14 days later.

NOTES: (1) Do not apply more than 4 lbs. of product per acre per application and no more than 12 lbs. of product per acre per season. (2) To avoid illegal residues, allow a minimum of 21 days between the last application and harvest.

APRICOTS: San Jose Scale, Parlatoria Scale, Black Scale, Brown Scale, Apricot Scale, European Red Mite Eggs, Brown Mite Eggs, Twig Borers, Apple Aphid Eggs, Black Cherry Aphid Eggs, Mealy Plum Aphid Eggs, Mealybugs - 1 lb. + 2 gals. dormant oil or 1-1½ gals. superior type oil in 100 gals. of water. Apply as a dormant spray. Do not apply more than 4 lbs. of product or 6 gals. of oil per acre. **Aphids, Brown Mites (Clover Mites), Two-spotted Spider Mites, Olive Scale Crawlers, San Jose Scale Crawlers** - 1 lb. in 100 gallons of water. Apply as infestations occur. Repeat application after 14 days, if necessary. **Olive Scale Crawlers** - ½ lb. + 1½ gallons of light medium horticultural oil per 100 gals. of water. Apply when scale crawlers are present. Do not apply more than 4 lbs. of product or 6 gals. of oil per acre per application. **Apricot Mealybugs** - 1 lb. in 100 gallons of water. Apply as a cover spray from petal fall to June. Allow 14 days between applications.

Notes: (1) Do not apply more than 4 lbs. of product per acre per application and no more than 12 lbs. of product per acre per season. (2) To avoid illegal residues allow a minimum of 21 days between the last application and harvest.

BLUEBERRIES: Cranberry Fruitworms, Cherry Fruitworms, Blueberry Maggots, Aphids, Thrips, Two-spotted Spider Mites - 1 lb. in 100 gals. of water. Apply as infestations occur. Allow 14 days between applications. **Fire Ants** - 1 lb. in 100 gals. of water. To aid in the control of fire ants, slowly apply 1 gal. of diluted mixture over and 6 inches to each fire ant mound. Apply gently to avoid

disturbing ants. Use equipment capable of delivering the diluted product as a gentle rain. High pressure sprays may disturb the ants and cause migration, reducing product effectiveness. **Note:** For best results, apply in cool weather, 65-80°F, or in early morning or late evening hours.

NOTES: (1) Do not apply more than 2 lbs. of product per acre per season. (2) To avoid illegal residues, allow a minimum of 7 days between the last application and harvest.

CANEBERRIES (CA, OR and WA only) (Blackberries, Boysenberries, Dewberries, Loganberries, Raspberries): Leafhoppers, Thrips, Aphids, Two-spotted Spider Mites, Raspberry Fruitworms - 2 lbs. per acre in a minimum of 100 gals. of water (200 gals. of water maximum). Apply as insects occur. Repeat applications after 14 days, if necessary. For raspberry fruitworms, make one application when blossom buds separate. Make a second application immediately before blossoms open. **Dryberry Mites** - 2-4 lbs. per acre in a minimum of 100 gals. of water. Apply as a dormant spray in the early Spring when canes are still on the ground and buds are closed. Make a second application when buds are well developed but still closed. **Raspberry Crown Borers (Raspberry Root Borers)** - 4 lbs. per acre in a minimum of 100 gals. of water. Apply as a drench to the crown and lower canes in the Spring before buds break.

NOTES: (1) Do not apply more than 4 lbs. of product per acre per application and no more than 12 lbs. of product per acre per season. (2) To avoid illegal residues, allow a minimum of 21 days between the last application and harvest.

CHERRIES: San Jose Scale, Parlatoria Scale, Black Scale, Brown Scale, Apricot Scale, European Red Mite Eggs, Brown Mite Eggs, Twig Borers, Apple Aphid Eggs, Clack Cherry Aphid Eggs, Mealy Plum Aphid Eggs, Mealybugs - 1¼ lbs. + 3 gals. dormant oil or 1-1½ gals. superior type oil in 100 gals. of water. Apply as a dormant spray. Do not apply more than 4 lbs. of product or 6 gals. of oil per acre. **Eyespotted Bud Moths, Fruit Tree Leafrollers** - 1 lb. in 100 gallons of water. Apply as infestations occur beginning at petal fall. Repeat application after 7 days, if necessary. **Leafhoppers** - 1 lb. in 100 gallons of water. Make 3-4 applications beginning at petal fall and continuing through the growing season as infestations occur. Allow 7 days between applications. **Cherry Fruitflies** - ½-1 lb. in 100 gallons of water. Make 3-4 applications beginning when adult flies begin to emerge and repeating at 10 day intervals. **Black Cherry Aphids** - 1 lb. in 100 gallons of water. Apply as a cover spray when aphids appear. Repeat application after 10 days, if necessary. **San Jose Scale Crawlers** - 1 lb. in 100 gallons of water. Apply during the pre-pink stage or when crawlers first appear. **Cherry Rust Mites** - ½-1 lb. in 100 gallons of water. Apply as a single supplemental spray to trees after harvest.

Notes: (1) Do not apply more than 4 lbs. of product per acre per application and no more than 12 lbs. of product per acre per year. (2) To avoid illegal residues, allow a minimum of 21 days between the last application and harvest.

