

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

DCT 14 1999

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Ms. Nancy R. Robey AGtrol International 7322 Southwest Freeway, Suite 1400 Houston, Texas 77074

Dear Ms. Robey:

Subject: Change primary brand name to CHAMP DP and Label revision to add Phomopsis on grapes, the plant Purple Osier Willow, scab on Apples and add Persimmon and replace the words "long sleeved shirt and long pants" with "coveralls" in the REI section.

EPA Registration 55146-57, CHAMP DP Your application dated July 12, 1999

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is acceptable provided the following changes are made:

- 1. Change overalls to coveralls in the AGRICULTURAL USE REQUIREMENTS box.
- 2. For TURFGRASS we recommend that a statement be added to clarify where the product can be used. Example: "For algae control in turfgrass on sodfarms, golf courses, cemeteries, home lawns."

Submit one (1) copy of your final printed labeling before you release the product for shipment.

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

Sincerely yours,

Cynthia Giles-Parker Product Manager 22

Fungicide Branch

Registration Division (7505C)

Enclosure:

CHAMP®DP Dry Prill

AGRICULTURAL FUNGICIDE/BACTERICIDE

ACTIVE INGREDIENT:		
COPPER HYDROXIDE		57.6%
OTHER INGREDIENTS		42.4%
	(METALLIC COPPER EQUIVALENT 37.5%)	

DANGER – PELIGRO

SI USTED NO ENTIENDE LA ETIQUETA, BUSQUE A ALGUIEN PARA QUE SE LA EXPLIQUE A USTED EN DETALLE. (IF YOU DO NOT UNDERSTAND THIS LABEL, FIND SOMEONE TO EXPLAIN IT TO YOU IN DETAIL.)

STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

IF SWALLOWED: Drink promptly a large quantity of milk, egg white, gelatin solution, or if these are not available, large quantities of water. Get medical attention. Avoid alcohol. Note to Physician: Probable mucosal damage may contraindicate use of gastric lavage.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

SEE BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

AGTROL INTERNATIONAL Houston, Texas 77074

EPA Reg. No. 55146-57 EPA Est. No.

ACCEPTED with COMMENTS
In EPA Letter Dateds

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

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER- PELIGRO

Corrosive. Causes irreversible eye damage. Do not get in eyes. Wear protective eyewear (goggles, face shield or safety glasses). Harmful if absorbed through skin, swallowed or inhaled. Avoid contact with skin or clothing. Avoid breathing dust, vapor or spray mist. Remove contaminated clothing and wash clothing before reuse. Wash thoroughly with soap and water after handling.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- a) long-sleeved shirt and long pants
- b) waterproof gloves
- c) shoes plus socks
- d) protective eyewear.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS STATEMENT

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

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
- After each day of use, wash in detergent and hot water any personal clothing worn while using this
 product.

ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wachwaters. This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water. Drift and runoif from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites.

STORAGE AND DISPOSAL

STORAGE: Do not contaminate water, food, or feed by storage or disposal. Store in a cool, dry place.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest Environmental Protection Agency regional office for guidance.

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

DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours provided the following instructions are followed:

For at least 7 days following application an eye-flush container, designed specifically for flushing eyes, must be available at the WPS decontamination site for workers entering the area treated with copper hydroxide.

Notify workers of the application by warning them orally that residues in the treated areas may be highly irritating to their eyes and to take precautions such as refraining from rubbing their eyes and if they get residues in their eyes they should immediately flush their eyes using the eye-flush container.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is overalls, waterproof gloves, shoes plus socks and protective eyewear.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides 40 CFR part 170. The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses. Keep unprotected persons out of treated area until sprays have dried.

FROST INJURY PROTECTION: Bacterial Ice Nucleation Inhibitor: Application of Champ DP® made to all crops listed on this label at rates and stages of growth indicated below just prior to anticipated frost conditions will afford control of ice nucleating bacteria (Pseudomonas Syringae, Erwina Herbicola and Pseudomonas Fluorescens) and may therefore provide protection against light frost. Use higher rates when bacterial infection is severe. Not recommended in those geographical areas where weather conditions favor severe frost.

GENERAL INSTRUCTIONS

CHAMP DP can be used with all types of spraying equipment. The volume per acre will differ depending on the specific crop and the equipment used. Use CHAMP DP as per instructions on this label.

