

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

TOX
CASSIDY FILE
#159

DATE: September 2, 1980
SUBJECT: Merpan 50 W.P.
EPA Registration No. 7001-260

FROM: Sherell A. Sterling *SSS 9-4-80*
FHB/TSS *9/8/80*

TO: Henry Jacoby
Product Manager (21)

Applicant: Occidental Chemical Co.
P.O. Box 198
Lathrop, CA 95330

Active Ingredient:

Captan 50%
Inert Ingredient 50%

Background

Acute data were submitted and reviewed October 24, 1979 (see: Sterling). Except for the Eye study, all other acute toxicity parameters were toxicity category III or IV; the Eye Irritation study was in toxicity category I. New data were submitted (see Accession No. 243112) on the Eye Irritation study. The study was Cosmopolitan Safety Evaluation, Inc. of Somerville, New Jersey. A method of support was not submitted. *(done b)*

Recommendations

1. In light of the new data submitted, FHB/TSS agrees with the registrant that the toxicity category should be lowered. However, FHB/TSS recommends that this product be placed under Toxicity Category II - WARNING. Due to corneal opacity in 2/9 animals, CAUTION is not the appropriate signal word under the current standards.
2. The appropriate signal word for this product is WARNING.
3. The following are necessary labeling revisions.

Labeling Recommendations

1. The signal word must be changed to WARNING.
2. The parenthesis must be dropped on the subheading to read "Hazards to Humans and Domestic Animals."
3. Statements under this section must be revised to the following:

"Causes eye irritation. Do not get in eyes, on skin or on clothing. Avoid breathing vapors or dust.
4. The "Statement of Practical Treatment" section must be placed under the "Hazards to Humans and Domestic Animals" section.
5. The correct placement of the "Physical or Chemical Hazards" section is directly following the "Environmental Hazards" section.

Review:

1. Primary Eye Irritation Study in Rabbits; CSE #1429-3; July 24, 1980; Accession No. 243112.

Procedure: 0.1 g of Merpan 50WP was instilled into one eye of each of 9 New Zealand white rabbits. Three rabbits' eyes were subsequently rinsed 20 seconds after instillation with water for one minute; remaining six rabbits; eyes were unrinsed. Scoring at 24, 48, 72 hours; 4, 7 days.

Results: At 24 hours in the unrinsed eyes, corneal opacity exhibited in 1/6 = 10; conjunctival redness in 6/6 = 3; chemosis in 4/6 = 2, 2/6 = 3; discharge in 2/6 = 1, 2/6 = 2, 2/6 = 3. In the rinsed eyes at 24 hours, corneal opacity observed in 1/3 = 5; redness in 2/3 = 1, 1/3 = 2; chemosis in 1/3 = 1; discharge in 1/3 = 1. In rinsed eye group, one animal found dead at 72 hours due to enteritis; scores were zero before animal died. All surviving washed eyes were clear at day 4. At day 7, nonwashed eyes showed redness in 1/6 = 1 and discharge in 1/6 = 1. At instillation of test substance, most animals vocalized; blepharospasm observed.

Study Classification: Core Guideline Data.

Toxicity Category: II - WARNING. Two animals showed opacity.

2



CAPTAN 50W

A FUNGICIDE FOR PLANT DISEASE CONTROL

ACTIVE INGREDIENTS:		BY
Captan N-(trichloromethylthio)-4-cyclohexene-1,2-dicarboximide		5
INERT INGREDIENTS:		5
	TOTAL	10

EPA Reg. No. 7001-260
EPA Est. No. 7001-CA-1

KEEP OUT OF REACH OF CHILDREN **DANGER**

HAZARDS TO HUMANS (& DOMESTIC ANIMALS)

Corrosive Causes eye damage. Do not get in eyes, on skin or clothing. Wear goggles and shield when handling. Harmful if swallowed. Avoid breathing vapors.

