

Directions for Use and Conditions of Sale and Warranty

IMPORTANT: Read the entire Directions For Use and the Conditions of Sale and Warranty before using this product.

CONDITIONS OF SALE AND WARRANTY

The directions for use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of factors as weather conditions, presence of other materials or the manner of use or application all of which are beyond the control of Moyer or the seller. All such risks shall be assumed by the buyer.

Moyer 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 inherent risks referred to above. Moyer makes no other express or implied warranty of fitness or merchantability or other express or implied warranty. In no case shall Moyer or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product. Moyer and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and warranty which may be varied only in writing, signed by a duly authorized representative of Moyer.

GENERAL INFORMATION

MORETROL 4-E is an emulsifiable solution which when diluted with water according to the directions in Directions For Use is intended for the control of insect pests of agricultural crops. Do not use in barns or dwellings. Do not use on livestock.

MORETROL 4-E should be mixed with sufficient water to assure thorough coverage unless otherwise stated in Directions For Use.

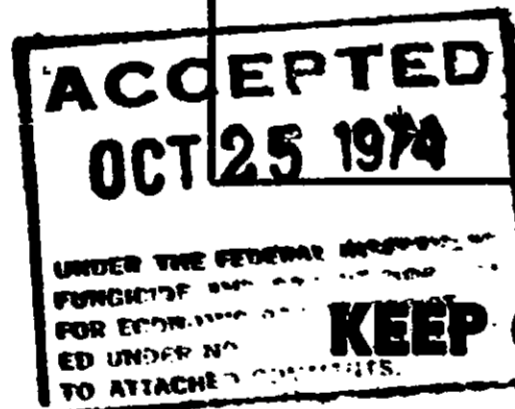
MOYER

CHEMICALS

MORETROL 4-E

ACTIVE INGREDIENTS	By Weight
O,O-diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl) phosphorothioate	48.0%
Xylene	42.0%
INERT INGREDIENTS	10.0%
TOTAL	100.0%

MORETROL 4-E contains 4 lbs. active ingredients per gallon



WARNING:

KEEP OUT OF REACH OF CHILDREN

5967-86

EPA REGISTRATION NO. 5967-86 ZA

EPA EST. 5967-CA-1

SEE SIDE PANELS FOR PRECAUTIONS

SEE BOOKLET FOR DIRECTIONS FOR USE

8/74

MANUFACTURED BY

MOYER CHEMICAL COMPANY

1310 BAYSHORE HIGHWAY

P.O. BOX 945

SAN JOSE, CALIFORNIA

WARNING

KEEP OUT OF REACH OF CHILDREN

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

ENVIRONMENTAL CAUTIONS:

This product is toxic to fish, shrimp, crabs, birds and other wildlife. Birds feeding on treated areas may be killed. Keep out of lakes, streams, ponds, tidal marshes and estuaries. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment, or disposal of wastes. Apply this product only as specified on this label.

This product is highly toxic to bees exposed to direct treatment or residues on crops. Protective information may be obtained from your Cooperative Agricultural Extension Service.

Do not re-use empty container. Dispose of container as directed in Directions For Use booklet.

Minimum flash point 82° F. (TOC).

Do Not Use, Pour, Spill or Store Near Heat or Open Flame.

NET CONTENTS GALS.

MORETROL 4-E

INSECTICIDE

Directions For Use

WARNING:

Keep Out of Reach of Children

READ ENTIRE LABEL AND BOOKLET. USE STRICTLY IN ACCORDANCE WITH DANGER STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

KEEP IN ORIGINAL CONTAINER



WARNING

KEEP OUT OF REACH OF CHILDREN

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

ENVIRONMENTAL CAUTIONS:

THIS PRODUCT IS TOXIC TO FISH, SHRIMP, CRABS, BIRDS AND OTHER WILDLIFE. BIRDS FEEDING ON TREATED AREAS MAY BE KILLED. KEEP OUT OF LAKES, STREAMS, PONDS, TIDAL MARSHES AND ESTUARIES. DO NOT APPLY WHERE RUNOFF IS LIKELY TO OCCUR. DO NOT APPLY WHEN WEATHER CONDITIONS FAVOR DRIFT FROM AREAS TREATED. DO NOT CONTAMINATE WATER BY CLEANING OF EQUIPMENT, OR DISPOSAL OF WASTES. APPLY THIS PRODUCT ONLY AS SPECIFIED ON THIS LABEL.

This product is highly toxic to bees exposed to direct treatment or residues on crops. Protective information may be obtained from your Cooperative Agricultural Extension Service.