APPLYING SPRAY MIXTURE: The directions given under each crop are for applying dilute spray mixture unless otherwise shown. The amount of CHAMP DP applied per acre in concentrate and aerial sprays should be the same as the amount applied per acre in dilute sprays. The required amount should be mixed with enough water to thoroughly cover the crop with spray mixture and is to be applied to the point of "runoff". The volume of water needed will depend upon the spray equipment used and the size of the crop being sprayed. Read the information below about applying dilute, concentrate, and aerial sprays.

APPLYING DILUTE HIGH-VOLUME SPRAYS: On vegetable crops use 25 to 100 gallons of spray mixture per acre; on fruit and nut trees use 250 to 800 gallons per acre. As much as 1,500 gallons per acre may be needed for large trees.

APPLYING CONCENTRATE GROUND SPRAYS: On vegetable crops use 5 to 20 gallons of spray mixture per acre; on fruit and nut trees use 25 to 250 gallons per acre.

APPLYING AERIAL SPRAYS: Use 3 to 30 gallons per acre.

NOTE: This product may be reactive on metal and masonry surfaces such as galvanized roofing. Avoid contact with metal surfaces. Do not spray on cars, houses, lawn furniture, etc.

NOTE: Do not tank mix CHAMP DP with Aliette® fungicide unless appropriate precautions have been taken to buffer the spray solution or severe phytotoxicity may result.

NOTE: CHAMP DP should not be applied in a spray solution having a pH of less than 6.5 as phytotoxicity may occur.

NOTE: Environmental conditions such as extended periods of wet weather, acid rain, etc. which alter the pH of the leaf surface may affect the performance of CHAMP DP resulting in possible phytotoxicity or loss of effectiveness.

NOTE: Reduced effect on pests or crop injury may result from tank mixing agricultural chemicals especially where several products are involved. Unless recommended on this label or by state/local expert, or the user has small scale direct experience, tank mixing should not be undertaken.

NOTE: Agricultural chemicals may be reactive with soft metals and some synthetic materials such as plastics, rubbers, etc. When working with equipment containing these materials the equipment must be thoroughly flushed with clean water after each day's use.

CHEMIGATION: Apply this product only through center pivot, motorized lateral move, end tow, traveler, big gun, plastic solid set, or plastic hand move sprinkler imigation systems that do not contain aluminum components. Do not apply this product through any other type of irrigation system unless specifically set forth above or as may be specified in the future as additional systems not containing aluminum components come into use. Crop injury, lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. For nonpublic water sprinkler chemigation systems, the system must contain a functional checkvalve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, nominally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. For non-public water sprinkler chemigation systems, the irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when windspeed favors drift beyond the area intended for treatment.

It is recommended that the pesticide supply tank be equipped with a means for continuous agitation either by recirculation or a mechanical agitator. Charge the supply tank with the appropriate amount of water and add the pesticide slowly followed by any sticker-spreaders, insecticides, nutrients, etc. Observe all cautions and limitations on the label of all products used in the mixtures. For fixed position irrigation systems such as center pivot, big gun, etc., the pesticide should be applied towards the end of the irrigation period. Exact timing will depend on the desired pesticide application rate and calibration of the system. For moving systems, the pesticide should be applied continuously. In all cases, thorough coverage of the crop should be achieved.

"Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps businesses, day care centers, hospitals inpatient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses."

"Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period."

"All words shall consist of letters at least 2.5 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER."

This sign is in addition to any sign posted to comply with the Worker Protection Standard.

NOTE: IRRIGATION SYSTEMS AND ASSOCIATED PIPING SHOULD BE THOROUGHLY FLUSHED WITH CLEAN WATER FOLLOWING APPLICATION OF COPPER BASED FUNGICIDES. FLUSHING MUST BE DONE IN A MANNER WHICH WILL NOT WASH THE PRODUCT FROM THE FOLIAGE AND REDUCE DISEASE CONTROL.

No additional surfactants are needed unless specified for an individual crop. Add CHAMP DP to the spray tank followed by any stickerspreaders, insecticides, nutrients etc. Observe all cautions and limitations on the label of all products used in mixtures. The specific instructions given on this label are based on general applications and circumstances. The recommendations of the State Agricultural Extension Service should be closely followed as to timing, frequency and number of sprays per season.

NOTE: APPLICATION TO PLANT SURFACES SPRAYED WITH AND WHICH HAVE LOW pH CHEMICAL RESIDUE MAY ALSO RESULT IN CROP INJURY.