CRANBERRIES: **Blackheaded Fireworms (*Rhopobota naevana*)** - 4 lbs. Apply to larval stage. Pheromone trap captures and sweep monitoring may be used to optimize treatment timing. Repeat application after 14 days, if necessary. A maximum of 6 applications per season is permitted. **Cranberry Tipworms** - 4 lbs. Presence of damage is not an indicator of active infestation. For best results, target early-stage larvae. Repeat application after 14 days, if necessary. A maximum of 6 applications per season is permitted. **Cranberry Fruitworms** - 4 -6 lbs. per acre. Cranberry growth stage and/or berry inspection for eggs may be used to optimize treatment timing; consult your local extension agent or pest management advisor. Repeat application every 14 days, as needed. A maximum of 4 applications per season is permitted for the 6 lb. rate. A maximum of 6 applications per season is permitted for the 4 lb. rate.

Notes: (1) This product may be applied to cranberries via ground, aerial, or sprinkler irrigation. For ground applications, apply the product in a minimum of 15 gals. of water per acre, for aerial application, a minimum of 20 gals. of water per acre, for chemigation up to 400 gals. of water per acre. Refer to the Chemigation section of this label for specific chemigation directions. (2) Do not use water. (3) Do not apply more than 24 lbs. of product per acre per season. (4) To avoid illegal residues, allow a minimum of 7 days between the last application and harvest.

GRAPES: Pacific Spider Mites, Leafhoppers, Grape Berry Moths, Grape Leafrollers, Omnivorous Leafrollers, Aphids, Spider Mites - 1-2 lbs. per acre in a minimum of 100 gals. of water. (200 gals. of water maximum). Apply as a thorough cover spray when pest appear. Repeat application after 7 days, if necessary. **Drosophila spp.** - 6 oz. per acre in a minimum of 100 gallons of water (300 gal. of water maximum). Apply as a thorough cover spray at 7 day intervals.

Notes: (1) Do not apply more than 2 lbs. of product per acre per application and no more than 10 lbs. per acre per season. (2) To avoid illegal residues, allow a minimum of 28 days between the last application and harvest.

NECTARINES: San Jose Scale, Parlatoria Scale, Black Scale, Brown Scale, European Red Mite Eggs, Twig Borers, Apple Aphid Eggs, Black Cherry Aphid Eggs, Mealy Plum Aphid Eggs, Mealybugs - 1 lb.+ 2-3 gals. of dormant oil or 1-1½ gals. superior type oil in 100 gals. of water. Apply as a dormant spray. Do not apply more than 4 lbs. of product or 6 gals. of oil per acre. **Aphids, Brown Mites (Clover Mites), Two-spotted Spider Mites, Olive Scale Crawlers, San Jose Scale Crawlers** - 1 lb. in 100 gallons of water. Apply as infestations occur. Repeat application after 7 days, if necessary. **Peach Twig Borers, Parlatoria Scale** - 1 lb. + 1 gal. light medium summer horticultural oil in 100 gals. of water. Apply at petal fall. Do not apply more than 4 lbs. of product or 4 gals. of summer oil per acre. **Olive Scale Crawlers** - ½ lb. + 1½ gals. light medium horticultural oil in 100 gals. of water. Apply as insects occur. Do not apply more than 4 lbs. of product or 4 gals. of summer oil per acre per application. Allow 7 days between applications. **Oriental Fruitmoths** - 1 lb. in 100 gals. of water. Apply at 100% petal fall. Make 2 additional applications at 10-15 day intervals. Time the last application to peak adult flight.

Notes: (1) Do not apply more than 4 lbs. of product per acre per application and no more than 12 lbs. of product per acre per season. (2) To avoid illegal residues, allow a minimum of 21 days between the last application and harvest.

PEACHES: San Jose Scale, Parlatoria Scale, Black Scale, Brown Scale, European Red Mite Eggs, Twig Borers, Apple Aphid Eggs, Black Cherry Aphid Eggs, Mealy Plum Aphid Eggs, Mealybugs - 1 lb. + 2-3 gals. dormant oil or 1-1½ gals. superior type oil in 100 gals. of water. Apply as a dormant spray. Do not apply more than 4 lbs. of product or 6 gals. of oil per acre. **Aphids, Brown Mites (Clover Mites), Two-spotted Spider Mites, Olive Scale Crawlers, San Jose Scale Crawlers** - 1 lb. in 100 gallons of water. Apply as infestations occur. Repeat application after 14 days, if necessary. **Peach Twig Borers, Parlatoria Scale** - 1 lb. + 1 gal. light medium summer horticultural oil in 100 gals. of water. Apply at petal fall. Do not apply more than 4 lbs. of product or 4 gals. of summer oil per acre. **Olive Scale Crawlers** - ½ + 1½ gals. light medium horticultural oil in 100 gals. of water. Apply as insects occur. Do not apply more than 4 lbs. of product or 4 gals. of summer oil per acre per application. Allow 7 days between applications. **Oriental Fruitmoths** - 1 lb. in 100 gallons of water. Apply at 100% petal fall. Make 2 additional applications at 10-15 day intervals. Time the last application to peak adult flight. **Peach Twig Borers** - 1 lb. in 100 gals. of water. Apply as insects occur in May and June. Allow 7 days between applications. **Leafhoppers** - 1 lb. in 100 gallons of water. Make 3-4 applications beginning at petal fall and continuing through the

growing season. Allow at least 7 days between applications. **White Peach Scale** - 1½-2 lbs. in 100 gallons of water. Apply post-harvest timed to coincide with peak crawler and immature scale activity. Under conditions of heavy infestation, 2 applications (7 days apart) may be needed.