ENVIRONMENTAL HAZARDS This pesticide is toxic to fish. Do not discharge in lakes, streams, ponds or public water unless in accordance with National Pollution Discharge Elimination Act permit. For guidance, contact your regional office of EPA. Do not apply when weather conditions favor drift from area treated.

STATEMENT OF PRACTICAL TREATMENT

- IF SWALLOWED - May be harmful if swallowed
- IF INHALED - Avoid breathing vapors or dust
- IF IN EYES - Immediately flush eyes with plenty of water for at least 5 minutes. Call a physician.
- IF ON SKIN - Wash skin with soap and water.

PHYSICAL OR CHEMICAL HAZARDS Store in cool, dry place. Protect from excessive heat.

DIRECTIONS FOR USE

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

STORAGE AND DISPOSAL

- Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.
- Pesticide, spray mixture or rinsate that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticides or buried in a safe place away from water.
- Dispose of in an incinerator or landfill approved for pesticide containers, or bury in a safe place.
- Consult federal, state or local disposal authorities for approved alternative procedures: limited open burning.

CAPTAN 50W is a microfine wettable powder for use in water as a spray for the control of fungus diseases of fruit, vegetables and ornamental crops, and as a soil treatment for the control of certain seed rots and damping-off diseases.

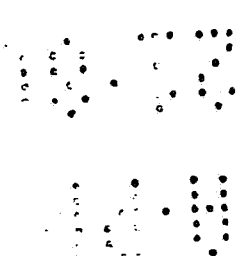
OBSERVE THE FOLLOWING USE PRECAUTIONS

Read all precautions and directions for use before using. Use only for claims listed on this label.

In order that pesticide residues on food and forage crops will not exceed federal tolerance, use only at recommended rates and intervals, and do not apply closer to harvest than specified on this label. Do not apply or allow to drift to adjoining food, fiber or pasture crops.

Consult State Agricultural Experiment Stations or State Agricultural Extension Service for information, as the timing of applications needed will vary with local conditions.

COMPATIBILITY AND PLANT SAFETY. CAPTAN 50W can be combined safely and at recommended dosage rates with most commonly used fungicides and insecticides, with the exception of oil and strongly alkaline materials. Alkaline materials such as spray lime and bordeaux mixture will reduce the fungicidal activity of CAPTAN. Do not apply CAPTAN in combination with or immediately before or closely following oil sprays. The time factor between the safe interval between CAPTAN and oil spray varies due to general climatic conditions; therefore, consult local agricultural spray programs and authorities to determine the proper interval. The use of spreaders which cause excessive wetting is not advised. Combinations of CAPTAN with formulations of organic phosphates should not be used. Combinations of CAPTAN with sulfur should not be used on crops sensitive to sulfur. Used at high rates or in drenching spray.



3

may cause a necrotic spotting of tender mature leaves of certain varieties of apples, peaches, plums and cherries. That type of injury is most likely to occur in the early covers sprays during long periods of warm, cloudy humid weather. To avoid hazard of leaf spotting under such conditions use CAPTAN and other spray materials at lowest recommended rates and avoid drenching trees.

DIRECTIONS FOR USE

Applications can be made by aircraft or ground power equipment (including concentrate and semi-concentrate equipment). Pour recommended amount of this material into nearly filled spray tank. Add balance of water. Maintain agitation during filling and spraying operations. Do not allow mixture to stand. Do not combine with emulsifiable liquids or wettable powders unless previous experience has proven them to be physically compatible and safe to plants. (Read compatibility and plant safety information given under Use Precautions.)

RECOMMENDATIONS

Unless otherwise specified rates are given in terms of CAPTAN 50W per 100 gallons of water for fruit and nut crops and ornamentals. For vegetable crops, rates are expressed as CAPTAN 50W per acre in sufficient water to provide thorough coverage. Except as specified begin applications before or at first sign of disease and repeat as needed to maintain control but observe use limitations. Unless otherwise specified, applications can be made on the day of harvest.

Maximum permissible rate per acre per applications as CAPTAN 50W is given in parenthesis () after crop claim.

