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MAR 12 1985

Ms. Mary Hewitt
The One. H. Lilly Co.
7737 N. E. Killingsworth
Portland, OR 97218

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Dear Ms. Hewitt:

Subject: Amendment - Update Label

Miller's Dioxin 40W
EPA Registration No. 802-512
Your submission dated February 5, 1985

BEST AVAILABLE COPY

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable provided that you:

1. Make the labeling changes listed below before you release the product for alignment bearing the amended labeling:

a. Label statements and revisions required by FR notice 83-2, Pesticide Safety, should be made at this time. Your letter of October 11, 1984 had indicated that "For the other reentry statements, we will use the exact wording as given in FR notice 83-2" but these were not included on your latest label submission. Specifically, add the signal word **WARNING** in the same type size as **HAZARD**. Immediately under these signal words add "PERSISTENT ALUMINUM: do not use on lawns, no use on products which are in contact with lawns and lawns equipment."

b. In the Directions for Use add the following statements to the beginning of the Re-entry statements:

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not enter treated areas until sprays have dried unless appropriate protective clothing is worn.

Protective clothing means, at least, a hat or other suitable head covering, a long sleeved shirt and long legged trousers or a coverall type garment (all of closely woven fabric covering the body, including arms legs), shoes and socks.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

c. Balance the **NOTE** about re-entry periods in California (currently appearing only in the booklet GENERAL INSTRUCTIONS) to appear in the RE-ENTRY STATEMENTS directly after the text indicated in Item "b" above.

- 2 of 15
- d. It is preferred that the RE-ENTRY STATEMENTS appear on both the label and in the booklet. If that is not possible, the statements should appear on the main label and the user should be referred to them from the beginning of the use directions in the booklet.
 - e. Add the common name Diazinon before its formula name in the booklet.
 - f. In the Hazards to Humans & Domestic Animals section of both the label and booklet revise "Do not permit children or pets to go on to sprayed grass until spray has completely dried." to "Do not allow children or pets to go on to sprayed areas until spray has completely dried."
 - g. Revise the Note to Physician to read as follows:

Note to Physician - Product contains an organophosphate insecticide. 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.
 - h. On page 26 of the booklet, change the heading to "Fly Control in Barns & Other Farm Bldgs.". This is necessary because the precautions under NOTE specify not to use the product in dairy barns.
 - i. On page 27 of the booklet, change the heading to read "Fly Control in Non-Food Areas of Food Processing Plants" to be consistent with the specific precautions appearing after NOTE on this same page. The directions should be rewritten to avoid implying application in food processing areas, such as "cover all equipment". You should specify areas that application is permitted in such as garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closets, and storage (after canning or bottling).
2. Submit five (5) copies of your final printed labeling before you release the product for shipment under the amended labeling.

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

Sincerely yours,

George T. LaRocca
Product Manager (15)
Insecticide-Rodenticide Branch
Registration Division (TS-767C)

MILLER'S

DIAZINON[®] 40W

(WETTABLE POWDER)

Insecticide for fruits, nuts, vegetables, field crops and ornamentals
FOR AGRICULTURAL USE ONLY

ACCEPTED
with COMMENTS
in the EPA Pesticide Database

MAR 12 1985

ACTIVE INGREDIENT
Diazinon : O,O-dimethyl O-[2-isopropyl 6-methyl 4-pyrimidinyl] phosphorothioate
INERT INGREDIENTS

40%
60%
100%

Total

"Diazinon" is the Reg. TM of CHA GEIGY

Keep out of reach of children
WARNING

BEST AVAILABLE COPY

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

802-512

PRECAUTIONARY STATEMENTS Hazards to Humans and Domestic Animals WARNING

May be fatal if swallowed. May be absorbed through skin. Do not breathe dust or spray mist. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Avoid contamination of food and feed. Keep out of reach of domestic animals. Do not use on humans or household pets. Do not permit children or pets to go onto sprayed grass until spray has completely dried.

STATEMENT OF PRACTICAL TREATMENT

If swallowed, call a physician or Poison Control Center immediately. Drink one or two glasses of water and induce vomiting by touching the back of throat with finger. Repeat until vomit fluid is clear. Do not induce vomiting or give anything by mouth to an unconscious person.

If inhaled, remove victim to fresh air and apply artificial respiration if indicated.

If on skin, wash promptly with soap and water. Rinse thoroughly.

If in eyes, rinse eyes with plenty of water and call a physician immediately.

Note to Physician: Gastric lavage is indicated. Atropine sulfate and 2 PAM are specific antidotes.

ENVIRONMENTAL HAZARDS

This product is toxic to fish, birds, and other wildlife. Birds feeding on treated areas may be killed. Keep out of lakes, streams, ponds, tidal marshes, and estuaries (except for effluents from treated water-cress beds). Do not apply to water that will be used for recreational purposes, and human and livestock consumption. 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. This product must not be used in areas where impact on the threatened endangered species is likely. Contact your State Fish and Game Agency for information pertaining to areas having threatened endangered species. Apply this product only as specified on this label.

This pesticide is highly toxic to bees exposed to direct treatment or to residues remaining on the treated area. Do not apply when bees are actively visiting the crop, cover crop, or weeds blooming in the treatment area. Applications should be timed to provide the maximum possible interval between treatment and the next period of bee activity.

DIRECTIONS FOR USE

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

RE-ENTRY STATEMENTS

Written or oral warnings must be given to workers who are expected to be in a treated area or an area about to be treated.

Oral warnings must be given if written warnings cannot be understood by workers and must be in a language they understand. Give specific oral warnings which inform workers of areas or fields that may not be entered without specific protective clothing, the period of time field must be vacated, and appropriate actions to take in case of accidental exposure.

Written warnings must include the following information: **WARNING** - Area treated with DIAZINON 40 W on (date and time of application). Do not enter without full protective clothing until sprays have dried.

In case of exposure to pesticide spray or dust, wash the skin thoroughly with soap and water. Remove contaminated clothing and wash before reuse. If in eyes, flush with plenty of water. If inhaled, go to an area where the pesticide has not been applied. Get medical attention if needed.