Notes: (1) Do not apply more than 4 lbs. of product per acre per application and no more than 12 lbs. of product per acre per season. (2) To avoid illegal residues, allow a minimum of 21 days between the last application and harvest.

PEARS: **San Jose Scale, Parlatoria Scale, Black Scale, Brown Scale, Apricot Scale, European Red Mite Eggs, Brown Mite Eggs, Pear Leaf Blister Mite Eggs, Twig Borers, Apple Aphid Eggs, Black Cherry Aphid Eggs, Mealy Plum Aphid Eggs, Mealybugs** - 1 lb. + 2-3 gals. dormant oil or 1-1½ gals. superior type oil in 100 gals. of water. Apply as a dormant spray. Do not apply more than 4 lbs. of product or 6 gals. of oil per acre. **Pear Psylla** - ½-1 lb. in 100 gals. of water. Apply as a cover spray at pre-pink stage. Make 1-2 additional applications during the first and second cover sprays, if necessary. Allow at least 14 days between applications. **Tentiform Leafminers, Mealybugs** - 1 lb. in 100 gals. of water. Make 3 cover sprays, beginning in April. Allow at least 14 days between applications. **Codling Moths, Rosy Apple Aphids, Green Apple Aphids, Wooly Apple Aphids, Spider Mites** - 1 lb. in 100 gals. of water. Make 3 cover sprays beginning as infestations occur. Allow at least 14 days between applications. **Note:** Mites will be suppressed if diazinon is used in this regular cover spray program. **Apple Maggots** - 1 lb. in 100 gals. of water. Make 3 cover sprays when flies are active and laying eggs. Allow at least 14 days between applications. **Note:** Diazinon will not control organophosphate-resistant apple maggot. **San Jose Scale Crawlers, Forbes Scale Crawlers** - 1 lb. in 100 gals. of water. Apply early in the season when crawlers first appear. If infestation warrants, make a second application 14 days later.

Notes: (1) Do not apply more than 4 lbs. of product per acre per application and no more than 12 lbs. of product per acre per season. (2) To avoid illegal residues, allow a minimum of 21 days between the last application and harvest.

PINEAPPLE: **Pineapple Mealybugs** - 2 lbs. per acre in 200-500 gals. of water. Repeat application, as necessary, every 28 days up to a maximum of 8 applications. Do not apply within 7 days of harvest or illegal residues may occur.

PLUMS: **San Jose Scale, Parlatoria Scale, Black Scale, Brown Scale, Apricot Scale, European Red Mite Eggs, Brown Mite Eggs, Twig Borers, Apple Aphid Eggs, Black Cherry Aphid Eggs, Mealy Plum Aphid Eggs, Mealybugs** - 1 lb. + 2-3 gals. dormant oil or 1-1½ gals. superior type oil in 100 gals. of water. Apply as a dormant spray. Do not apply more than 4 lbs. of product or 6 gals. of oil per acre. If applied in late April or May, mix diazinon with 1 gal. of light medium summerhorticultural oil per 100 gals. of water. **Brown Mites, Clover Mites, European Red Mites** - 1 lb. in 100 gallons of water. Apply, as needed, every 7 days. **Leafcurl Plum Aphids, Mealy Plum Aphids, Thistle Aphids** - ½-1 lb. in 100 gallons of water. Apply, as needed, every 7 days.

Notes: (1) Do not apply more than 4 lbs. of product per acre per application and no more than 12 lbs. of product per acre per season. (2) To avoid illegal residues, allow a minimum of 21 days between the last application and harvest.

PRUNES: **San Jose Scale, Parlatoria Scale, Black Scale, Brown Scale, Apricot Scale, European Red Mite Eggs, Brown Mite Eggs, Twig Borers, Apple Aphid Eggs, Black Cherry Aphid Eggs, Mealy Plum Aphid Eggs, Mealybugs** - 1 lb. + 2-3 gals. dormant oil or 1-1½ gals. superior type oil in 100 gals. of water. Apply as a dormant spray. Do not apply more than 4 lbs. of product or 6 gals. of oil per acre. For late April or May applications, mix diazinon with 1 gal. of light medium summer

horticultural oil per 100 gals. of water. **Brown Mites, Clover Mites, European Red Mites** - 1 lb. in 100 gallons of water. Apply, as needed, every 7 days. **Leafcurl Plum Aphids, Mealy Plum Aphids, Thistle Aphids** - 1/2-1 lb. in 100 gallons of water. Apply, as needed, every 7 days.

Notes: (1) Do not apply more than 4 lbs. of product per acre per application and no more than 12 lbs. of product per acre per season. (2) To avoid illegal residues, allow a minimum of 21 days between the last application and harvest.