DIRECTIONS FOR USE

This material is an agricultural pesticide for the following uses:

FRUITS & NUTS

Almonds

Mites, Twig Borers: 1 - 1/2 pts. per 100 gals. of water.
Asiotatoria Scales, San Jose Scales: Mix 1 - 1/2 qts. Moretrol 4-E plus 2 - 3 gallons dormant oil per 100 gallons of water and apply as a dormant spray. Almond hulls may be used for feed for livestock.

Apricots

Aphids, Brown Mites (Clover Mites), Two-spotted Spider Mites, San Jose Scale Crawlers: Mix 1 pt. per 100 gals. of water. Apply when aphids, mites and scale crawlers first appear.

Olive Scale Crawlers: Mix 1/2 pt. of Moretrol 4-E plus 1/2 gallons light medium horticultural oil per 100 gallons of water. Apply when scale crawlers are present.

Apricot Mealybugs: Mix 1 pt. per 100 gallons of water. Apply as a cover spray from petal fall to June.

Do not apply within 10 days of harvest.

Caneberries

i.e. **Blackberries, Boysenberries, Dewberries, Loganberries, Raspberries.**

Leafhoppers, Thrips, Aphids, Two-spotted Mites, Raspberry Sawflies: Mix 1 pt. per 100 gals. of water and apply up to 200 gals. of spray per acre or apply 2 pts. 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 2 pts. per 100 gals. water. Apply as a dormant spray in early spring, when canes are still on the ground and buds are closed.

Do not apply within 7 days of harvest on Caneberries.

Raspberry Crown Borers (Raspberry Root Borers): Mix 2 qts. 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.

Cherries

Eye-spotted Bud Moths, Fruit-tree Leaf Rollers: Mix 1 pt. per 100 gals. of water. Apply in cover sprays as necessary, beginning with petal fall.

Cherry Fruit Flies: Mix 1/2 - 1 pt. per 100 gals. of water. Make 3 or 4 applications, beginning when adult cherry fruit flies begin to emerge and repeat at 10-day intervals.

Leafhoppers: Apply 1 pt. per 100 gals. of water in 3 - 5 applications beginning at petal fall and continuing through the growing season or apply as infestations develop.

Black Cherry Aphids: Mix 1 pt. per 100 gals. of water. Apply as a cover spray when aphids appear and repeat after 10 days.

San Jose Scale Crawlers: Mix 1 pt. per 100 gals. of water. Apply during the pre-pink stage or when crawlers first appear. Do not apply within 10 days of harvest.

Cherry Rust Mites: Mix 1/2 - 1 pt. per 100 gals. of water. Apply as a supplemental spray after harvest.

Citrus Fruits

i.e. **Grapefruit, Lemons, Limes, Oranges, Tangelos, Tangerines, Citrus, Citron, Kumquats, and hybrids of these.**

Citrus Aphids, Fruit-tree Leaf Rollers, Cottony-cushion Scale Crawlers, and Soft Scale Crawlers: Apply 1/2 - 1 pt. per 100 gals. of water (Maximum 1,000 gals. per acre) as a thorough cover spray when aphids and crawler stages of scale insects first appear.

Fruit-tree Leaf Rollers: Use 1/2 - 1 pt. per 100 gals. of spray (maximum 1,000 gals. per acre) when an average of 50 percent of eggs in egg masses have hatched in the spring.

Citrus Thrips: Apply 1 pt. in 100 gals. of water (maximum 1,000 gals. per acre) when thrips first appear.

Citrus Snow Scales: Apply 1 - 2 pts. per 100 gals. of water (maximum 1,000 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. Do not apply during bloom. Do not apply to citrus within 21 days of harvest.

Figs

Vinegar Flies (Drosophila spp.), Dried Fruit Beetles: Apply 1 pt. per 100 gals. of water. Do not apply within 5 days of harvest.

Leaf Curl Plum Aphids, Mealy Plum Aphids, Thistle Aphids: Apply 1/2 - 1 pt. per 100 gals. of water.

Do not apply within 10 days of harvest.

Strawberries

Aphids, Two-spotted Spider Mites: Apply 1 pt. per 100 gals. of water per acre.

Cyclamen Mites: Apply 1 qt. per 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 1 qt. per acre when insects are present. Apply 1 - 2 days before transplanting and mix into the top 1 - 2 inches of soil immediately.

Strawberry Leaf Rollers: Mix 3/4 - 1 pt. per 100 gals. of water. Apply 200 gals. of spray per acre when blossoms show color. Do not apply within 5 days of harvest.