BERRIES, VINES AND HOPS

BLACKBERRY, (Santiam, Logans, Boysen, Marion, Aurora, Cascade, Chehalem and Thornless Evergreen), Leaf Spot, Cane Spot, Purple Blotch, Anthracnose, Yellow Rust, and Pseudomonas Blight. Apply delayed dormant spray after training in spring at 2.67 pounds per acre. Make fall spray application after harvest. Add 1 quart of crop oil per acre. Leaf Spot, Cane Spot, Purple Blotch, Anthracnose, and Yellow Rust, apply when leaf buds begin to open and repeat when flower buds show white at 1.4 pounds per acre. Add 1 quart of crop oil per acre.

NOTE: Crop injury may occur if applied to foliage under certain conditions such as hot or prolonged moist periods. Discontinue applications if signs of crop injury appear.

BLUEBERRY, Bacterial Canker. Apply at 3.75 to 4.67 pounds per acre. Make first application before the fall rains, preferably the first week in October and a second application four weeks later. (EXCEPT CALIFORNIA)

CRANBERRY, *Fruit Rot.* Apply at 5.6 pounds per acre beginning in late bloom. One or two additional applications made at 10 to 14 day intervals may be required, depending on disease pressure. *Rose Bloom.* Apply three sprays of 5.6 pounds per acre CHAMP DP at 10 to 14 day intervals as soon as symptoms are observed. *Bacterial Stem Canker.* Apply 5.6 pounds per acre post harvest and again in the spring before bud burst. One or two additional applications at 10 to 14 day intervals may be require depending on disease severity. *Tip Blight (Monilinia), Stem Blight, Leaf Blight, Red Leaf Spot.* Apply at 5.6 pounds per acre as a delayed dormant spray in the spring. Repeat at 10 to 14 day intervals as needed through pre-bloom. *Upright Dieback.* Apply at 5.3 pounds per acre as a prebloom application. A second application can be made 10 to 14 days later if required.

CURRANT & GOOSEBERRY, Anthracnose, Leaf Spot. Make three applications at 7 pounds per acre, starting after harvest, before bloom and after petal fall. Continue on a 10 to 14 day schedule during wet conditions in the spring.

GRAPE, Black Rot, Phomopsis, Powdery Mildew and Downy Mildew. Apply 1.33 to 2.67 pounds per acre. Begin application at bud break with additional applications made throughout the season and post-harvest period depending upon disease severity. (NOTE: Slight to severe foliage injury may occur in copper-sensitive varieties such as Concord, Delaware, Niagara and Rosette. Use lower rate of CHAMP DP and test for sensitivity when treating these varieties or others to be sensitive to copper. Hydrated lime may be added at a rate of up to 1/2 lb. per 100 gallons of spray solution to decrease the severity of phytotoxicity. Mix CHAMP DP and water first before adding lime or incompatibility may occur.)

HOPS, Downy Mildew. Apply 1.33 pounds per acre as a fungicide crown treatment after pruning, but before training. After training, additional fungicide treatments are needed at about 10 day intervals.

NOTE: Discontinue use 2 weeks before harvest.

RASPBERRY, Leaf and Cane Spot, Purple Blotch, Anthracnose, Yellow Rust, Pseudomonas Blight. Apply at 2.67 pounds per acre as a delayed dormant spray after training in the spring. Make a fall application after harvest. Add one quart of crop oil per acre. Leaf and Cane Spot, Purple Blotch, Anthracnose, Yellow Rust. Apply at 1.4 pounds per acre when leaf buds begin to open and repeat when flower buds show white. Add one quart of crop oil per acre. (EXCEPT CALIFORNIA)

NOTE: Crop injury may occur if applied to foliage under certain conditions such as hot or prolonged moist periods. Discontinue applications if signs of crop injury appear.

STRAWBERRY, Leaf Spot & Leaf Blight. Apply 1.33 to 2.0 pounds per acre. Begin application when plants are established and continue on a weekly schedule throughout season.

NOTE: Discontinue applications if signs of phytotoxicity appear.

FIELD CROPS

ALFALFA, Cercospora & Leptosphaerulina Leaf Spots. Apply 1.33 pounds per acre 10 to14 days before each harvest or earlier if disease threatens.

NOTE: Spray injury may occur with sensitive varieties such as Lahontan.