STRAWBERRIES: **Aphids, Two-spotted Spider Mites** - 1 lb. in 100 gallons of water per acre. Apply as pests occur. Repeat application if necessary every 7 days. **Cyclamen Mites** - 2 lbs. in 100 gallons of water per acre. Direct spray to the plant crowns. Plants should be sufficiently agitated to assure thorough coverage of the foliage. Repeat applications after 7 days, if necessary. **Mole Crickets** - 2 lbs. per acre. Apply 1-2 days before transplanting and immediately incorporate into the top 1-2 inches of soil. **Strawberry Leafrollers** - 3/4 -1 lb. in 100 gallons of water. Apply 200 gallons of spray per acre when blossoms show color.

Notes: (1) Do not make more than 3 foliar applications per season. (2) Do not apply more than 2 lbs. of product per acre per application and no more than 8 lbs. of product per acre per season. (3) Allow a minimum of 5 days between the last application and harvest.

WALNUTS (CA only): **Aphids, Spider Mites** - 2 lbs. in 100 gals. of water per acre. Apply as a foliar spray, as needed. Repeat application in 14 days, if necessary. Do not make more than 3 applications per season. Do not apply within 45 days of harvest or after husks open or illegal residues may occur. **Codling Moths, Scale Crawlers, Walnut Caterpillars** - 6 lbs. in 100 gals. of water per acre. Apply as a foliar spray, as needed. Repeat application in 14 days, if necessary. Do not make more than 3 applications per season. Do not apply within 45 days of harvest or after husks open or illegal residues may occur.

VEGETABLE CROPS

REI - 24 hours

For foliar or soil applications, **Diazinon 50WP** should always be applied as a spray in sufficient water assure thorough coverage of the foliage or soil. **Diazinon 50WP** may be applied aerially or by ground application as specified in the following table. The specific amount of product to be used appears under the separate directions for use for each crop.

Crop	Ground Application		Aerial Application Minimum Gals./Acre
	Minimum Gals./Acre	OR Minimum Gals./1,000 Sq.Ft.	
Beets, Red (Table)	10	2	5
Broccoli	10	2	5
Brussels Sprouts	10	2	5
Cabbage	10	2	5
Cantaloupes	5	1	5
Carrots	10	2	5
Casabas	5	1	5
Cauliflower	10	2	5
Chinese Broccoli	10	2	5
Chinese Cabbage	10	2	5
Chinese Mustard	10	2	5
Collards	10	2	5
Crenshaws	5	1	5
Cucumbers	5	1	5

Crop	Ground Application		Minimum Gals./1,000 Sq.Ft.	Aerial Application	
	Minimum Gals./Acre	OR		Minimum Gals./Acre	
Endive (Escarole)	10		2		5
Honeydew Melons	5		1		5
Kale	10		2		5
Lettuce (Head and Leaf)	10		2		5
Muskmelons	5		1		5
Mustard	10		2		5
Onions, (Bulb and Green)	10		2		5
Persian Melons	5		1		5
Radishes	10		2		5
Rutabagas	10		2		5
Spinach	10		2		5
Sweet Corn	20		4		5
Tomatoes	10		2		5
Tumips	10		2		5
Watermelons	5		1		5

*Do not use on commercially grown potatoes which will be hand-harvested.

Observe stated time intervals between last application and harvest as well as intervals between and maximum numbers of applications per season.

Pre-Harvest Intervals (PHI*) for Foliar Applications

Crop	PHI* (Days)
Beets, Red (Table)	14
Broccoli	7
Brussels Sprouts	7
Cabbage	21
Cantaloupes	3
Carrots	14
Casabas	3
Cauliflower	7
Chinese Broccoli	10
Chinese Cabbage	10
Chinese Mustard	10
Collards	10
Crenshaws	3
Cucumbers	7
Endive (Escarole)	14
Honeydew Melons	3
Kale	10
Lettuce (Head and Leaf)	14
Muskmelons	3
Mustard	10
Onions (Green and Bulb)	14
Persian Melons	3
Radishes	14

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Crop	PHI* (Days)
Rutabagas	14
Spinach	14
Sweet Corn	7
Tomatoes	1
Turnips (Roots and Tops)	14
Watermelons	3

*PHI = Pre-harvest Interval or number of days to wait between the last application and harvest.

Notes: 1) **Soil Incorporation:** Following application of this product to control vegetable soil insects, immediately incorporate the product into the soil to the recommended depth (see TIMING/SPECIAL DIRECTIONS) using a rotary hoe, cultivator, disk, harrow, or other suitable means. For control of surface cutworms, incorporate 2-3 inches; for subterranean cutworms, incorporate 3-6 inches. 2) **To Protect Bees:** Foliar applications of this product should not be made to peas or beans if these crops or weeds in the treatment area are in bloom, or to corn during the pollen shed period.