Walnuts

Aphids, Mites: Apply 1 qt. per acre as a foliage spray.

Codling Moths, Scale Crawlers, Walnut Caterpillars: Apply 3 qts. per acre as a foliage spray. Do not apply after the husks open.

VEGETABLE FOLIAR INSECTS

Moretrol 4-E should always be applied as a spray in sufficient water to assure thorough coverage of the foliage.

Beans

Pole Beans, Snap Beans, Lima Beans

Black Bean Aphids, Mexican Bean Beetles, Leaf Miners: Apply 1 - 1/2 pts. per acre.

Cucumber Beetles: Apply 1/2 - 3/4 pt. in 100 gals. of water 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.

Lima Beans

Dipterous Leaf Miners, Leafhoppers, Mites: Apply 1 pt. per acre. Do not apply within 7 days of 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, Cabbage and Cauliflower

Aphids, Diamond-back Moths, Imported Cabbageworms: Apply 1/2 - 1 pt. per acre. Applications at 7 - 10 day intervals will usually be required. Do not apply to broccoli or cauliflower within 5 days, or to cabbage within 7 days of harvest.

Brussels Sprouts

Aphids, Diamond-back Moths, Imported Cabbageworms: Apply 1 pt. per acre. Generally applications at 7 - 10 day intervals will be required. Do not apply to brussels sprouts within 7 days of harvest.

Carrots

Aphids: Appl. 1 pt. per acre. Do not apply within 10 days of harvest.

Celery

Aphids, Flea Beetles: Apply 1 pt. in 100 gals. of water per acre. Do not apply within 10 days of harvest. Plants should be market trimmed (tops removed) before being shipped or used. Tops should not be used for feed or food.

Collards, Kale, Swiss Chard, and Turnip Tops

Aphids, Imported Cabbageworms, Diamond-back Moths, Harlequin Cabbage Bugs, Corn Earworms: Apply 1/2 - 1 pt. per acre. Do not apply to collards, kale or turnip tops within 10 days, or to Swiss chard within 12 days of harvest.

Cucumbers

Aphids, Serpentine Leaf Miners, Thrips: Apply 1 pt. per acre. Do not apply within 7 days of harvest.

Lettuce and Endive

Aphids, Dipterous Leaf Miners: Apply 1/2 to 1 pt. per acre. Do not apply within 10 days of harvest.

Melons and Squash

Cantaloupes, Cabbages, Cressnaws, Honeydew Melons, Muskmelons, Persian Melons, and hybrids of these; Watermelon and their hybrids; Summer and Winter Squash

Aphids, Leafhoppers, Mites: Apply 1 - 1/2 pts. per acre.
Serpentine Leaf Miners, Thrips: Apply 1/2 - 1 pt. per acre. Do not apply to melons and winter squash within 3 days, or to summer squash within 7 days of harvest.

VEGETABLE SOIL INSECTS

Moretrol 4-E should always be applied as a spray in sufficient water to assure thorough coverage of the soil.

Cutworms (Surface and Subterranean)

Broccoli	Kale	Snap Beans
Brussels Sprouts	Lettuce	Spinach
Cabbage	Lima Beans	Summer Squash
Cantaloupes	Muskmelons	Sweet Corn
Cauliflower	Parsley	Swiss Chard
Celery	Peas	Toratoes
Collards	Peppers	Watermelons
Cucumbers	Potatoes	Winter Squash

Broadcast 2 - 4 qts. 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	Peas	Snap Beans
Carrots	Pole Beans	Tomatoes
Corn	Radishes	Turnips
Lettuce	Red Beets	

Broadcast 10 qts. per acre just prior to planting. Work into soil 4 - 8 inches immediately. This pre-plant treatment will also control other soil insects such as cutworms (surface and subterranean), mole crickets, root maggots and wire-worms.

Mole Crickets

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

Broadcast 1 qt. per acre when insects are present. Make application to plant beds or fields 1 - 2 days prior to sowing of seed or transplanting and work into soil 1 - 2 inches immediately.

Onion Maggots

Onions

Furrow Application: Apply 1 qt. per acre in sufficient water to drench the seed furrow at planting time.

Broadcast Application: Broadcast 2 - 4 qts. per acre just prior to planting. Work into soil 3 - 4 inches immediately.