FRUIT & NUT CROPS

IMPORTANT: Read label carefully. Although most of the directions on this label may be followed nationwide, a few are limited to either the Eastern or Western U.S. Follow those directions for your growing area where specified.

Almonds: *Brown Rot, Twig & Blossom Blight, Shothole, Scab, Leaf Blight.* Use 2 to 3 pounds. Apply at popcorn, bloom and petal fall. Hulls may be fed to livestock (32 lbs.)

Subsequent applications may be made up to 12 days of harvest in accordance with pest infestations and State Agricultural Extension Service recommendations, provided the hulls are not fed to dairy animals or animals being finished for slaughter. (32 lbs.)

Apples (Eastern U.S.): *Primary Scab, Black Rot (Frogeye), Botrytis Blossom End Rot.* Use 1-1/2 to 2 pounds at 5 to 7 day intervals as needed to maintain cover in prebloom, bloom and petal fall and first cover sprays. Use at 2 pound rate if conditions favor scab or if active scab can be found. *Secondary Scab, Brooks Fruit Spot, Sooty Blotch, Fly Speck, Black Rot, Black Pox, Botryosphaeria Rot, Bitter Rot.* Use 1 to 2 pounds at 10 to 14 day intervals in second and later cover sprays up to start of harvest (16 lbs.) *Powdery Mildew.* If powdery mildew is a problem add 1-1/2 to 3 pounds sulfur or 1/4 to 1/2 pound Karathane to all post-bloom sprays until the foliage matures. Use 1/2 pound Karathane if interval between sprays is longer than 7 days. **CAUTION:** Do not use CAPTAN in combination with or closely following or in alternation with wettable sulfur products on sulfur sensitive varieties of apples such as Red Delicious, Staygreen, Baldwin, King, etc., as severe injury and defoliation may occur.

Apples (Western U.S.): *Apple Scab.* In preblossom sprays, use 2 lbs. per 100 gallons of water in high volume application. In low volume sprays apply 16 pounds per acre. In mid-summer, the dosage may be reduced to 1 pound per 100 gallons in high volume application or 10 pounds per acre in low volume sprays. *Bull's Eye Rot, Botrytis Rot (Pacific Northwest).* Use 2 pounds per 100 gallons of spray. Make 1 or 2 applications with late cover sprays and 1 to 2 preharvest applications (16 lbs.)

Apricots: *Brown Rot (Twig Blight), Jacket Rot.* Use 2 pounds. Apply in red bud, bloom, 75% petal fall and cover stages (10 lbs.)

Blackberry, Dewberry, Raspberry (Eastern U.S.): *Anthraxnose.* Use 4 pounds per acre if sufficient water for thorough coverage in the pre-blossom (when new canes are 6 to 8 inches long) and first cover (right after petal fall) sprays. *Raspberry (Botrytis Fruit Rot)* use 2 pounds per 100 gallons water. Begin application in the first bloom. Make 2 or more repeat applications (at field conditions warrant) at 10 to 15 day intervals (6 lbs.)

Raspberries (Western U.S.): *Anthraxnose, Botrytis Spur Slight.* Apply 2 pounds. Apply at bloom or when new shoots are 8 to 10 inches long. Repeat 2 weeks later, apply fall spray after canes are removed. *Fruit Rot.* Apply 2 pounds. Apply 3 to 5 days before harvest starts. Repeat at mid harvest and 8 to 10 days later (6 lbs.)

Blueberries (Western U.S.): *Botrytis Gray Mold or Berry Rot, Mummy Berry.* Use 2 pounds if sufficient water for thorough coverage. Begin at mid-bloom, repeat at 7 to 10 day intervals until maturity (5 lbs.)