LEETS, RED (Table): **Cutworms** - 4-8 lbs. per acre or 1½-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) **Mole Crickets** - 2 lbs. per acre or ¾ oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. **Wireworms**- 6-8 lbs. per acre or 2¼-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. **Aphids, Dipterous Leafminers** - ½-1 lb. per acre or 1/5-2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, up to 5 times, with a minimum of 7 days between applications. Do not apply within 14 days of harvest or illegal residues may occur. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

BROCCOLI: **Root Maggots** - 4-6 lbs. per acre or 1½-2¼ oz. per 1,000 sq. ft. Broadcast just before planting or transplanting and immediately incorporate into the top 3-4 inches of soil. **Root Maggots** - 4-8 ozs. per 50 gals. of water. In transplant water as a drench application when 200-300 gals. of water are used per acre. Apply ½-1 cup (4 to 8 oz.) per plant by hand or by tractor mounted sprayer equipped with drop nozzles to direct spray to the base of the plant. **NOTE:** Transplant water treatments may result in stand reduction due to plant stress at time of transplanting. **Cutworms** - 4-8 lbs. per acre or 1½-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) **Mole Crickets** - 2 lbs. per acre or ¾oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. **Wireworms** - 6-8 lbs. per acre or 2¼-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. **Aphids, Diamondback Moths, Imported Cabbageworms, Dipterous Leafminers** - ½-1 lb. per acre or 1/5-2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, up to 5 times, with a minimum of 7 days between applications. Do not apply within 7 days of harvest or illegal residues may occur. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

BRUSSELS SPROUTS: **Root Maggots** - 4-6 lbs. per acre or 1½-2¼ oz. per 1,000 sq. ft. Broadcast just before planting or transplanting and immediately incorporate into the top 3-4 inches of soil. **Root Maggots** - 4-8 in 50 gals. of water. In transplant water as a drench application when 200-300 gals. of water are used per acre. Apply ½-1 cup (4 to 8 ozs.) per plant by hand or by tractor-mounted sprayer equipped with drop nozzles to direct spray to the base of the plant. **NOTE:** Transplant water treatments may result in stand reduction due to plant stress at time of transplanting. **Cutworms** - 4-8 lbs. per acre or 1½-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate

into the soil. (See Soil Incorporation Note.) **Mole Crickets** - 2 lbs. per acre or ¾ oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. **Wireworms** - 6-8 lbs. per acre or 2¼-3 oz. per 1,000 sq ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. **Aphids, Diamondback Moths, Imported Cabbageworms,** - ½-1 lb. per acre or 1/5-2/5 oz. per 1,000 sq ft. Apply as insects occur. Repeat application as necessary, up to five times, with a minimum of 7 days between applications. Do not apply within 7 days of harvest or illegal residues may occur.

CABBAGE: Root Maggots - 4-6 lbs. per acre or 1½-2¼ oz. per 1,000 sq. ft. Broadcast just before planting or transplanting and immediately incorporate into the top 3-4 inches of soil. **Root Maggots** - 4-8 oz. in 50 gals. of water. In transplant water as a drench application when 200-300 gals. of water are used per acre. Apply ½-1 cup (4 to 8 ozs.) per plant by hand or by tractor-mounted sprayer equipped with drop nozzles to direct spray to the base of the plant. **NOTE:** Transplant water treatments may result in stand reduction due to plant stress at time of transplanting. **Cutworms** - 4-8 lbs. per acre or 1½-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) **Mole Crickets** - 2 lbs. per acre or ¾ oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. **Wireworms** - 6-8 lbs. per acre or 2¼-3 oz. per 1,000 sq ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. **Aphids, Diamondback Moths, Imported Cabbageworms, Dipterous Leafminers** - ½-1 lb. per acre or 1/5-2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application as necessary, up to 5 times, with a minimum of 7 days between applications. Do not apply within 21 days of harvest or illegal residues may occur. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

CARROTS: Cutworms - 4-8 lbs. per acre or 1½-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) **Mole Crickets** - 2 lbs. per acre or ¾ oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. **Wireworms** - 6-8 lbs. per acre or 2¼-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. **Carrot Rust Fly** - 4 lbs. per acre or 1½ oz. per 1,000 sq. ft. Apply as a drench to the seed furrow at planting. **Aphids** - 1 lb. per acre or 2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, up to 5 times, with a minimum of 7 days between applications. Do not apply within 14 days of harvest or illegal residues may occur.

CAULIFLOWER: Root Maggots - 4-6 lbs. per acre or 1½-2¼ oz. per 1,000 sq. ft. Broadcast just before planting or transplanting and immediately incorporate into the top 3-4 inches of soil. **Root Maggots** - 4-8 ozs. in 50 gals. of water. In transplant water as a drench application where 200-300 gals. of water are used per acre. Apply ½-1 cup (4 to 8 ozs.) per plant by hand or by tractor-mounted sprayer equipped with drop nozzles to direct spray to the base of the plant. **NOTE:** Transplant water treatments may result in stand reduction due to plant stress at time of transplanting. **Cutworms** -4-8 lbs. per acre or 1½-3 oz. per 1,000 sq. ft.. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) **Mole Crickets** - 2 lbs. per acre or ¾ oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. **Wireworms** - 6-8 lbs. per acre or 2¼-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. **Aphids, Diamondback Moths, Imported Cabbageworms, Dipterous Leafminers** - ½-1 lb. per acre or 1/5-2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, up to 5 times, with a minimum of 7 days between applications. Do not apply within 7 days of harvest or illegal residues may occur. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