Root Maggots

Broccoli, Brussels Sprouts, Cabbage, and Cauliflower: Broadcast Application: Broadcast 2-3 qts. 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 1/4 to 1/2 pt. in 50 gallons of transplant water, when 200-300 gals. of water are used per acre. May be applied at the rate of 1/2 - 1 cupful per plant, either by hand or by tractor mounted sprayer equipped with drop nozzles 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 1 qt. in 50 gals. of water. Apply 80-100 gals. per acre (1 1/3 gals. per 1,000 linear feet of row) in the seed furrow at planting time.

Wireworms

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

Broadcast 3 - 4 qts. per acre prior to planting, and work into soil 4 - 8 inches immediately.

Potatoes

Wireworms: Broadcast 3 - 6 qts. per acre prior to planting. Immediately disk or harrow into soil 4 - 8 inches.

FIELD AND FORAGE INSECTS

Moretrol 4-E 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.

Alfalfa and Clover

Spotted Alfalfa Aphids, Yellow Clover Aphids, Pea Aphids, Leafhoppers, Plant Bug Nymphs, Mites: Apply 3/4 - 1 pt. per acre.

Grasshoppers: Apply 1 pt. per acre.
Cutworms (Surface and Subterranean): Broadcast 2 - 4 qts. per acre just prior to planting. Work into the soil immediately, 2 - 3 inches for surface cutworms, 3 - 6 inches for subterranean cutworms.

Following the above applications, 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 is cut and dried for 3 days following treatment.

oroughly after handling. Avoid contamination of food and feed. Keep out of reach of domestic animals. Do not use on humans, household pets or livestock. Do not permit children or pets to go on sprayed grass until spray has completely dried.

ENVIRONMENTAL CAUTIONS:

THIS PRODUCT IS TOXIC TO FISH, SHRIMP, CRABS, BIRDS AND OTHER WILDLIFE. BIRDS FEEDING ON TREATED AREAS MAY BE KILLED. KEEP OUT OF LAKES, STREAMS, PONDS, TIDAL MARSHES AND ESTUARIES. DO NOT APPLY WHERE RUNOFF IS LIKELY TO OCCUR. DO NOT APPLY WHEN WEATHER CONDITIONS FAVOR DRIFT FROM AREAS TREATED. DO NOT CONTAMINATE WATER BY CLEANING OF EQUIPMENT, OR DISPOSAL OF WASTES. APPLY THIS PRODUCT ONLY AS SPECIFIED ON THIS LABEL.

This product is highly toxic to bees exposed to direct treatment or residues on crops. Protective information may be obtained from your Cooperative Agricultural Extension Service.

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CONTAINER DISPOSAL

KEEP PESTICIDE IN ORIGINAL CONTAINER. DO NOT PUT CONCENTRATE OR DILUTE INTO FOOD OR DRINK CONTAINERS.

WASH EMPTY CONTAINER WITH ALKALI, CRUSH OR PERFORATE, BURY IN SAFE PLACE AWAY FROM WATER SUPPLIES AND RUNOFF. NEVER RE-USE. DO NOT BURN.

WARNING: Do not get rinse solution on hands, in eyes or on clothing. Wear protective clothing and equipment. In case of contact wash immediately with soap and water.

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1310 Bayshore Highway P.O. Box 945 San Jose, California

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per 100 gals. of water. Apply in cover sprays as necessary, beginning with petal fall.

Cherry Fruit Flies: Mix 1/2 - 1 pt. per 100 gals. of water. Make 3 or 4 applications, beginning when adult cherry fruit flies begin to emerge and repeat at 10-day intervals.

Leafhoppers: Apply 1 pt. per 100 gals. of water in 3 - 5 applications beginning at petal fall and continuing through the growing season or apply as infestations develop.

Black Cherry Aphids: Mix 1 pt. per 100 gals. of water. Apply as a cover spray when aphids appear and repeat after 10 days.

San Jose Scale Crawlers: Mix 1 pt. per 100 gals. of water. Apply during the pre-pink stage or when crawlers first appear. Do not apply within 10 days of harvest.

Cherry Rust Mites: Mix 1/2 - 1 pt. per 100 gals. of water. Apply as a supplemental spray after harvest.

Citrus Fruits

i.e. Grapefruit, Lemons, Limes, Oranges, Tangalos, Tangerines, Citrus, Citron, Kumquats, and hybrids of these.

Citrus Aphids, Fruit-tree Leaf Rollers, Cottony-cushion Scale Crawlers, and Soft Scale Crawlers: Apply 1/2 - 1 pt. per 100 gals. of water (Maximum 1,000 gals. per acre) as a thorough cover spray when aphids and crawler stages of scale insects first appear.

Fruit-tree Leaf Rollers: Use 1/2 - 1 pt. per 100 gals. of spray (maximum 1,000 gals. per acre) when an average of 50 percent of eggs in egg masses have hatched in the spring.