STORAGE AND DISPOSAL

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

Pesticide Disposal: Pesticide, spray mixture, or rinse water that cannot be used according to label instructions must be disposed of according to applicable Federal, state, or local procedures.

Container Disposal: Completely empty bag by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of bags in a sanitary landfill or by incineration if allowed by State and local authorities.

NOTICE: Follow directions carefully. Timing and method of application, weather, and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risk of use, storage or handling of this material not in strict accordance with directions given hereon.

NOTICE: See booklet attached to back of this container for complete list of use instructions.

NET WEIGHT 5 LBS.

THE CHAS. H. LILLY CO.
PORTLAND, OREGON 97218

 LILLY/MILLER

EPA Est. 802 OR-1

EPA Reg. No. 802-512

MILLER'S

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DIAZINON® 40W

(WETTABLE POWDER)

ACCEPTED
with COMMENTS
in EPA Letter Dated

Insecticide for fruits, nuts, vegetables, field crops and ornamentals
FOR AGRICULTURAL USE ONLY

MAR 12 1985

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

802-512

ACTIVE INGREDIENT		
Diazinon	: O,O-dimethyl O-(2-isopropyl 6-methyl-4-pyrimidinyl) phosphorothioate	40%
INERT INGREDIENTS		60%
	Total	100%

"Diazinon" is the Reg. TM. of CIBA-GEIGY

Keep out of reach of children
WARNING

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals
WARNING

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If inhaled, remove victim to fresh air and apply artificial respiration if indicated.
If on skin, wash promptly with soap and water. Rinse thoroughly.
If in eyes, rinse eyes with plenty of water and call a physician immediately.
Note to Physician: Gastric lavage is indicated. Atropine sulfate and 2-PAM are specific antidotes.

ENVIRONMENTAL HAZARDS

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In case of exposure to pesticide spray or dust, wash the skin thoroughly with soap and water. Remove contaminated clothing and wash before reuse. If in eyes, flush with plenty of water. If inhaled, go to an area where the pesticide has not been applied. Get medical attention if needed.

STORAGE AND DISPOSAL

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

Pesticide Disposal: Pesticide, spray mixture, or rinse water that cannot be used according to label instructions must be disposed of according to applicable Federal, state, or local procedures.

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NOTICE: See booklet attached to back of this container for complete list of use instructions.

NET WEIGHT 5 LBS.

THE CHAS. H. LILLY CO.
PORTLAND, OREGON 97218



EPA Est. 802-OR-1

EPA Reg. No. 802-512

BEST AVAILABLE COPY

Booklet

Miller's

Diazinon

Insecticide

40W

THIS LABEL BOOKLET CONTAINS ALL DIRECTIONS FOR USE ON THE FOLLOWING:

Alfalfa	Fly control in	Pecans
Almonds	barns and animal	Peppers
Apples	sleeping quarters	Pineapple
Apricots	Grapefruit	Plums
Beets	Grapes	Pole Beans
Bermudagrass	Hops	Potatoes
Blueberries	Kale	Prunes
Broccoli	Lawns	Radishes
Brussels Sprouts	Lemons	Rangeland
Cabbage	Lespedeza	Snap Beans
Caneberries	Lettuce	Sorghum
Carrots	Lima Beans	Soybeans
Cauliflower	Melons	Spinach
Celery	Mushroom Houses	Squash
Cherries	Nectarines	Strawberries
Citrus Fruits	Olives	Sugar Beets
Clover	Onions	Sugarcane
Collards	Oranges	Sweet Corn
Corn	Ornamentals	Swiss Chard
Cotton	Parsnips	Tobacco
Cowpeas	Pasture & Grass	Tomatoes
Cranberries	Forage	Turnips
Cucumbers	Peaches	Walnuts
Endive	Peanuts	Watercress
Figs	Pears	(Hawaii only)
Filberts	Pears	

IMPORTANT: Read all warnings, precautions, and notices on container label and in this booklet before using this product.

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Diazinon[®] 40W

Insecticide for fruits, nuts, vegetables,

field crops and ornamentals

FOR AGRICULTURAL USE ONLY

ACTIVE INGREDIENT:

*O, O-diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl) phosphorothioate. 40%

INERT INGREDIENTS: 60%

Total 100%

*Diazinon[®] is the Reg. T.M. of CIBA-GEIGY

E.P.A. Reg. No. 802-512-AA

NOTICE: Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risk of use, storage or handling of this material not in strict accordance with directions given herewith.

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PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING

May be fatal if swallowed. May be absorbed through skin. Do not breathe dust or spray mist. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Avoid contamination of food and feed. Keep out of reach of domestic animals. Do not use on humans or household pets. Do not permit children or pets to go onto sprayed grass until spray has completely dried.

Statement of Practical Treatment

If swallowed, call a physician or Poison Control Center immediately. Drink one or two glasses of water and induce vomiting by touching back of throat with finger. Repeat until vomit fluid is clear. Do not induce vomiting or give anything by mouth to an unconscious person.

Environmental Hazards

This product is toxic to fish, birds, and other wildlife. Birds feeding on treated areas may be killed. Keep out of lakes, streams, ponds, tidal marshes, and estuaries (except for effluence from treated watercress beds). Do not apply to water that will be used for recreational purposes, and human and livestock consumption. 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. This product must not be used in areas where impact on threatened endangered species is likely. Contact your State Fish and Game Agency for information pertaining to areas having threatened endangered species. Apply this product only as specified on this label.

This pesticide is highly toxic to bees exposed to direct treatment or to residues remaining on the treated area. Do not apply when bees are actively visiting the crop, cover crop, or weeds blooming in the treatment area. Applications should be timed to provide the maximum possible interval between treatment and the next period of bee activity.

In the directions for use given in this booklet, unless otherwise noted, Miller's Diazinon 40W should be mixed with sufficient water to assure thorough coverage. Best control is obtained when application is made at first sign of insects. Applications should be repeated as necessary to maintain control.