CHINESE BROCCOLI, CHINESE CABBAGE (BOK CHOY AND NAPA), CHINESE MUSTARD (GAI CHOY): Aphids, Diamondback Moths, Imported Cabbageworms, Dipterous Leafminers - 1/2-1 lb. per acre or 1/5-2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, up to 5 times, with a minimum of 7 days between applications. Do not apply within 10 days of harvest or illegal residues may occur. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

COLLARDS: Cutworms - 4-8 lbs. per acre or 1 1/2-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) Mole Crickets - 2 lbs. per acre or 3/4 oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. Wireworms - 6-8 lbs. per acre or 2 1/4-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. Aphids, Diamondback Moths, Imported Cabbageworms, Harlequin Cabbagebugs, Corn Earworms - 1/2-1 lb per acre or 1/5-2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, up to 5 times, with a minimum of 7 days between applications. Do not apply within 10 days of harvest or illegal residues may occur.

CUCUMBERS: Cutworms - 4-8 lbs. per acre or 1 1/2-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) Wireworms - 6-8 lbs. per acre or 2 1/4-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. Aphids, Serpentine Leafminers, Thrips, Striped Cucumber Beetles, Melonworm - 1 lb. per acre or 2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, every 7 days. Do not make more than 5 applications per season. Do not apply within 7 days of harvest or illegal residues may occur. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

ENDIVE (ESCAROLE): Cutworms - 4-8 lbs. per acre or 1 1/2-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) Mole Crickets - 2 lbs. per acre or 3/4 oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. Wireworms - 6-8 lbs. per acre or 2 1/4-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. Aphids, Dipterous Leafminers - 1/2-1 lb. per acre or 1/5-2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, up to 5 times, with a minimum of 7 days between applications. Do not apply within 14 days of harvest. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

KALE: Cutworm - 4-8 lbs. per acre or 1 1/2-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) Mole Crickets - 2 lbs. per acre or 3/4 oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. Wireworms - 6-8 lbs. per acre or 2 1/4-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. Aphids, Diamondback Moths, Imported Cabbageworms, Harlequin Cabbagebugs, Corn Earworms - 1/2-1 lb. per acre or 1/5-2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, up to 5 times, with a minimum of 7 days between applications. Do not apply within 10 days of harvest or illegal residues may occur.

LETTUCE (Head and Leaf): Cutworms - 4-8 lbs. per acre or 1 1/2-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) Mole Crickets - 2 lbs. per acre or 3/4 oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. Wireworms - 6-8 lbs. per acre or 2 1/4-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. Aphids, Dipterous Leafminers - 1/2-1 lb. per acre or 1/5-2/5 oz. per 1,000 sq. ft. Apply as

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insects occur. Repeat application, as necessary, up to 5 times, with a minimum of 7 days between applications. Do not apply within 14 days of harvest. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

MELONS (CANTALOUPE, CASABAS, CRENSHAW, HONEYDEW, MUSKMELON, PERSIAN, AND HYBRIDS OF THESE) AND WATERMELONS: **Cutworms** - 4-8 lbs. per acre or 1½-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) **Wireworms** - 6-8 lbs. per acre or 2¼-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. **Aphids, Dipterous Leafminers, Thrips, Striped Cucumber Beetles, Melonworms, Leafhoppers, Spider Mites** - ½-1 lbs. per acre or 1/5-3/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, every 7 days. Do not make more than 5 applications per season. Do not apply within 3 days of harvest or illegal residues may occur. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

MUSTARD: **Mole Crickets** - 2 lbs. per acre or ¾ oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. **Wireworms** - 6-8 lbs. per acre or 2¼-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. **Aphids, Dipterous Leafminers, Diamondback Moths, Imported Cabbageworms** - ½-1 lb. per acre or 1/5-2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, up to 5 times, with a minimum of 7 days between applications. Do not apply within 10 days of harvest or illegal residues may occur. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

ONION (GREEN & BULB): **Onion Maggots** - 4-8 lbs. per acre or 1½-3 oz. per 1,000 sq. ft. Broadcast just before planting and mix into the top 3-4 inches of soil. **NOTE:** Diazinon will not control organophosphate-resistant onion maggots. **Onion Thrips** - 1 lb. per acre or 2/5 oz. per 1,000 sq. ft. Apply as thrips appear. Repeat application after 7 days, if necessary. Do not make more than 3 applications per season. Do not apply within 14 days of harvest or illegal residues may occur. **Wireworms** - 6-8 lbs. per acre or 2¼-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into top 4-8 inches of soil.

RADISHES: **Cutworms** - 4-8 lbs. per acre or 1½-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) **Mole Crickets** - 2 lbs. per acre or ¾ oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. **Wireworms** - 6-8 lbs. per acre or 2¼-3 oz. per 1,000 sq. ft. Broadcast before planting and immediately incorporate into the top 4-8 inches of soil. **Aphids, Flea Beetles, Dipterous Leafminers** - ½-1 lb. per acre or 1/5-2/5 oz. per 1,000 sq. ft.. Apply as insects occur. Repeat application, as necessary, up to 3 times, with a minimum of 7 days between applications. Do not apply within 14 days of harvest or illegal residues may occur. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

RUTABAGAS: **Cutworms** - 4-8 lbs. per acre or 1½-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil (See Soil Incorporation Note.) **Mole Crickets** - 2 lbs. per acre or ¾ oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. **Wireworms:** 6-8 lbs. per acre or 2¼-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. **Aphids, Flea Beetles, Dipterous Leafminers** - ½-1 lb. per acre or 1/5-2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, up to 5 times, with a minimum of 7 days between

applications. Do not apply within 14 days of harvest or illegal residues may occur. **Note:** Diazinon will not control organophosphate-resistant leafminers.