Citrus Thrips: Apply 1 pt. in 100 gals. of water (maximum 1,000 gals. per acre) when thrips first appear.

Citrus Snow Scales: Apply 1 - 2 pts. per 100 gals. of water (maximum 1,000 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. Do not apply during bloom. Do not apply to citrus within 21 days of harvest.

Figs

Vinegar Flies (Drosophila spp.), Dried Fruit Beetles: Apply 1 pt. per 100 gals. of water. Do not apply within 5 days of harvest.

Filberts

Filbert Leaf Rollers, Aphids: Apply 1 - 2 qts. in 250-400 gals. of water per acre, as a thorough cover spray.

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Grapes

Pacific Spider Mites, Leafhoppers, Grape Berry Moths, Grape Leaf Folders: Mix 1 pt. per 100 gals. of water and apply as a thorough cover spray, or apply 2 pts. per acre in sufficient water for thorough coverage. Do not apply within 18 days of harvest.

Drosophila spp.: Mix 6 fl. oz. per 100 gals. of water and apply as a thorough cover spray, or apply a maximum of 18 fl. oz. per acre in sufficient water for thorough coverage when insects first appear. Make additional applications at weekly intervals or necessary. Do not apply within 7 days of harvest.

Olives

Olive Scales: Mix 3/4 - 1 pt. of Moretrol 4-E plus 1 1/2 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 and Nectarines

Aphids, Brown Mites (Clover Mites), Two-Spotted Spider Mites, San Jose Scale Crawlers: Mix 1 pt. per 100 gals. of water. Apply when aphids, mites and scale crawlers first appear.

Olive Scale Crawlers: Mix 1/2 pt. of Moretrol 4-E plus 1 1/2 gals. light medium horticultural oil per 100 gals. of water. Apply when scale crawlers are present.

Oriental Fruit Moths: Mix 1 pt. 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 Borer: Mix 1 pt. per 100 gals. of water and apply to peaches in May and June.

Leafhoppers (Peaches only): Apply 1 pt. per 100 gals. of water in 3 - 5 applications beginning at petal fall and continuing through the growing season, or apply as infestations develop.

White Peach Scale (Peaches only): As a post-harvest spray, apply 1 1/2 - 2 pts. 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. Do not apply to peaches within 20 days or to nectarines within 10 days of harvest.

Plums and Prunes

Brown Mites (Clover Mites), European Red Mites: Apply 1 pt. per 100 gals. of water.

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Apply 1/2 - 1 pt. per acre. Applications at 7 - 10-day intervals will usually be required. Do not apply to broccoli or cauliflower within 5 days, or to cabbage within 7 days of harvest.

Brussels Sprouts

Aphids, Diamond-back Moths, Imported Cabbageworms: Apply 1 pt. per acre. Generally applications at 7 - 10-day intervals will be required. Do not apply to brussels sprouts within 7 days of harvest.

Carrots

Aphids: Appl. 1 pt. per acre. Do not apply within 10 days of harvest.

Celery

Aphids, Flea Beetles: Apply 1 pt. in 100 gals. of water per acre. Do not apply within 10 days of harvest. Plants should be market trimmed (tops removed) before being shipped or used. Tops should not be used for feed or food.

Collards, Kale, Swiss Chard, and Turnip Tops

Aphids, Imported Cabbageworms, Diamond-back Moths, Harlequin Cabbage Bug, Corn Earworms: Apply 1/2 - 1 pt. per acre. Do not apply to collards, kale or turnip tops within 10 days, or to Swiss chard within 12 days of harvest.

Cucumbers

Aphids, Serpentine Leaf Miners, Thrips: Apply 1 pt. per acre. Do not apply within 7 days of harvest.

Lettuce and Endive

Aphids, Dipterous Leaf Miners: Apply 1/2 to 1 pt. per acre. Do not apply within 10 days of harvest.

Melons and Squash

Cantaloupes, Casabas, Casahaws, Honeydew Melons, Muskmelons, Persian Melons, and hybrids of these; Watermelons and their hybrids; Summer and Winter Squash

Aphids, Leafhoppers, Mites: Apply 1 - 1 1/2 pts. per acre.

Serpentine Leaf Miners, Thrips: Apply 1/2 - 1 pt. per acre.

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

Onions

Onion Thrips: Apply 1 pt. per acre. Do not apply within 10 days of harvest.