Since Diazinon 40W is a wettable powder formulation constant agitation is necessary during application.

NOTE: The California Department of Agriculture has a 5-day reentry for Diazinon on citrus, grapes, peaches and nectarines. Five days should lapse 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.

USE PRECAUTIONS: Observe number of days before harvest for last application noted in parenthesis by each food crop. Unless otherwise noted the maximum dosage for each crop, indicated in pounds of Diazinon 40W is shown in parenthesis () following crop listings. Do not apply when honey bees are foraging in the garden.

STORAGE AND DISPOSAL

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

Pesticide Disposal: Pesticide, spray mixture, or rinse water that cannot be used according to label instructions must be disposed of according to applicable Federal, State, or local procedures.

Container Disposal: Completely empty bag by shaking and tapping sides and bottom to loosen clinging particles. Completely residue into application equipment. Then dispose of bags in a sanitary land-filling operation. If allowed by state and local authorities.

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Fruit and Nut Insects

ALMONDS (Max. dosage-15 lbs. per acre)
 Mites, Twig Borers: Apply 1½-2 lbs. per 100 gals. of water.
 Parlatoria Scales, San Jose Scales: Mix 1½-2 lbs. plus 2-3 gals. dormant oil per 100 gals. of water and apply as a dormant spray.
 Almond Hulls may be fed to livestock.

APPLES (14) (Max. dosage-15 lbs. per acre)
 Leafhoppers: Apply 1½ lbs. per 100 gals. of water in 3-5 applications beginning at petal fall and continuing through the growing season, or apply as infestations develop.
 San Jose Scales, Mealybugs, Apple Aphid eggs, European Red Mite eggs, Brown Mite eggs, Apple Aphid eggs: Mix 1½ lbs. plus 1 gal. of superior type oil or 2 gals. of dormant oil per 100 gals. of water. Apply as a dormant or delayed dormant spray.
 Eye-Spotted Bud Moths, Fruit Tree Leaf Rollers, Mealybugs: Mix 1½ lbs. per 100 gals. of water. Make 3 to 8 cover spray applications, beginning in the pink stage.

APPLES and PEARS (14) (Max dosage-15 lbs. per acre)
 Codling Moths, Rosy Apple Aphids, Green Apple Aphids, Woolly Apple Aphids, Mites. Mix 1½ lbs. per 100 gals. of water. Make 3 to 8 cover spray applications beginning with the first cover. Applications should be timed according to insect infestations.
 Apple Maggots: Mix 1½ lbs. per 100 gals. of water. Make at least 3 cover spray applications when flies are active and laying eggs.
 San Jose Scale Crawlers, Forbest Scale Crawlers: Mix 1½ lbs. per 100 gals. of water. Apply early in the season when crawlers first appear. If infestation warrants, make a second application 7 to 10 days later.

NOTE: Mites will be suppressed if Diazinon 40W is used in the regular cover spray program. Slight russeting may occur on the Golden Delicious variety.

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APRICOTS (10) (Max dosage-10 lbs. per acre)

San Jose Scales, Brown Apricot Scales, Walnut Scales.

Apricot Mealybugs: Mix 1½ lbs plus 2 gals of dormant oil per 100 gals of water. Apply as dormant spray.

Aphids, Brown Mites (Clover Mites), Two-Spotted Spider Mites, Olive Scale Crawlers, San Jose Scale Crawlers: Mix 1½ lbs. per 100 gals of water. Apply when aphids, mites and scale crawlers first appear.

Olive Scale Crawlers: Mix ½ lb plus 1½ gals of light-medium horticultural oil per 100 gals of water. Apply when scale crawlers are present.

Apricot Mealybugs: Mix 1½ lbs per 100 gals of water. Apply as a cover spray from petal fall to June.

BLUEBERRIES (7)

Cranberry Fruitworms, Cherry Fruitworms, Blueberry Maggots, Aphids, Thrips, Two-Spotted Mites: Mix 1½ lbs. per 100 gals. of water. Apply up to 200 gals. of spray per acre, or apply 2½ lbs. per acre in sufficient water for thorough coverage.

CANEBERRIES: i.e. Blackberries, Boysenberries, Dewberries, Loganberries, Raspberries (7) Leafhopper: Thrips, Aphids, Two Spotted Mites, Raspberry Sawflies: Mix 1½ lbs. per 100 gals. of water and apply up to 200 gals. of spray per acre, or apply 2½ lbs. per acre in sufficient water for thorough coverage.

Raspberry Fruitworms: Apply at the above rates when blossom buds separate and repeat application immediately before blossoms open.

Dryberry Mites: Mix 2½ lbs per 100 gals of water. Apply as a dormant spray in early spring when canes are still on the ground and buds are closed. Make a second application when the buds are well developed, but still closed.

Raspberry Crown Borers (Raspberry Root Borers): Mix 5 lbs. per 100 to 200 gals. of water and apply as a drench to the crown area and to the lower canes. Apply either in the spring before berries begin to form, or in the fall after harvest.

PEACHES (10) (Max dosage-10 lbs. per acre)

Eye-Spotted Bud Moths, Fruit Tree Leaf Rollers: Mix 1½ lbs. per 100 gals. of water. Apply in cover sprays as necessary, beginning with petal fall.

Cherry Fruit Flies: Mix ½-1½ lbs. per 100 gals. of water. Make 3 or 4 applications, beginning when adult flies begin to emerge and repeating at 10-day intervals.

Black Cherry Aphids: Mix 1½ lbs. per 100 gals. of water. Apply as a cover spray when aphids appear and repeat after 10 days.

San Jose Scale Crawlers: Mix 1½ lbs. per 100 gals. of water. Apply during the pre-pink stage or when crawlers first appear.

Cherry Rust Mites: Mix ½ to 1½ lbs. per 100 gals. of water. Apply as a supplemental spray after harvest.