SPINACH: Aphids, Dipterous Leafminers - 1/2-1 lb. per acre or 1/5-2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, up to 5 times, with a minimum of 7 days between applications. Do not apply within 14 days of harvest. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

SWEET CORN: Cutworms 4-8 lbs. per acre or 1 1/2-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) **Seed Corn Maggots** - 4-8 lbs. per acre or 1 1/2-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 2 inches of soil. **Wireworms** - 6-8 lbs. per acre or 2 1/4-3 oz. per 1,000 sq. ft. Broadcast before planting and immediately incorporate into the top 4-8 inches of soil. **Corn Earworms** - 2-2 1/2 lbs. per acre or 3/4-1 oz. per 1,000 sq. ft. Apply when silks first appear. Repeat application every 7 days up to a maximum of 5 applications, if necessary. **Corn Leaf Aphids** - 1-2 lbs. per acre or 2/5-3/4 oz. per 1,000 sq. ft. Apply in sufficient water to provide complete coverage to the upper portions of the plants. Repeat in 7 days, if necessary. Do not make more than applications per season. **Grasshoppers, Spider Mites, Flea Beetles** - 1 lb. per acre or 2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat if necessary, but do not make more than 5 applications per season. **Sap Beetles** - 2-2 1/2 lbs. per acre or 3/4-1 oz. per 1,000 sq. ft. Consult local agricultural authorities for proper timing of sprays. Repeat application in 7 days, if necessary. Do not make more than 5 applications per season.

NOTE: (1) To protect bees, do not apply foliarly to corn during the pollen shed period. (2) Allow a minimum of 7 days between the last application and grazing or cutting for forage. (3) Corn may be picked 7 days after the last application.

TOMATOES: Cutworms - 4-8 lbs. per acre or 1 1/2-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) **Mole Crickets** - 2 lbs. per acre or 3/4 oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. **Wireworms** - 6-8 lbs. per acre or 2 1/4-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. **Aphids, Dipterous Leafminers** - 1/2 lb. per acre or 1/5 oz. per 1,000 sq. ft. Apply as insects appear. Repeat application after 7 days, if necessary. Do not make more than 5 applications per season. Do not apply within one day of harvest or illegal residues may occur. **Note:** Diazinon will not control organophosphate-resistant leafminers. **Banded Cucumber Beetles, Fall Armyworms, Southern Armyworms, Beet Armyworms** - 3/4-1 lb. per acre or 3/10-2/5 oz. per 1,000 sq. ft. Apply as insects appear. Repeat application after 7 days, if necessary. Do not make more than 5 applications per season. Do not apply within one day of harvest or illegal residues may occur. **Vinegar Flies (Drosophila Spp.)** 1/2-1 1/2 lbs. per acre or 1/5-3/5 oz. per 1,000 sq. ft. Apply as insects appear. Repeat application after 7 days, if necessary. Do not make more than 5 applications per season. Do not apply within one day of harvest or illegal residues may occur. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

TURNIPS (ROOTS AND TOPS): Cutworms - 4-8 lbs. per acre or 1 1/2-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the soil. (See Soil Incorporation Note.) **Mole Crickets** - 2 lbs. per acre or 3/4 oz. per 1,000 sq. ft. One to two days before planting, broadcast and immediately incorporate into the top 1-2 inches of soil. **Wireworms** - 6-8 lbs. per acre or 2 1/4-3 oz. per 1,000 sq. ft. Broadcast just before planting and immediately incorporate into the top 4-8 inches of soil. **Aphids, Flea Beetles, Dipterous Leafminers** - 1/2-1 lb. per acre or

1/5-2/5 oz. per 1,000 sq. ft. Apply as insects occur. Repeat application, as necessary, up to 5 times, with a minimum of 7 days between applications. Do not apply within 14 days of harvest or illegal residues may occur. **NOTE:** Diazinon will not control organophosphate-resistant leafminers.

MUSHROOM HOUSES

Mushroom flies (Phorida and Sciarids) - Mix 4-5 lbs. of **Diazinon 5OWP** in 50 gallons of water and spray on outside and inside walls, floors and sideboards of mushroom houses after compost has been pasteurized by heating. Also, spray over the plastic covering the beds and trays after spawning. **Note: Do not spray the compost. To avoid illegal residues, do not apply more than 3 applications to mushroom houses per crop.**

SEED TREATMENT - PLANTER BOX TREATMENT

In the planter box, mix with seed as a dry mixture. Stir slightly using a mixing stick. **DO NOT MIX WITH BARE HANDS.** Treat only those seeds needed for immediate use, minimizing the interval between treatment and planting. Do not store excess treated seed beyond planting time. Exposed treated seeds may be hazardous to birds and other wildlife. Dispose of excess treated seed by burial away from bodies of water.