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Peas

Aphids, Leaf Miners: Apply 3/4 - 1 pt. 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

Aphids, Serpentine Leaf Miners: Apply 1/2 pt. per acre. Do not apply within 5 days of harvest.

Potatoes

Aphids, Flea Beetles, Colorado Potato Beetles, Dipterous Leaf Miners: Apply at the rate of 1/2 - 3/4 pt. per acre.

Banded Cucumber Beetles, Leafhoppers, Southern Armyworms: Apply 3/4 - 1 pt. per acre. Do not apply within 35 days of harvest.

Radishes, Parsnips, and Turnips

Aphids, Flea Beetles, Dipterous Leaf Miners: Apply 1/2 - 1 pt. per acre. Do not apply within 10 days of harvest.

Spinach and Beets

Aphids, Dipterous Leaf Miners: Apply 1/2 - 1 pt. per acre. Do not apply to spinach within 10 days, or to beets within 14 days of harvest.

Squash (Summer) and Winter Squash

See Melons and Squash on previous page.

Sweet Corn

Corn Earworms: Apply 1 - 1 1/4 qts. 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

Aphids, Dipterous Leaf Miners: Apply 1/2 pt. per acre. To control leaf miners, weekly applications are usually required.

Banded Cucumber Beetles, Fall Armyworms, Southern Armyworms: Apply 3/4 - 1 pt. per acre.

Vinegar Flies (Drosophila spp.): Apply 1/2 - 1 1/2 pts. per acre. Weekly applications are usually required. Do not apply within 1 day of harvest.

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in 50 gallons of transplant water, when 200-300 gals. of water are used per acre. May be applied at the rate of 1/2 - 1 cupful per plant, either by hand or by tractor mounted sprayer equipped with drop nozzles 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.

Wireworms

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

Broadcast 3 - 4 qts. per acre prior to planting, and work into soil 4 - 8 inches immediately.

Potatoes

Wireworms: Broadcast 3 - 6 qts. per acre prior to planting. Immediately disk or harrow into soil 4 - 8 inches.

FIELD AND FORAGE INSECTS

Moretrol 4-E 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.

Alfalfa and Clover

Spotted Alfalfa Aphids, Yellow Clover Aphids, Pea Aphids, Leafhoppers, Plant Bug Nymphs, Mites: Apply 3/4 - 1 pt. per acre.

Grasshoppers: Apply 1 pt. per acre.

Cutworms (Surface and Subterranean): Broadcast 2 - 4 qts. per acre just prior to planting. Work into the soil immediately, 2 - 3 inches for surface cutworms, 3 - 6 inches for subterranean cutworms.

Following the above applications, 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.

Alfalfa Weevil Larvae: For control in the spring, apply 2 - 3 pts. per acre when feeding damage to growing tips becomes evident. Repeat application, if necessary, if damage is already extensive, cut the hay and make application to

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the stubble. Do not graze dairy and beef animals or sheep for 2 days. Do not cut for hay for 10 days following treatment. Do not spray livestock directly with either air or ground equipment. Do not treat during bloom to avoid injury to pollinating insects.

Clover

Striped Ground Crickets: Broadcast 1 - 2 pts. per acre following seeding in the fall but prior to clover emergence.

Corn

Corn Rootworm Larvae: Band application at planting time: Apply 1 - 2 qts. per acre in a minimum of 5 gals. of water. Make application in the seed furrow or apply 2 1/2 - 5 ounces per 1,000 linear feet of corn row in a 4 - 7-inch band directly behind the planter shoe. For band treatment, refer to the row spacing chart for amounts recommended per acre.

Post-emergence Basal Treatment: Apply 1 1/4 - 2 1/2 ounces per 1,000 linear feet of corn row in sufficient water to thoroughly wet base of corn plant and a narrow band of soil next to the plant.

Refer to the row spacing chart for amounts recommended per acre. Cover treated band with 2 - 3 inches of soil using a disk hiller or cultivator immediately after spraying. Application should be made at the first sign of corn root worm larvae.

SUGGESTED RATES ACCORDING TO ROW SPACING FOR CORN ROOTWORM LARVAE CONTROL

ROW SPACING	LINEAR FEET OF CORN ROW/ACRE	AMOUNT OF MORETROL 4-E PER ACRE	
		Planting Time Application	Post-emergence Basal Treatment
48"	10,890	28 - 56 oz.	14 - 28 oz.
42"	12,455	31 - 62 oz.	15.5 - 31 oz.
40"	13,068	32 - 64 oz.	16 - 32 oz.
		(1 - 2 qts.)	(1/2 - 1 qt.)
38"	13,939	35 - 70 oz.	17.5 - 35 oz.
36"	14,250	36 - 72 oz.	18 - 36 oz.
30"	17,424	44 - 88 oz.	22 - 44 oz.
24"	21,780	55 - 110 oz.	27.5 - 55 oz.
20"	26,136	64 - 128 oz.	32 - 64 oz.
		(2 - 4 qts.)	(1 - 2 qts.)
15"	34,848	88 - 176 oz.	44 - 88 oz.