Brown Apricot Scales, San Jose Scales, Black Scales, Black Cherry Aphid eggs, Brown Mite eggs: Mix 1½-2 lbs. of Diazinon 40W plus 3 gals. of dormant oil per 100 gals. of water. Apply as a dormant spray. (Max. Dosage-12½ lbs. per acre)

CRANBERRIES (7)

Black Headed Fireworms, (Sparganothis sulfureana): Apply 5 lbs. in 400 gals. of water per acre.

Cranberry Fruitworms: Apply 7½ lbs. in 400 gals. of water per acre.

FIGS (5) (Max. Dosage-6½ lbs. per acre)

Vinegar Flies (Drosophila spp.) Dried Fruit Beetles: Apply 1½ lbs. per 100 gals. of water.

FILBERTS

Filbert Leaf Rollers, Aphids: Apply 2½-5 lbs. in 250-400 gals. of water per acre, as a thorough cover spray.

CITRUS FRUITS (Grapefruit, Lemons, Limes, Oranges, Tangelos, Tangerines, Citrus Citron, Kumquats and hybrids of these) (21)

Citrus Aphids, Cottony-Cushion Scale Crawlers, and Soft Scale Crawlers: Apply ½-1½ lbs. per 100 gals. of water (maximum 1000 gals. per acre) as a thorough cover spray when aphids and crawler stages of scale insects first appear.

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Fruit Tree Leaf Rollers: Mix 1-1½ lbs. per 100 gals. of spray (maximum 1000 gals. per acre) when an average of 50% of eggs in egg masses have hatched in the spring.

Citrus Thrips: Apply 1½ lbs. in 100 gals. of water (maximum 1000 gals. per acre) when thrips first appear.

Citrus Snow Scales: Apply 1½-2½ lbs. per 100 gals. of water (maximum 1000 gals. per acre) as a post bloom spray and again as a summer spray. For heavy snow scale infestations use the higher dosage rate. Thorough coverage of tree trunk, limbs, and twigs is essential.
NOTE: Do not apply during bloom.

GRAPES (Max. dosage 2½ lbs. per acre)

Pacific Spider Mites, Leafhoppers, Grape Berry Moths, Grape Leaf Folders: Mix 1½ lbs. per 100 gals. of water and apply as a thorough cover spray, or apply 2 lbs. per acre in sufficient water for thorough coverage. Do not apply within 18 days of harvest.

Drosophila spp. Mix 7½ oz. per 100 gals. of water and apply as a thorough cover spray, when insects first appear. Make additional applications at weekly intervals as necessary. Do not apply within 7 days of harvest. If a spreader-sticker is used, do not apply within 18 days of harvest.

OLIVES (75) (Max. dosage 30 lbs. per acre)

Olive Scales: Mix 1 to 1½ lbs. plus 1½ gals. of light medium summer horticultural oil per 100 gals. of water. Apply as a cover spray in June or July. Do not apply during bloom to avoid injury to pollinating insects or within 75 days of harvest.

PEACHES (20) NECTARINES (10) (Max. dosage 10 lbs. per acre)

San Jose Scales, Brown Apricot Scales, Walnut Scales, Apricot Mealybugs: Mix 1½ lbs. plus 2 gals. of dormant oil per 100 gals. of water. Apply as a dormant spray.

Peach Twig Borers, Parlatoria Scales: Mix 1½ lbs. plus 1 gal. of light medium summer horticultural oil per 100 gals. of water. Apply at petal fall.

Aphids, Brown Mites (Clover Mites), Two Spotted Spider Mites, Olive Scale Crawlers, San Jose Scale Crawlers: Mix 1½ lbs. per 100 gals. of water. Apply when aphids, mites and scale crawlers first appear.

Olive Scale Crawlers: Mix ½ lb. plus 1½ gals. light medium horticultural oil per 100 gals. of water. Apply when scale crawlers are present.

Oriental Fruit Moths: Mix 1½ lbs. per 100 gals. of water and apply at 100% petal fall. Make 2 additional applications at 10-15 day intervals. Time the last application to peak adult Oriental Fruit Moth flight, if possible.

Peach Twig Borers: Mix 1½ lbs. per 100 gals. of water and apply to peaches in May and June.

White Peaches (peaches only): As a post-harvest spray apply 2-2½ lbs. per 100 gals. of water timed to coincide with peak crawler and immature scale activity. Under conditions of heavy infestations 2 applications may be necessary.

PEARS (14) (Max. dosage 15 lbs. per acre)

Pear Leaf Blister Mites, Mealybugs, San Jose Scale, Brown Apricot Scales: Mix 1½ lbs. plus 2 gals. of dormant oil per 100 gals. of water. Apply as a dormant spray.

Tentiform Leaf Miners, Mealybugs: Mix 1½ lbs. per 100 gals. of water. Apply in 3 cover sprays, beginning in April.

NOTE: Refer also to Apples and Pears above.

PECANS

Aphids, Mites, Pecan Nut Casebearers, Walnut Caterpillars: Apply 2½-7½ lbs. per acre as a foliage spray. Do not apply after husks crack.

PINEAPPLE

Pineapple Scales: Apply 12½ lbs. plus 2 gals. of light or medium horticultural oil in 500 gals. of water per acre to the vegetative slips on the plant following harvest of the pineapple.

Pineapple Mealybugs: Apply 5 lbs. per acre. May be applied on day of harvest. Pineapple forage and refuse

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may be fed to livestock 7 days following last application.

PLUMS and PRUNES (10) (Max dosage 10 lbs per acre)
 Peach Twig Borers, Mealy Plum Aphid eggs, San Jose Scales, Paratona Scales, Brown Almond Mites. Mix 1 1/2 lbs plus 2 1/2 gals of dormant oil per 100 gals of water. Apply as a dormant spray. For late April or May applications, mix 1 1/2 lbs plus 1 gal of light medium summer horticultural oil per 100 gals of water.
 Brown Mites (Clover Mites), European Red Mites. Apply 1 1/2 lbs in 100 gals of water.
 Leaf Curl Plum Aphids, Mealy Plum Aphids, Thistle Aphids. Apply 1 1/2 lbs per 100 gals of water.