Notes: (1) If seed has not been treated with a fungicide, use an EPA-registered fungicide combination with **Diazinon 5OWP** at rates indicated on the fungicide package. Failure to use a fungicide may result in injury to the seed. (2) If the seed treatment increases the friction between seeds sufficiently to reduce the rate of delivery through the plant, 1/2 oz. of graphite per bushel seed should be added as a drill lubricant. Adjust the planter to give the required rate of seed delivery with the treated seed. (3) Treated seed must not be used for or mixed with food or animal feed or processed for oil.

CORN: Seedcorn Beetle - Mix 3 oz. per bushel of seed.

CORN, SUCCULENT PEAS AND SUCCULENT BEANS: Seedcorn Maggot - Mix 1/2 oz. per bushel of seed.

FIELD CROPS

PREI - 24 hours

Apply soil and foliar applications of **Diazinon 5OWP** in sufficient water to ensure thorough coverage for foliar applications. Observe stated time intervals between last application and harvest, as well as intervals between applications and total number of application that can be made per season.

Preharvest Interval (PHI*) for Foliar Applications

Crop	PHI *
Hops	14
Sugar Beets	14

*PHI = Pre-Harvest Interval or the number of days to wait between the last application and harvest.

HOPS: Aphids, Spider Mites - 2 lbs. per acre. Apply as pest occur. Repeat application, if necessary, in 14 days. Do not make more than 4 applications per season or apply within 14 days of harvest or illegal residues may occur.

SUGAR BEETS: Wireworms - 6-8 lbs. per acre. Broadcast just before planting. Incorporate into soil 4-6 inches. Do not apply more than 8 lbs. of this product to the soil, per season. **Beet Leafhoppers, Dopterous Leafminers, Aphids** - 3/4-1 lb. per acre. Apply as insects occur. Repeat applications, as

necessary, up to 5 times per season with a minimum of 7 days between applications. Do not apply within 14 days of harvest. **NOTE:** Diazinon will not control organophosphate-resistant leafminers. **Grasshoppers** - 1 lb. per acre. Apply as insects occur. Repeat application, as necessary, up to 5 times, per season with a minimum of 7 days between applications. Do not apply within 14 days of harvest.

NOTE: Sugar beet tops may be fed to beef and dairy animals.

INSECT CONTROL ON ORNAMENTALS GROWN IN OUTDOOR NURSERIES ONLY

REI - 12 hours

To control certain insects on Arborvitae, Azalea, Birch, Boxwood, Camellia, Carnation, Chrysanthemum, Crab Apple, Dogwood, Douglas Fir, Elm, Enonymus, Gladioli, Hawthorn, Holly, Honey Locust, Honeysuckle, Juniper, Lilac, Lily, Locust, Maple, Marigold, Oak, Pansy, Petunia, Pine, Ornamental Plum, Poplar, Rhododendron, Rose, Scotch Pine, Spirea, Spruce, Sycamore, Wax Plant (Hoya), Willow, Yellowwood and Yew, apply the recommended rates indicated below. Apply when pest first appear. Try to spray underside of leaves and penetrate dense foliage. Repeat as necessary.

Aphids, Bagworms, Carnation Bud Mites, Carnation Shoot Mites, Clover Mites, Cyclamen Mites, Dipterous Leafminers, European Pine Shoot Moths, European Red Mites, Flea Beetles, Holly Bud Moths, Leafhoppers, Obscure Root Weevils, Omnivorous Leaf-tiers, Privet Mites, Scale Crawlers (Cottony-cushion, Lecanium, Pine Needle, San Jose, Soft), Thrips, Two-spotted Spider Mites, Juniper Webworms, and Whiteflies - Use ½ oz. per 3 gallons of water or 1 lb. per 100 gallons of water.

Apple-and-Thorn Skeletonizers, Cotoneaster Webworms, European Pine Sawfly, Fall Webworms, Hemlock Chermes, Oak Loopers, Oblique-banded Leafrollers, Pear Slugs, and Tent Caterpillars - Use 1½ oz. per 3 gallons of water or 3 lbs. per 100 gallons of water.

Note: Do not use on Ferns, Poinsettia, Hibiscus, Papaya, Pilea, and Gardenia, since injury to the plants may occur.

Mimosa Webworms: Mix ½ oz. in 3 gallons of water (or 1 lb. in 100 gallons of water) and apply as a thorough foliar spray when adults first appear. Make a second and third application at 4-5 week intervals.

**CONDITIONS OF SALE - LIMITED WARRANTY
AND LIMITATIONS OF LIABILITY AND REMEDIES**

Read the Conditions of Sale - Warranty and Limitations of Liability and Remedies before using this product. If the terms are not acceptable, return the product, unopened, and the full purchase price will be refunded.

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions, the failure to follow the label directions, or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use

subject to the factors noted above which are beyond the control of the Company. The Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product shall be limited to, at Helena Chemical Company's election, one of the following:

1. Refund of the purchase price paid by buyer or user for product bought, or
2. Replacement of the product used

To the extent allowed by law, the Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income. The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.

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