Cherries (Eastern U.S.): *Brown Rot, Leaf Spot, Botrytis Rot.* Use 2 pounds in pre-bloom, bloom, petal fall, shuck cover and preharvest sprays. Applications at 3 to 4 day intervals may be necessary during bloom to control blossom blight. Repeat application at 7 to 10 day intervals as needed to maintain cover up to start of harvest. If powdery mildew is a problem add 3 pounds sulfur to the petal fall, shuck and early cover sprays. If sulfur is added, CAPTAN may be reduced to 1 pound in these sprays. Post harvest sprays - apply 2 pounds immediately after harvest for leaf spot. Repeat application in 10 to 14 days (20 lbs.)

Cherries (Western U.S.): *Brown Rot Blossom Blight, Brown Rot (Fruit), Leaf Spot.* Use 2 pounds in prebloom, bloom, petal fall, shuck cover and preharvest sprays (20 lbs.)

Citrus (Grapefruit, Lemons, Oranges, Tangelos, Tangerines): *Brown Rot (Phytophthora).* Use 2 to 4 pounds. Apply to skirts of trees before winter rains. Wet tree thoroughly to height of 3 to 4 feet. Repeat 10 to 12 weeks later (20 lbs.) *Meianose, Scab (Oranges & Tangelos).* Use 2 pounds plus spray sticker. Apply as necessary from 2/3 petal fall until fruit is 1/2 inch in diameter. Do not apply after fruit size exceeds 1/2 inch in diameter. Do not feed raw by-products to livestock (10 lbs.)

Cranberries (Western U.S.): *Blotch Rot (Acanthorhynchus vaccinii), Guignardia Blight.* Apply 6 pounds per acre in 300 gallons of water in early spring applications as required. *Storage Rots, Twig Blight.* Apply 6 pounds per acre in 300 gallons of water during the first week of June for twig blight and in early and late August for storage rots (7 lbs.)

Grapes (Eastern U.S.): Black Rot, Downy Mildew. Use 2 pounds per 100 gallons, make first application just before bloom, repeat just after bloom and at 10 to 14 day intervals for 1 to 3 more applications depending upon the susceptibility of the grape variety. *Dead Arm (current season infection)* Use 2 to 4 pounds per 100 gallons dilute spray. Apply 50 gallons per acre when shoots are 1/2 to 1 inch long. Repeat application when shoots are 4 to 6 inches long (10 lbs.)

Grapes (California): Bunch Rot (Botrytis) Apply 2 pounds per acre. Make 2 applications before bloom and 1 just after bloom. Repeat periodically making 3 cover applications before the bunches close. *Dead Arm (current season infection)* Apply 4 pounds per 100 gallons spray. Apply 3 to 6 pounds per acre by ground equipment. Apply 4 pounds in 7 to 20 gallons of water per acre by aircraft. Apply first spray when green tissue begins to show but before shoots are 1 inch long. Apply a second spray when shoots are 6 to 8 inches long (10 lbs.)

Mangoes: Cercospora Leaf Spot or Blotch Use 2 pounds. Begin at first sign of disease and repeat at weekly intervals to maintain control (20 lbs.) aircraft

Peaches, Nectarines: Brown Rot, Scab. Use 2 pounds in full pink, bloom, petal fall, shuck, cover and preharvest sprays. Applications at 3 to 4 day intervals may be necessary during bloom to control blossom blight. Repeat application at 7 to 14 day intervals as needed to maintain cover. Continue applications through harvest if conditions favor brown rot. If powdery mildew is a problem, add 3 pounds sulfur to the petal fall, shuck and early cover sprays. If sulfur is added, CAPTAN may be reduced to 1 pound in these sprays. *Coryneum Blight (Peach Blight, Shothole)* Use 2 pounds apply in pink bud, full bloom, petal fall and cover periods as necessary and as a post harvest spray (but before leaves drop) (10 lbs.)

Peaches (Nursery Stock) (California): Preventative preplant dip treatment for *Crown Gall*. Use 4 pounds CAPTAN 50WP plus 3.2 pints diluted sodium hypochlorite (5.25% household bleach) per 100 gallons water. Wash nursery trees to remove soil from roots. Cut off all dormant buds and suckers in crown area and prune root system if necessary. Submerge the entire dormant tree for 5 minutes. Recharge dip during operation as necessary to maintain a proper concentration of 200 ppm chlorine. Check the concentration frequently using a chlorine test kit.