STRAWBERRIES (5)
 Aphids, Two spotted Spider Mites. Apply 1 1/2 lbs in 100 gals of water per acre.
 Cyclamen Mites. Apply 2 1/2 lbs in 100 gals of water per acre, directing spray to plant crowns. Plants should be sufficiently agitated to assure thorough coverage of the foliage. Make additional applications, if necessary after harvest.
 Mole Crickets. Broadcast 2 1/2 lbs. per acre when insects are present. Apply 1 to 2 days before transplanting and mix into the top 1-2 inches of soil immediately.
 Strawberry Leaf Rollers. Mix 1-1 1/2 lbs. per 100 gals of water. Apply 200 gals spray per acre when blossoms show color.

WALNUTS
 Aphids, Mites. Apply 2 1/2 lbs per acre as a foliage spray.
 Codling Moths, Scale Crawlers, Walnut Caterpillars. Apply 7 1/2 lbs per acre.
 NOTE. Do not apply after the husks open.

Vegetable Foliar Insects

Diazinon 40W should always be applied as a spray in sufficient water to assure thorough coverage of the foliage. In California use a minimum of 5 gals. water per acre for aerial application and a minimum of 20 gals. water per acre for ground application.

BEANS (Pole Beans, Snap Beans, Lima Beans) (7)
 Black Bean Aphids, Mexican Bean Beetles, Leaf Miners. Apply 1 1/2 lbs per acre.
 Cucumber Beetles. Apply 10-15 lbs in 100 gals of water per acre.

NOTE: Bean forage or bean hay may be fed to dairy and beef cattle and sheep. Wait 4 days following treatment if forage is to be cut for hay.

LIMA BEANS (7)
 Dipterous Leaf Miners, Leafhoppers, Mites. Apply 1 1/2 lbs per acre. Do not apply within 7 days of bean harvest. Bean forage or bean hay may be fed to dairy and beef cattle and sheep. Wait 4 days following treatment if forage is to be cut for hay.

BROCCOLI CAULIFLOWER (5) and CABBAGE (7)
 Aphids, Diamondback Moths, Imported Cabbageworms, Dipterous Leaf Miners. Apply 1-1 1/2 lbs per acre. Applications at 7-10 day intervals will usually be required.

BRUSSELS SPROUTS (7)
 Aphids, Diamondback Moths, Imported Cabbageworms. Apply 1 1/2 lbs per acre. Applications at 7-10 day intervals will usually be required.

CARROTS (10)
 Aphids. Apply 1 1/2 lbs. per acre.

CELERY (10)
 Aphids, Flea Beetles. Apply 1 1/2 lbs. in 100 gals. of water per acre.

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Dipterous Leaf Miners. Apply $\frac{1}{2}$ to 1 lb. per acre in sufficient water to achieve thorough coverage when infestations first appear. Repeat as necessary.

NOTE: Plants should be market trimmed (tops removed) before being shipped or used. Tops should not be used for feed or food.

COLLARDS, KALE, TURNIP TOPS (10) and SWISS CHARD (12)

Aphids, Imported Cabbageworms, Diamondback Moths, Harlequin Cabbage Bugs, Corn Earworms. Apply $\frac{1}{2}$ to 1 lb. per acre.

CUCUMBERS (7)

Aphids, Serpentine Leaf Miners, Thrips. Apply 1 lb. per acre.

LETTUCE and ENDIVE (10)

Aphids, Dipterous Leaf Miners: Apply $\frac{1}{2}$ -1 lb. per acre.

MELONS and SQUASH (Cantaloupes, Casabas, Crenshaws, Honeydew Melons, Muskmelons, Parsiart Melons, and hybrids of these, Watermelons and their hybrids, Summer and Winter Squash)

Aphids, Leafhoppers, Mites. Apply 1 lb.-1 lb. per acre. Serpentine Leaf Miners, Thrips: Apply $\frac{1}{2}$ -1 lb. per acre.

NOTE: Do not apply to melons or winter squash within 3 days, or to summer squash within 7 days of harvest.

MUSHROOM HOUSES

Mushroom Flies (Phorids and Sciadids): Mix 5-10 lbs. in 50 gals. of water (0.5% to 1.0% actual Diazinon) and spray on outside and inside walls and ventilators of mushroom houses, after compost in beds has been pasteurized by heating. Do not spray compost in bed or after spawning. To treat wooden sides of beds, posts, doors, and door frames after pasteurizing, mix $\frac{1}{2}$ lb. in 5 gals. of water and apply with a brush. Do not treat compost.

ONIONS (10)

Onion Thrips: Apply 1 lb. per acre.

PEAS

Aphids, Leaf Miners: Apply 1-1 lb. per acre. Peas may be picked immediately. Pea vines and pea vine hay may

be fed to dairy and beef cattle and sheep. Wait 4 days following treatment if forage is to be cut for hay.

PEPPERS (5)

Aphids, Serpentine Leaf Miners: Apply $\frac{1}{2}$ lb. per acre.

POTATOES (35)

Aphids, Flea Beetles, Colorado Potato Beetles, Dipterous Leaf Miners: Apply $\frac{1}{2}$ -1 lb. per acre.

Banded Cucumber Beetles, Leafhoppers, Southern Armyworms: Apply 1-1 lb. per acre.

RADISHES, PARSNIPS and TURNIPS (10)

Aphids, Flea Beetles, Dipterous Leaf Miners: Apply $\frac{1}{2}$ -1 lb. per acre.

SPINACH (10) and BEETS (14)

Aphids, Dipterous Leaf Miners: Apply $\frac{1}{2}$ -1 lb. per acre.

SQUASH (Summer and Winter) See Melons and Squash above.

SWEET CORN (5)

Corn Earworms: Apply 2-3 lbs. per acre when silks first appear. Two or three repeat applications at 2-3 day intervals will usually be necessary. Corn may be picked immediately following last application. Corn forage may be fed to dairy and beef cattle and sheep.

Refer also to Corn under Field and Forage Insects.