PEANUT, Cercospora Leaf Spot. Begin spraying 35 to 40 days after planting or when disease symptoms first appear. Apply at 1 to 2 pounds per acre. Continue applications at 10 to 14 day intervals. One to two quarts of six pounds per gallon flowable sulfur may be added. Reduce spray interval to 7 days during humid weather. Use higher rates when conditions favor disease.

SUGAR BEET, Cercospora Leaf Spot. Start spray when disease threatens and continue for 4 to 5 applications. Spray every 10 to 14 days depending on weather conditions at 1.33 to 3.33 pounds per acre depending on disease severity.

WHEAT, BARLEY, OATS, Septoria Leaf Blotch & Helminthosporum Spot Blotch. Apply 1 to 1.33 pounds per acre. Make first application by early heading and follow with second application 10 days later or as necessary. Use higher rates when conditions favor disease.

ORNAMENTALS

PECAN, LIVE OAK, *Ball Moss* (Texas and Florida). Apply at 5.5 pounds per 100 gallons of water, in spring after heavy rain, using 1.5 gallons of spray per foot of tree height. Make sure to wet tufts thoroughly. A second application may be required after 12 months.

NOTE: CHAMP DP maybe injurious to ornamentals grown under live oaks.

PHILODENDRON, *Bacterial Leaf Spot.* Apply weekly before disease appears at 1 pound of CHAMP DP per 100 gallons of water.

SYCAMORE, *Anthracnose*. Make two applications using 1.33 to 2 pounds per 100 gallons as a full cover spray. Make first application at bud crack and second application 7 - 14 days later at 10% leaf expansion.

For control of bacterial and fungal diseases on foliage, flowers, and stems of ornamentals grown in **Greenhouses, Shadehouses, Fields and Nurseries** (container, bench or bed-grown), apply CHAMP DP at .67 pound per 100 gallons as a full cover spray beginning at first sign of disease. Repeat at intervals of 7 to 14 days (or shorter) depending on rainfall and disease severity. Due to the large number of species, widely varying growth conditions, and varieties of ornamentals and nursery plants it is impossible to test every one

for sensitivity to CHAMP DP. The user should apply the recommended rate of CHAMP DP in a small area and check for any symptoms of phytotoxicity in 7 to 10 days prior to large-scale application. Do not tank mix with Aliette® fungicide without buffering the spray solution.

One half tablespoon of CHAMP DP per gallon of water is equivalent to 0.9 pounds per 100 gallons.

AGLAONEMA, Bacterial Leaf Spot

ALTHEA (Rose of Sharon), Bacterial Leaf Spot

ARALIA, Xanthomonas & Cercospora Leaf Spots, Alternaria

ARBORVITAE, Alternaria Twig Blight, Cercospora Leaf Spot

AZALEA, (a) Cercospora Leaf Spot, Botrytis Blight, Phytophthora Dieback, Powdery Mildew

BEGONIA, Bacterial Leaf Spot (Xanthomonas sp., Erwinia sp., Pseudomonas sp.)

BOSTON FERN, Bacterial Leaf Spot

BOUGAINVILLEA, Anthracnose, Bacterial Leaf Spot

BULBS (EASTER LILY (b), TULIP), Botrytis Blight, Anthracnose

CAMELIA, Anthracnose, Bacterial Leaf Spot

CAMPHOR TREE, Pseudomonas Leaf Spot

CANNA, Pseudomonas Leaf Spot

CARNATION, (a) Alternaria Blight, Pseudomonas Leaf Spot & Botrytis Blight.

CHINEASE TALLOW TREE, Bacterial Leaf Spot (Xanthomonas sp., Pseudomonas sp.)

CHRYSANTHEMUM, (a) Septoria Leaf Spot, Botrytis Blight

COTONEASTER, Botrytis Blight

DAHLIA, Alternaria Leaf Spot, Cercospora Leaf Spot, Botrytis Grey Mold

DATE PALM, Pestalotia Leaf Spot

DIANTHUS, Bacterial Spot, Bacterial Soft Rot

DOGWOOD, Anthracnose

DRACAENA, Bacterial Leaf Spot

DUMB CANE, Bacterial Leaf Spot

DUSTY MILLER, Bacterial Leaf Spot (Pseudomonas cichorii)