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

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Seed Corn Maggots: Broadcast 2 - 4 qts. per acre just prior to planting. Work into soil 2 inches immediately.

Cutworms (Surface and Subterranean): Broadcast 2 - 4 qts. 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 3 - 6 inches immediately.

Wireworms: Apply 3 - 4 qts. per acre prior to planting and work into soil 4 - 8 inches immediately.

Corn Rootworm Adults: Apply 1/2 to 1 pt. per acre.

Corn Leaf Aphids: Apply 1 - 2 pts. per acre in sufficient water to provide complete coverage of the upper portions of plants. Repeat application as necessary.

Mites: Apply 1 pt. per acre in sufficient water to achieve thorough coverage when infestation first appears and repeat applications as necessary.

Flea Beetles: Apply 1 pt. per acre in sufficient water to assure thorough coverage when insects first appear, and repeat application as necessary.

Grasshoppers: Apply 1 pt. per acre.

Sap Beetles: Apply 2 - 2 1/2 pts. 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.

Cotton

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

Do not apply within 14 days of harvest. Do not graze treated cotton plants, or feed gin waste to livestock.

Cowpeas

Cutworms (Surface and Subterranean): Broadcast 2 - 4 qts. per acre, just prior to planting. Work into the soil immediately, 2 - 3 inches for surface cutworms, 3 - 6 inches for subterranean cutworms.

Hops

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

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Lespedeza

Cutworms (Surface and Subterranean): Broadcast 2 - 4 qts. per acre just prior to planting. Work into the soil immediately, 2 - 3 inches for surface cutworms, 3 - 6 inches for subterranean cutworms.

Sorghum

Sorghum Midges: Apply 1/2 - 1 pt. per acre when 90% of heads have emerged from the boot. Repeat application within 4 days.

Mites: Apply 1 pt. per acre in sufficient water to assure thorough coverage when infestation first appears and repeat applications as necessary.

Crop may be fed to livestock immediately following treatment. Do not apply within 7 days of harvesting for grain.

Cutworms (Surface and Subterranean): Broadcast 2 - 4 qts. per acre just prior to planting. Work into the soil immediately 2 - 3 inches for surface cutworms, 3 - 6 inches for subterranean cutworms.

Soybeans

Cutworms (Surface and Subterranean): Broadcast 2 - 4 qts. per acre just prior to planting. Work into the soil immediately 2 - 3 inches for surface cutworms, 3 - 6 inches for subterranean cutworms.

Sugar Beets

Beet Leafhoppers, Dipterous Leaf Miners, Aphids: Apply 1/4 - 1 pt. per acre.

Grasshoppers: Apply 1 pt. per acre.

Wireworms: Broadcast 3 - 4 qts. per acre just prior to planting and work into soil 4 - 8 inches immediately.

ORNAMENTAL INSECT CONTROL

To control certain insects on ornamentals such as Arborvites, Azalea, Birch, Boxwood, Camellia, Carnation, Chrysanthemum, Douglas Fir, Elm, Gladiolus, Hawthorn, Holly,

INSECTS	RATE/1000 SQ. FT.		REMARKS
	MORETROL E-4	WATER	
Lawn Chinch Bugs	2 - 3 fl. oz. or 3 - 6 fl. oz.		Alternately make application at 3 for longer residual control and in per 1000 sq. ft. and thoroughly wa-ter immediately after application. 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	4 fl. oz.	3 gals.	Spot spray ant hills and wasp ground nest openings.
Digger Wasps, Earwigs, Frit Flies, Lawn Billbugs, Sod Webworms (Lawn Moths), Sowbugs	4 fl. oz.	3 gals.	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	1 1/4 fl. oz.	3 gals.	Do not apply to animals. For Brown Dog Ticks, spray grass and under shrubbery, particularly near house.
Millipedes	8 fl. oz.	3 gals.	

Boxelder Bugs: Spray bugs outside the house with 1 1/4 - 2 1/2 fl. oz. (2 1/2 - 5 tablespoons) in 1 gal. of water. At the same

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time, thoroughly spray around foundation, windows, doors, free trunks, and into cracks and other places where the insects hide.