TOMATOES (1)

Aphids, Dipterous Leaf Miners: Apply $\frac{1}{2}$ lb. per acre. To control leaf miners, weekly applications are usually required.

Banded Cucumber Beetles, Fall Armyworms, Southern Armyworms: Apply 1-1 lb. per acre.

Vinegar Flies (*Drosophila* spp.): Apply $\frac{1}{2}$ -1 lb. per acre. Weekly applications are usually required.

WATERCRESS (Hawaii Only) (5)

Cyclamen Mites. Apply 1 lb. in 100 gals. of water per acre. Direct spray to crowns and growing tips of plants. If infestation is heavy, make a second application no later than 10 days after the first application. Repeat applications as necessary.

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Diazinon 40W should always be applied as a spray in sufficient water to assure thorough coverage of the soil

CARROT RUST FLIES

Carrots: Apply 5 lbs per acre as a drench to the seed furrow at planting time.

CUTWORMS (Surface and Subterranean)

Broccoli, Brussels Sprouts, Cabbage, Cantaloupes, Cauliflower, Celery, Collards, Cucumbers, Endive (escarole), Kale, Lettuce, Lima Beans, Muskmelons, Parsley, Peas, Peppers, Potatoes, Snap Beans, Spinach, Summer Squash, Sweet Corn, Swiss Chard, Tomatoes, Watermelons, Winter Squash.

Broadcast 5-10 lbs. per acre just prior to planting. Work into the soil immediately, 2-3 inches for surface cutworms, 3-6 inches for subterranean cutworms.

GARDEN SYMPHYLANS (Centipedes)

Cabbage, Carrots, Corn, Lettuce, Peas, Pole Beans, Radishes, Red Beets, Snap Beans, Tomatoes, Turnips

Broadcast 25 lbs. per acre just prior to planting. Work into soil 4-8 inches immediately. This preplant treatment will also control cutworms (surface and subterranean), mole crickets, root maggots, and wireworms.

MOLE CRICKETS

Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Endive (escarole), Kale, Lettuce, Mustard, Peppers, Radishes, Tomatoes, Turnips

Broadcast 2 1/2 lbs. per acre when present. Make application to plant bed or field 2 days prior to sowing of seed or transplanting, and work into soil 1-2 inches immediately.

ONION MAGGOTS

Onions: Furrow Application: Apply 2 1/2 lbs per acre in sufficient water to drench the seed at planting time. Broadcast Application: Broadcast 5-10 lbs. per acre just prior to planting. Work into soil 3-4 inches immediately.

ROOT MAGGOTS

Broccoli, Brussels Sprouts, Cabbage, and Cauliflower
Broadcast Application: Broadcast 5-7 1/2 lbs. per acre

and immediately work into the soil 3-4 inches before seeding, either in the seedbed or in the field or before transplanting. Transplant Water (Drench) Application: Mix 1-1 1/2 lbs. in 100 gals. of transplant water, when 200 gals. of water are used per acre. (Do not exceed 2 1/2 lbs. per acre.) May be applied at the rate of 1-1 cupful per plant, either by hand or by tractor-mounted sprayer equipped with drop nozzle to direct spray to the base of the plant. Transplant water treatments may result in stand reduction due to plant stress at time of transplanting.

Radishes: Mix 5 lbs. in 100 gals. of water. Apply 50-100 gals. per acre (1-1 1/2 gals. per 1,000 sq. ft. of row) in the seed furrow at planting time.

WIREWORMS

Broccoli, Brussels Sprouts, Cabbage, Cantaloupes, Carrots, Cauliflower, Celery, Collards, Cucumbers, Endive (escarole), Kale, Lettuce, Lima Beans, Muskmelons, Onions, Parsley, Peas, Peppers, Snap Beans, Spinach, Summer Squash, Sweet Corn, Sweet Potatoes, Swiss Chard, Tomatoes, Watermelons, Winter Squash.

Broadcast 7 1/2-10 lbs. per acre prior to planting and work into soil 4-8 inches immediately.
Potatoes: Broadcast 7 1/2-15 lbs. per acre prior to planting. Immediately disc or harrow into soil 4-8 inches.

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Diazinon 40W should always be applied as a spray in sufficient water to assure thorough coverage of the foliage or soil, depending on the type of application.

In California use a minimum of 5 gals. water per acre for aerial application and a minimum of 20 gals. water per acre for ground application.

ALFALFA and CLOVER

Spotted Alfalfa Aphids, Yellow Clover Aphids, Pea Aphids, Leafhoppers, Plant Bug Nymphs, Mites. Apply 1-1½ lbs. per acre.

Grasshoppers: Apply 1½ lbs. per acre.

Cutworms (Surface and Subterranean): Broadcast 5 lb. lbs. per acre just prior to planting. Work into the soil immediately, 2-3 inches for surface cutworms, 3-6 in. for subterranean cutworms.

Dairy and beef cattle and sheep (1) may be grazed immediately following application, (2) may be fed green alfalfa or clover immediately following cutting, and (3) may be fed hay provided alfalfa or clover is not cut for hay for 7 days following treatment. Do not spray livestock directly. Do not treat during bloom to avoid injury to pollinating insects.

CORN

Corn Rootworm Larvae: Planting time application: Apply 2½-5 lbs. per acre in a minimum of 5 gals. of water at planting. Make application in the seed furrow, or apply 3-6 oz. per 1,000 linear feet of corn row in a 4-7 inch band directly behind the planter shoe. For band applications refer to the row spacing chart for amounts recommended per acre. Post-emergence basal treatment: Apply 2-3 oz. per 1,000 linear feet of corn in sufficient water to wet base of corn plant and narrow row band of soil next to the plant. Refer to row spacing chart for amounts recommended per acre. Cover treated band with 2-3 inches of soil using a disk tiller or cultivator immediately after spraying. Application should be made at the first sign of corn rootworm larvae.