Pears (Eastern U.S.): Scab. Use 2 pounds in preblossom, petal fall and cover sprays. Repeat cover applications at 7 to 14 day intervals under severe scab conditions. Russetting may be reduced on Bosch pears. Do not use on D'Anjou pears. (16 lbs.)

Pears (Western U.S. - except Pacific Northwest): Pear Scab. Use 2 pounds. Apply during early finger stage, petal fall and first cover sprays. Under severe scab infection, conditions additional treatments may be necessary. Russetting may be reduced on Bosc pears. Do not use on D'Anjou pears (16 lbs.)

Pineapples: Heart Rot (Phytophthora Parasitica). Use 10 pounds. Dip slips into solution just prior to planting. *Root Rot (Phytophthora cinnamomi)* Use 4 pounds. Spray immediately after planting. Repeat at 2 week intervals. (20 lbs.) Post harvest dip: *Storage & Transit Rot.* Use 10 pounds. Dip or wash harvested fruit.

Plums, Prunes (Eastern U.S.): Brown Rot. Use 2 pounds in full pink, bloom and petal fall sprays. Repeat applications at 7 to 14 day intervals as needed to maintain cover. Continue applications through harvest if conditions favor brown rot. The addition of a neutral spreader has improved coverage (10 lbs.)

Plums, Prunes (Western U.S.): Brown Rot. Use 2 pounds. Apply at green bud, popcorn, bloom and petal fall stages. Repeat in cover sprays as conditions warrant. *Prune Russet Scab (Lacy Scab) (in California)* Apply 2 pounds per 100 gallons water (8 lbs per acre) Apply at full bloom. (10 lbs.)

Quince: Brown Rot, Scab. Use 2 pounds. Begin when disease threatens. Repeat at 7 to 10 day intervals. Do not apply within 7 days of harvest (10 lbs.)

Strawberries: Botrytis (gray mold), Leaf Spot. Apply 4 to 6 pounds per acre in sufficient water for thorough coverage. Begin applications when new growth starts in the spring and before fruit starts to form. Repeat at weekly intervals. Under conditions favorable to fruit rot continue applications through harvest period treating immediately after each picking. (8 lbs.)

VEGETABLE CROPS

Asparagus (Preplanting Root Dip): Botrytis, Root Rots, Phoma Rot, Penicillium Rot, Fusarium. Use 3 pounds per 100 gallons water (4 tablespoonfuls per gallon). Dip root sections for 1 minute drain and plant.

Beans, Peas: Damping Off (Beans only), Fungus Root Rot. Use 10 to 12 pounds per acre as a broadcast treatment, working into top 3 to 4 inches of soil, or use 5 to 6 pounds per acre in the row at time of planting

Cantaloupe, Cucumber, Pumpkin, Summer & Winter Squash, Honeydew Melons, Watermelons: Angular Leaf Spot, Anthracnose. Use 4 pounds per acre in sufficient water for thorough coverage. Begin applications at first signs of infection and repeat at 5 to 7 day intervals or as needed to maintain control. (7.6 lbs.)

Carrots: Cercospora Blight, Septoria Leaf Spot. Use 2 pounds per 100 gallons water and apply the equivalent of 4 pounds CAPTAN 50WP per acre. Apply at first sign of disease and repeat at 6 to 10 day intervals (6 lbs.)

Celery: Damping-Off, Pink Rot. Use 2 pounds per 100 gallons water. Apply 450 gallons spray per acre to plant beds when all seeds have germinated. Repeat as necessary (13 lbs.) *Late Blight (Septoria), Pink Rot (Sclerotinia)* Use 2 pounds per 100 gallons water. Apply 200 gallons spray per acre. Spraying should begin in the seedbed and be continued at 7 to 10 day intervals (13 lbs.)