ECHINACEA, Botrytis Blight

ELM (Drake), Xanthomonas Leaf Spot

EUONYMUS, Botrytis Blight, Anthracnose

EUROPEAN FAN PALM, Pestalotia Leaf Spot

GARDENIA, Alternaria Leaf Spot, Cercospora Leaf Spot, Botrytis Bud Rot

GERANIUM, Alternaria Leaf Spot, Cercospora Leaf Spot, Botrytis Grey Mold

GLADIOLUS, Alternaria Leaf Spot, Botrytis Grey Mold, Bacterial Leaf Blight, Botrytis Blight, Anthracnose

GOLDEN RAIN TREE, Alternaria Leaf Spot, Botrytis Grey Mold, Bacterial Leaf Blight

GRAPE IVY, Bacterial Leaf Spot

HIBISCUS (d), Bacterial Leaf Spot

HOLLY FERN, Pseudomonas Leaf Spot

HONEY LOCUST, Bacterial Leaf Spot

IMPATIENS, Bacterial Leaf Spot

INDIA HAWTHORN (c), Anthracnose, Entomosporium Leaf Spot

IRIS, Bacterial Leaf Spot

IVY (English, Algerian) (a) Xanthomonas Leaf Spot

IXORA, Xanthomonas Leaf Spot

JUNIPER (Eastern Red Cedar), Anthracnose

LANTANA, Bacterial Leaf Spot

LILAC, Cercospora Leaf Spot

LOBLOLLY BAY, Anthracnose

LOQUAT, Entomosporium maculata, colletotrichum sp.

MAGNOLIA (Southern), Anthracnose, Bacterial Leaf Spot, Algal Leaf Spot

MAGNOLIA (Sweet Bay), Anthracnose

MAGNOLIA, Bacterial Leaf Spot

MANDEVILLAS, Anthracnose

MARIGOLD, Alternaria Leaf Spot, Botrytis Leaf Rot, Flower Rot, Cercospora Leaf Spot

MULBERRY CONTORTED, Bacterial Leaf Spot

MULBERRY, WEEPING, Bacterial Leaf Spot

NEPHTHYTIS, Bacterial Leaf Spot

OLEANDER, Bacterial Leaf Spot, Fungal Leaf Spot

OAK, LAUREL, Algal Leaf Spot (Cephaleuros virescens)

PACHYSANDRA, Volutella Leaf Blight

PANSY, Downey Mildew

PARLOR PALM, Bacterial Leaf Spot

PEAR (flowering), Fire Blight, Leaf Spot

PENTAS (Egyptian Star), Bacterial Leaf Spot (Xanthomonas sp.)

PEONY, Botrytis Blight

PERIWINKLE, Phomopsis Stem Blight

PHLOX, Alternaria Leaf Spot

PHOTINIA (Red Tip, Red Leaf), Anthracnose, Entomosporium

PISTACHIO, Anthracnose

PLANTAIN LILY, Bacterial Leaf Spot

POTHOS, Bacterial Leaf Spot

POWDER PUFF PLANT, Bacterial Leaf Spot

PURPLE OSIER WILLOW, Anthracnose

PYRACANTHA, Fireblight, Scab

QUEEN PALM, Exosporium Leaf Spot, Phytophthora Bud Rot

RHODODENDRON, Atternaria Flower Spot

ROSE, (a) Powdery Mildew, Black Spot

SNAPDRAGON, Anthracnose, Dieback, Downey Mildew

SPATHE FLOWER, Bacterial Leaf Spot

TATARIAN HONEYSUCKLE, Bacterial Leaf Spot

UMBRELLA TREE, Bacterial Leaf Spot

VERBENA, Xanthomonas Leaf Spot

VIBURNUM, Anthracnose

WASHINGTON PALM, Pestalotia Leaf Spot

WEEPING FIG, Bacterial Leaf Spot

WEEPING WILLOW, Anthracnose

YUCCA (ADAMS NEEDLE), Cercospora & Septoria Leaf Spots

- (a) On some varieties a discoloration may occur on foliage or blooms. To prevent residues on commercial plants, do not spray just before selling season.
- (b) Apply 2.0 to 3.5 pounds of CHAMP DP in 20 to 100 gallons of water per acre.
- (c) For India Hawthorn use 1.4 to 2.75 pounds per 100 gallons or .75 to 1.5 level tablespoons per gallon.
- (d) Hibiscus Do not apply to plants in flower.