DIRECTIONS FOR MIXING

Mix in water with agitation; agitate while spraying. Use designated amount of product in the following gallons of water per acre unless otherwise noted: Vegetable and Field Crops—20 to 250 gallons by ground, 5 to 10 gallons by air. Small Fruits—20 to 250 gallons by ground, 7 to 10 gallons by air. Tree Fruits—40 to 800 gallons by ground, 10 to 20 gallons by air. Citrus—100 to 3,000 gallons by ground, 10 to 20 gallons by air. On young fruit trees, use a minimum of 20 gallons by ground per acre.

NOTICE TO BUYER—Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions. NON-RETURNABLE

COMPATABILITY

Avoid combinations containing highly alkaline materials such as lime-sulfur or lime. Alkaline compounds will reduce the effectiveness of Moretrol E-4.

Do not permit workers to enter the treated area where substantial contact will be made with treated foliage until following instructions.

Sorghum

Sorghum Midge: Apply 1/2 - 1 pt. per acre when 90% of heads have emerged from the boot. Repeat application within 4 days.

Mites: Apply 1 pt. per acre in sufficient water to assure thorough coverage when infestation first appears and repeat applications as necessary.

Crop may be fed to livestock immediately following treatment. Do not apply within 7 days of harvesting for grain.

Cutworms (Surface and Subterranean): Broadcast 2 - 4 qts. per acre just prior to planting. Work into the soil immediately 2 - 3 inches for surface cutworms, 3 - 6 inches for subterranean cutworms.

Soybeans

Cutworms (Surface and Subterranean): Broadcast 2 - 4 qts. per acre just prior to planting. Work into the soil immediately 2 - 3 inches for surface cutworms, 3 - 6 inches for subterranean cutworms.

Sugar Beets

Beet Leafhoppers, Dipterous Leaf Miners, Aphids: Apply 1/4 - 1 pt. per acre.

Grasshoppers: Apply 1 pt. per acre.

Wireworms: Broadcast 3 - 4 qts. per acre just prior to planting and work into soil 4 - 8 inches immediately.

ORNAMENTAL INSECT CONTROL

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

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INSECTS	AMOUNT MORETROL 4-E TO USE	
	PER 3 GALS. OF WATER	PER 100 GALS. OF WATER
Aphids, Bagworms, Carnation Bud Mites, Carnation Shoot Mites, Clover Mites, Cyclamen Mites, Dipterous Leaf Miners, European Red Mites, Flea Beetles, Holly Bud Moths, Leafhoppers, Obscure Root Weevil, Omnivorous Leaf Tiers, Privet Mites, Scale Crawlers (Cotton-cushion, Lecanium, Pine Needle, San Jose, Soft Scale), Thrips, Two-Spotted Mite, Webworms, Whiteflies	1/2 fl. oz.*	1 pt.*
Apple-and-Thorn Skeletonizers, Cotoneaster Webworms, Fall Webworms, Hemlock Cherms, Oak Loopers, Oblique-banded Leaf Rollers, Pear Slugs, Tent Caterpillars	1 1/2 fl. oz.	3 pts.

* 1 fl. oz. = 2 tablespoons 16 fl. oz. = 1 pint

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

Mimosa Webworms: Mix 1/2 fl. oz. in 3 gals. of water (or 1 pt. 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.

LAWN INSECT CONTROL

To control insects listed below, apply recommended rates. For insects such as 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-foot band of soil around the house, as well as the house foundation wall to a height of 2 - 3 feet. Repeat application if necessary.

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DIRECTIONS FOR MIXING

Mix in water with agitation; agitate while spraying. Use designated amount of product in the following gallons of water per acre unless otherwise noted: **Vegetable and Field Crops**—20 to 250 gallons by ground, 5 to 10 gallons by air. **Small Fruits**—20 to 250 gallons by ground, 7 to 10 gallons by air. **Tree Fruits**—40 to 800 gallons by ground, 10 to 20 gallons by air. **Citrus**—100 to 3,000 gallons by ground, 10 to 20 gallons by air. On young fruit trees, use a minimum of 20 gallons by ground per acre.

NOTICE TO BUYER—Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions. **NON-RETURNABLE**

COMPATABILITY

Avoid combinations containing highly alkaline materials such as lime-sulfur or lime. Alkaline compounds will reduce the effectiveness of Moretrol E-4.

Do not permit workers to enter the treated area where substantial contact will be made with treated foliage until following indicated days have lapsed after application: **Grapes, 5; Peaches and Nectarines, 5; Citrus, 5.**

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