Eggplant: Rhizomorphs Blight, Fruit Rot, Anthracnose. Use 2 pounds. Begin when plants emerge in plant bed or when disease first appears in field. Repeat at 3 to 7 day intervals through growing season. *Damping-off.* Use 10 to 12 pounds per acre in sufficient water for thorough coverage. Begin when all seeds have germinated. Repeat at 10 day intervals (6 lbs as foliar spray; 12 lbs in plant beds before transplanting)

Onions (Green) (California): Downy Mildew. Use 3 pounds per acre in 5 to 20 gallons water. per acre by air or 20 to 100 gallons water per acre by ground equipment. Apply at first sign of infection and repeat at 5 to 7 day intervals or as needed to maintain disease control. (3 lbs.)

Onions (Green & Bulb): *Downy Mildew, P. Blotch.* Use 2 pounds. Apply at first sign of infection and repeat at 7 to 10 day intervals. (3 lbs.)

Peppers, Pimentos: *Anthrachnose, Cercospora (Frogeye Leaf Spot and Stem End Rot).* Use 3 pounds. Apply at 3 to 7 day intervals throughout the growing season. (6 lbs.) *Damping-off.* Use 2 pounds. Plant bed treatment. Begin when all seeds have germinated. Repeat at 10 day intervals (12 lbs.)

Tomatoes: *Anthrachnose, Gray Leaf Spot, Septoria Leaf Spot.* Use 4 to 6 pounds per acre in sufficient water for thorough coverage. Under severe conditions use 6 to 8 pounds per acre in sufficient water for thorough coverage. Apply at first sign of infection and repeat at 5 to 7 day intervals or as needed to maintain control. (10 lbs.)

SPECIAL USES

Preplanting Soil Treatment: For control of *Damping-Off* and *Root Rots* for the crops listed below, apply spray broadcast to soil surface as a preplanting application and cultivate into upper 3 to 4 inches of soil. Or apply to furrow over the seed when specified. (14,500 linear feet of row equals 1 acre). Close and pack the furrow in usual manner. Apply dosage rate in sufficient water for thorough soil coverage unless otherwise specified.

Beans, Peas: Use 10 to 12 pounds broadcast or 5 to 6 pounds in furrow. (12 lbs.)

Beets: Use 2 pounds per 100 gallons water; 15 gallons spray per 1,000 square feet. (13 lbs.)

Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Kale, Kohlrabi, Mustard, Rutabagas, Turnips: *Damping-Off only.* Use 15 pounds broadcast. (28 lbs.)

Cantaloupes, Cucumbers, Honeydew Melons, Pumpkins, Squash (Summer & Winter), Watermelons: Use 2 pounds per 100 gallons water; 600 gallons spray per acre broadcast. (12 lbs.)

Spinach: (Direct seeded) Use 5 to 7 pounds in 30 gallons water in furrow. (7 lbs.)

Post Harvest Dip: For control of various molds and storage rots (*Botrytis, Cleosporium, Rhizopus*). Use as a post harvest dip or wash on the following fruits and vegetables: Apples, Apricots, Cantaloupes, Cherries, Cucumbers, Grapefruit, Lemons, Limes, Mangoes, Nectarines, Onions (Green & Bulb), Oranges, Peaches, Pears, Potatoes, Tangelos, Tangerines. Use 2-1/2 pounds. Apply as a spray or in dip tank. When used as a dip, recharge wash solution periodically when tank volume is reduced by 25%. Bring water back to volume and add 1 pound for each 25 gallons added. At end of every 8 hour shift, empty tank, flush and charge with fresh dilution. Do not allow dip tank solution to stand overnight. Maintain continuous agitation during dipping operation. Caution: Do not feed mango or citrus by-products to dairy animals or animals being finished for slaughter.

Packing Box Treatment: For reduction of storage rots and molds (*Rhizopus, Botrytis, Cleosporium*) treat packing boxes with a solution of 2 pounds per 100 gallons water. Spray boxes thoroughly or use as a dip. Keep solution agitated continuously. Drain, flush and recharge the dip tank with new solution after each 8 hour shift.