TREE CROPS

ALMOND, APRICOT, CHERRY, PLUM, PRUNE, *Coryneum Blight* (Stigmina carpophila) [Shot Hole], Bacterial Canker, *Blossom Brown Rot, Dead Bud* (Pseudomonas syringae), *Bacterial Blast* (Pseudomonas). Use 5.33 to 8 pounds CHAMP DP per acre as a dormant application before foliage buds swell. For **CHERRIES**, where disease is severe, an additional application at leaf fall may be required. **ALMOND ONLY:** For bacterial blast control in sprinkler irrigated orchards or where disease is severe, apply .75 pound per acre post-bloom, at two week intervals or just prior to sprinkling. *Coryneum Blight* (Stigmina carpophila) [Shot Hole], *Blossom Brown Rot*, Early bloom (popcorn) application prior to full bloom apply at 4 to 5.5 lb/A.

NOTE: To avoid plant injury, do not use above rate after full bloom. For blast control in sprinkler imigated orchards or where disease is severe, apply 2 to 4 CHAMP DP sprays or as many as required, at 1 to 2 pounds per acre at 2 week post bloom intervals or just before sprinkling.

NOTE: In sensitive varieties of **ALMONDS**, such as Peerless, Mission, and Neplus slight leaf injury may occur from post bloom spray.

APPLE, Anthracnose, European Canker, Blossom Blast, Shoot Blast (Pseudomonas). Apply before fall rains at 8 to 10.5 pounds per acre. NOTE: Use on yellow varieties may cause discoloration. To avoid, pick before spraying. Fireblight, Scab. Apply at 5.5 to 10.5 pounds per acre. Make application as a full cover spray between silver-tip and green-tip. NOTE: Phytotoxicity may occur from late application. After green-tip apply at .67 pound per acre. Crown or Collar Rot. Mix 2.75 pounds in 100 gallons of water. Apply 4 gallons of suspension as a drench on the lower trunk area of each tree. Apply either in early spring or in fall after harvest each year.

NOTE: Do not use if soil pH is below 5.5 or copper toxicity may result.

AVOCADO, *Anthracnose, Blotch, Scab.* Apply when bloom buds begin to swell at 5.33 to 8 pounds per acre. Continue application at monthly intervals for 5 to 6 applications. Use higher rate when conditions favor disease.

CITRUS, Melanose, Scab, Algal Spot. Apply 2.67 to 8 pounds per acre, depending on disease severity, as a pre-bloom and post-bloom spray. Greasy Spot, Pink Pitting Apply 1.33 to 4 pounds per acre using higher rates when conditions favor disease. Brown Rot. Apply 2.67 to 5.33 pounds per acre beginning in fall and continuing as needed. Apply to skirts of trees to a height of at least 4 feet. Use higher rates when conditions favor disease. NOTE: In California, in areas subject to copper injury, add 1/3 to 1 pound of high quality lime per pound of CHAMP DP. Citrus Canker. (SUPRESSION ONLY), Apply 8 pounds per acre, spraying flushes 7 to 14 days after shoots begin to grow. Young fruit may require an additional application. Number and timing of applications will be dependent on disease pressure. Under heavy disease pressure, each flush of new growth should be sprayed. Alternaria Brown Spot (SUPRESSION ONLY) Apply 5.33 to 6.67 pounds per acre to susceptible varieties on the first flush in the spring and every additional flush. Application to fruit should start after two thirds of the petals have fallen and be repeated at 21-day intervals. Phytophthora Foot Rot. Mix .67 pound of CHAMP DP with 1 gallon of water and paint trunks of trees from the soil surface to the lowest scafflid limbs. Apply in May prior to summer rains and/or in the fall prior to wrapping trees for freeze protection. Treatment serves as protection for up to one year, but does not cure existing infections. Phytophthora Brown Rot, Septonia Spot, apply 2.67 to 5.33 pounds per acre to the entire tree in the fall before or just after the first rain and continue as needed. NOTE: In California in areas subject to copper injury, add one third to one pound of high quality lime per pound of CHAMP DP.

NOTE: Do not use CHAMP DP on Citrus seedlings grown in greenhouses or shadehouses.

CITRUS FIELD NURSERY GROWN, Melanose, Scab, Greasy Spot, Pink Pitting, Brown Rot and Citrus Canker. (SUPRESSION ONLY). Apply 1.33 pounds of CHAMP DP in 100 gallons of water (2.67 to 5.33 pounds per acre) at 28-day intervals.