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SUGGESTED RATES ACCORDING TO ROW SPACING FOR CORN ROOTWORM LARVAE CONTROL

ROW SPACING	LINEAR FEET OF CORN ROW/ACRE	AMOUNT OF DIAZINON 40W PER ACRE	
		PLANTING TIME APPLICATION	POST-EMERGENCE BASAL TREATMENT
48"	10,890	35 - 70 oz.	17.5 - 35 oz.
42"	12,455	39 - 78 oz.	19.5 - 39 oz.
40"	13,068	40 - 80 oz.	20 - 40 oz.
38"	13,938	44 - 88 oz.	22 - 44 oz.
36"	14,750	45 - 90 oz.	22.5 - 45 oz.
30"	17,424	55 - 110 oz.	27.5 - 55 oz.
24"	21,780	66 - 132 oz.	33 - 66 oz.
20"	26,136	80 - 160 oz.	40 - 80 oz.
18"	30,492	[5 to 10 lbs.]	(2½ to 5 lbs.)
15"	34,848	110 - 220 oz.	55 - 110 oz.

NOTE: For row spacings not listed, calculate the appropriate dosage rates based on the 40-inch row figures.

Seed Corn Maggots: Broadcast 5-10 lbs. per acre just prior to planting. Work into soil 2 inches immediately.

Cutworms (Surface and Subterranean): Broadcast 5-10 lbs. per acre. For surface cutworms apply just prior to planting or when larvae first appear and work into soil 1-2 inches immediately. Do not apply later than layby. For subterranean cutworms, apply just prior to planting and work into soil 3-6 inches immediately.

Wireworms: Apply 7½-10 lbs. per acre prior to planting, and work into the soil 4-8 inches immediately.

Corn Rootworm Adults: Apply ½-1½ lbs. per acre.

Corn Leaf Aphids: Apply 1½-2½ lbs. per acre in sufficient water to provide complete coverage of the upper portions of plants. Repeat application as necessary.

Grasshoppers: Apply 1½ lbs. per acre.

Sap Beetles: Apply 2½-3 lbs. per acre. Add 1-2 gals. of soluble mineral oil per acre to the spray mixture. Consult local agricultural authorities for proper timing of sprays. Corn may be picked immediately following last application. Corn forage may be fed to dairy and beef cattle and sheep.

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COTTON

Spider Mites, Aphids, Leafhoppers, Lygus Bugs, Cotton Leafworms, Cotton Leaf Perforators: Apply 1 1/2-2 1/2 lbs in 5-25 gals of water per acre. Repeat as infestation warrants.

NOTE: Do not apply within 14 days of harvest. Do not graze treated cotton plants, or feed gin waste to live stock.

COWPEAS

Cutworms (Surface and Subterranean): Broadcast 5-10 lbs per acre, just prior to planting. Work into the soil immediately, 2-3 inches for surface cutworms, 3-6 in for subterranean cutworms.

HOPS

Aphids, Mites: Apply 2 1/2 lbs. per acre. Do not apply within 14 days of harvest.

LESPEDEZA

Cutworms (Surface and Subterranean): Broadcast 5-10 lbs per acre just prior to planting. Work into the soil immediately, 2-3 inches for surface cutworms, 3-6 in for subterranean cutworms.

PEANUTS (21)

Cutworms: Apply 5 lbs per acre in a 12 inch band over the row. Use sufficient water to achieve thorough coverage. Begin application when small larvae appear. Two or three additional applications at three-week intervals may be necessary.

NOTE: Livestock (1) may be fed peanut hulls, (2) may be fed peanut forage 7 days following treatment and (3) may be fed peanut hay 21 days following treatment.

SORGHUM (7)

Sorghum Midges: Apply 1/2-1 1/2 lbs. per acre when 90% of the heads have emerged from the boot. Repeat application within 4 days. Crop may be fed to livestock immediately following treatment.

Cutworms (Surface and Subterranean): Broadcast 5-10 lbs. per acre just prior to planting. Work into the soil immediately, 2-3 inches for surface cutworms, 3-6 in for subterranean cutworms.

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SOYBEANS

Cutworms (Surface and Subterranean): Broadcast 5-10 lbs. per acre just prior to planting. Work into the soil immediately, 2-3 inches for surface cutworms, 3-6 in for subterranean cutworms.

SUGAR BEETS

Leafhoppers, Dipterous Leaf Miners, Aphids: Apply 1-1 1/2 lbs. per acre.

Grasshoppers: Apply 1 1/2 lbs per acre.

Wireworms: Broadcast 7 1/2-10 lbs. per acre just prior to planting, and work into soil 4-8 inches immediately. Tops may be fed to beef and dairy animals.

SUGARCANE

Aphids: Apply 1/2-1 1/2 lbs per acre.

NOTE: Allow 1 day between last application and harvest.

Bagasse and forage may be fed to livestock.

Wireworms: Apply 10 lbs per acre in a 12 inch band centered over the furrow in sufficient water to obtain thorough coverage. Make application directly to seed pieces in open furrow at covering time.

TOBACCO

Aphids, Flea Beetles: Apply 1/2-1 lb per acre. Do not apply within 3 days of harvest.

Cutworms: Broadcast 5-7 1/2 lbs per acre before transplanting and work immediately into the soil 2-4 inches.

Green June Beetle Larvae: Mix 1/2 lb in 100 gals of water and apply as a surface spray (100 gals per 100 sq yd) to up to 100 plants in a 1/2 acre field with sprinkling can.

Mule Crickets: Broadcast 20 lbs per acre when insects are present. Make application in fields 1-2 feet prior to sowing seed or in a band along at work into soil.

and over. Mites: Broadcast Application of 1/2 lb per acre in 5-25 gals of water per acre before transplanting. Mites: Broadcast Application of 1/2 lb per acre in 5-25 gals of water per acre before transplanting.

Wireworms: Broadcast Application of 7 1/2 lbs per acre 3-4 weeks before transplanting. Wireworms: Broadcast Application of 7 1/2 lbs per acre 3-4 weeks before transplanting. Wireworms: Broadcast Application of 7 1/2 lbs per acre 3-4 weeks before transplanting.

BERMUDAGRASS

Thrips, Whiteflies, Grasshoppers: Apply 1% lbs. per acre.