ORNAMENTALS

Azaleas: *Damping-Off* of cuttings. Use 4 pounds. Dip cuttings before bedding. *Petal Blight.* Use 2 pounds. Apply to soil area around plants and spray flowers just before bloom. Repeat at 7 to 14 day intervals through bloom.

Begonia (Tuberous): *Damping-Off, Tuber Rot.* Use 4 pounds. Dip tubers 30 minutes, drain and plant.

Camellias: *Petal Blight.* Use 1 pound. Apply to drench soil around plants beginning when flowers start to open. Repeat at 7 to 10 day intervals through bloom.

Carnations: *Alternaria Leaf Spot, Rust.* Use 2 pounds. Begin at first sign of disease. Repeat at 7 to 10 day intervals. Shorten intervals during frequent rains and heavy dews. *Damping-Off* of cuttings. Use 4 pounds. Dip cuttings before bedding.

Chrysanthemum: *Botrytis Flower Blight, Septoria Leaf Spot.* Use 2 pounds. Apply at first sign of disease. Repeat at 7 to 10 day intervals. *Damping-Off* of cuttings. Use 4 pounds. Dip cuttings before bedding.

Dichondra (California only): *White Mold (Sclerotium Rolfsii).* Use 2 pounds. Apply 1 gallon spray per 10 square feet. Make 2 to 3 applications at 7 day intervals.

Gladiolus (Corms): *Corm Rot & Decay, Damping-Off.* Use 1/2 to 1-1/2 pounds per 10 gallons, dip corms 20 to 30 minutes. Drain and plant.

Grasses (Ornamental in Non-Pastured Areas Only): *Leaf Spot, Damping-Off, Brown Patch, Melting Out, Seedling Blights, and Brown Spot on St. Augustine Grass.* Use 2 pounds. Apply 10 gallons spray per 1,000 square feet. Begin when growth starts in spring. Repeat at 7 to 14 day intervals throughout season. Do not graze treated areas or feed clippings to livestock.

Grasses (Lawn Seedbeds): *Damping-Off and other soil borne diseases.* Use 1/4 to 1/3 pound per 1,000 square feet or 2 pounds in 100 gallons water using 15 gallons spray per 1,000 square feet. Cultivate into upper 3 to 4 inches before planting.

Roses: *Black Spot, Botrytis Blossom Blight.* Use 2 pounds. Begin at first growth or first sign of disease. Repeat at 7 to 14 day intervals, and more frequently during frequent rains and heavy dews.

Soil & Greenhouse Bench Treatment: Preplanting for *Damping-Off* and *Root Rot* diseases on seedlings or transplants of roses (and other shrubs, trees, flowers). Lawn seedbeds, vegetables (such as beans, celery, crucifers, eggplant, peas, peppers, tomatoes). Use 2 pounds per 100 gallons water at rate of 15 gallons per 1,000 square feet. Cultivate into upper 3 to 4 inches of soil before planting.

799: 5-80

Occidental Chemical Company

P. O. Box 163, Lathrop, California 95330

P. C. 7 x 1185, Houston, Texas 77001

DISCLAIMER OF WARRANTIES Seller warrants that the chemical composition of this product conforms to the chemical description given on this label. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES AND REPRESENTATIONS EXPRESSED, IMPLIED, OR STATUTORY, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. Timing, rate and method of application, weather and crop conditions, mixtures with chemicals not specifically recommended on this label or an accompanying written recommendation, are beyond the control of seller. Buyer assumes all risks of storage and handling of this material not in strict accordance with all actions given herewith. Buyer further agrees, in the event damages arising from the use of this product to accept the full discharge of seller's liability for such damages and a refund of the purchase price of the product, at buyer's option, as full discharge of seller's liability. Seller is authorized to make any other warranty guarantee directions concerning this product, and no such warranties, guarantees or directions shall be valid or binding upon seller.

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