RANGELAND, PASTURE, GRASS FORAGE, DITCH BANKS, ROADSIDES, WASTELAND, NONCROP AREAS, AND BARRIER STRIPS

Grasshoppers: Apply 1-1½ lbs per acre in sufficient water or oil to obtain thorough coverage when insect first appear, preferably in the nymphal stage.

Dairy and beef cattle and sheep (1) may be grazed immediately following application, (2) may be fed green forage immediately following cutting, and (3) may be fed hay provided grass is not cut for hay for 21 days if the spray is a water solution, or for 30 days if the spray is an oil solution. Do not spray livestock directly. Do not repeat application for 30 days.

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Ornamental Insects

To control insects on Arborvitae, Azalea, Birch, Boxwood, Camellia, Carnation, Chrysanthemum, Douglas Fir, Elm, Gladiolus, Hawthorn, Holly, Juniper, Lilac, Locust, Maple, Oak, Pine, Plum, Poplar, Rhododendron, Rose, Spruce, and Willow, apply the recommended rates indicated below.

INSECTS	AMT. DILUTION CONT. TO USE	
	PER 3 GALS. WATER	PER 100 GALS. WATER
Aphids, Bagworms, Carnation Bud Mites, Carnation Shoot Mites, Clover Mites, Cyclamen Mites, Dipterous Leaf Miners, 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 Scale) Thrips, Two Spotted Mites, Webworms, Whiteflies	½ oz	1½ lbs.
Apple and Thorn Skeletonizers, Cottonweaver Webworms, Fall Webworms, Hemlock Cherries, Oak Looper, Oblique Banded Leaf Rollers, Pear Slugs, Tent Caterpillars	2 oz	3½ lbs.

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

Mimosa Webworms: Mix ½ oz in 3 gals of water (or 1½ lbs in 100 gals of water) and apply as a thorough foliar spray when adults first appear. Make a second and third application at 4-5 week intervals.

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To control insects listed below, apply recommended rates for Ants, Brown Dog Ticks, Clover Mites, Crickets, Earwigs, Fleas, Millipedes, Sowbugs, and Collembola (Springtails), which are commonly found near the house and may enter the house, spray a 5 ft. band of soil around the house as well as the house foundation wall to a height of 2-3 ft. Repeat application if necessary.

INSECTS	RATE PER 1000 SQ. FT.		REMARKS
	IN. WASH. 4319	AA-110	
Lawn: Chinch Bugs	2½-4 or 4-7½ oz.	25° gals.	Use higher rate for longer residual control and in lawns of dense growth such as St. Augustine lawns.
Ants, Armyworms, Clover Mites, Collembola (Springtails), Crickets, Cutworms, Digger Wasps, Earwigs, Frit Flies, Lawn Billbugs, Sod Webworms (Lawn Moths), Sowbugs,	5 oz.	3 gals.	Spot spray ant hills and wasp ground nest openings. For lawn billbugs, irrigate the lawn thoroughly immediately after treatment. For frit flies, mow grass and water well before treatment but delay application until grass is dry. Do not water again until necessary.
Brown Dog Ticks, Bermuda Mites, Chiggers, Fleas, Leafhoppers, Ticks,	2 oz.	3 gals.	Do not apply to animals. For brown dog ticks, spray grass and under shrubbery, particularly near house.
Millipedes	10 oz.	3 gals.	
Rhodesgrass Scales	6½ oz.	25° gals.	Apply when crawlers first emerge.

* Alternatively, make applications in 3 gals. of water per 1000 sq. ft. and thoroughly water immediately following application.

Boxelder Bugs: Spray bugs outside the home with 2 to 3 oz. in 1 gal. of water. At the same time spray thoroughly around foundation, windows, doors, tree trunks, and into cracks and other places where the insects hide.

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Residual Sprays: Mix 2½ lbs. in 25 gallons of water and apply as an overall spray to ceilings and walls of livestock sheds, calf barns, hog barns and other farm buildings. Spray other areas where flies congregate such as garbage dumps and corrals. Repeat applications as fly populations warrant. Longer residual control may be obtained by increasing the rate to 5 lbs. in 25 gallons of water. Applications should be made to the point of runoff. One gallon of spray mixture should cover 350 to 750 sq. ft. depending on surface treated.

"Spot" Bait Sprays: Apply 1½ lbs. plus 2 lbs. sugar in 5 gals. water with knapsack or similar sprayer to areas frequented by flies such as doorways, and around windows. Repeat applications as fly populations warrant.

Liquid Bait for Sprinkling Can Application: Mix 2½ oz. plus 1 lb. sugar in 5 gals. of water. Sprinkle lightly over floor in areas frequented by flies. Burlap bags may be laid out in those areas and sprinkled with this mixture. Apply every 1-2 days as necessary.

MAGGOT CONTROL: For control of fly maggots use 2½ oz. in 5 gallons of water per 500 sq. ft. of fly breeding area such as garbage dumps and manure piles. Apply as a coarse spray or with a sprinkling can. Repeated applications will be needed as additional garbage is added. Apply to poultry droppings only if poultry is on wire.

NOTE: Do not apply in poultry houses, dairy barns, or milk rooms. Remove animals from buildings during spraying and keep them out at least 4 hours. Do not spray animals or contaminate their feed or drinking water. Do not use in dwellings. Do not use in poultry houses except for control of fly maggots in manure where poultry is on wire and cannot come in contact

with the product. Good sanitation and proper disposal of wastes are necessary in any effective fly control program.

FLY CONTROL IN FOOD PROCESSING PLANTS: Mix 5 lbs. in 25 gals. water and apply to walls and ceilings before canning or other processing begins. Repeat if necessary when plant is not operating. Cover all equipment and produce to prevent contamination. Spray unloading docks and other outside areas where flies congregate.

NOTE: Do not use in edible product areas of food processing plants, restaurants, or other areas where food is commercially prepared or processed. Do not use in serving areas while food is exposed. Good sanitation and proper disposal of wastes are necessary in any effective fly control program.