FILBERT, Bacterial Blight. Apply 10.67 to 16 pounds per acre as a post-harvest spray. In seasons of heavy rainfall, apply another spray when three-fourths of the leaves have dropped. Add 1 pint of superior type oil per 100 gallons of water. Eastern Filbert Blight. Apply 10.67 to 16 pounds per acre in sufficient water to obtain thorough coverage. Make initial application at budswell to budbreak. Additional sprays should be made on a

10 to 14 day interval depending on disease severity or when conditions are conducive for disease development. Add 1 pint of superior type oil per 100 gallons of water.

KIWIFRUIT, Blossom Blight (Bud Rot), Leaf Spot (Phomopsis), Erwinia herbicola, Pseudomonas syringae, Pseudomonas fluorescens. Make two to three applications at 1.33 to 2 pounds per acre during domant season. Do not apply at time of or after leaf emergence.

MACADAMIA, Blossom Blight & Raceme Blight, Anthracnose. Apply 3 to 6 pounds per acre depending on disease pressure in 50 to 300 gallons of water during peak raceme development and bloom periods. For aerial application apply 3 to 6 lbs. per acre in 10 to 30 gallons of water. (EXCEPT CALIFORNIA)

OLIVE (California), *Peacock Spot, Olive Knot.* Make first application at 5.33 to 8 pounds per acre before winter rains fall. A second application in early spring should be made if disease is severe.

PEACH, NECTARINE, Leaf Curl, Coryneum Blight (Shot Hole), Bacterial Canker, Bacterial Blast (Pseudomonas), Bacterial Blight (Xanthomonas). Apply 5.33 to 10.67 pounds per acre after leaf fall as a dormant application. Use the higher rate when rainfall is very heavy and disease pressure is high. May be used with an agricultural spray oil. Blossom Brown Rot, Leaf Curl, Coryneum Blight (Shot Hole). Apply 5.33 to 8 pounds per acre as a full cover spray at pink bud. Application at this time affords some control of Leaf Curl and Coryneum Blight. Bacterial Spot. Apply 5.33 pounds per acre as a dormant spray. As a post-bloom spray, apply 1 pound per acre at first and second cover sprays.

NOTE: Do not apply three weeks prior to harvest. Use only recommended rates. Spotting of leaves and defoliation may occur from use in cover sprays.

PEAR, Fireblight. Apply at .67 pound per acre at 5 day intervals throughout bloom period. Pseudomonas Blight. Apply before fall rains at a rate of 8 to 10.67 pounds per acre and again at dormant before spring growth starts.

NOTE: Excessive dosages may cause fruit russet.

PECAN, Shuck Rot, Kernel Rot (Phytophthora cactorum), Zonate Leaf Spot (Cristulariella pyramidalis) SUPRESSION ONLY. Apply 1.33 to 2.67 pounds per acre at 2 to 4 week intervals when kernel growth begins through shuck opening. Apply in sufficient water to ensure thorough coverage.

PISTACHIO, Botrytis Blight, Botryosphaeria Panicle and Shoot Blight, Septoria Leaf Blight, Late Blight (Alternaria alternata). Apply 2.67 to 5.33 pounds per acre beginning at budswell. Repeat at 14 to 28 day intervals depending on disease conditions. If disease conditions are severe, use the high rate and the short spray interval.

QUINCE, Fire Blight. Apply .67 pounds per acre at 5-day intervals throughout the bloom period. Apply in sufficient water to provide thorough coverage.

WALNUT, Walnut Blight. Apply 5.33 to 8 pounds per acre. Apply first spray at early pre-bloom prior to or when catkins are partially expanded. Make additional applications during bloom and early nutlet stage as needed. Additional applications may be necessary when frequent rainfall occurs.

NOTE: When applied as a dilute spray, 1 pint of summer oil emulsion may be added per 100 gallons of spray. Adequate control may not be obtained when copper tolerant species of Xanthamonas bacteria are present.

TROPICAL CROPS

BANANA, Sigatoka. Apply by air at 1.33 pounds per acre in 3 gallons of water containing 0.5-gallon agricultural oil. Apply on a 14 day schedule throughout the wet season. Apply at 21 day intervals during dry periods. Black Pitting. Apply at 2.67 pounds per 100 gallons directly to the fruit stem and include the basal portion of the leaf crown. Apply during the first and second weeks after fruit emergence.

CACAO, Black Pod. Begin applications at the start of the rainy season and continue while infection conditions persist. Sprays should be made as often as 14 to 21 days in high rainfall areas at varying rates from 1.33 to 5.33 pounds per acre depending on disease severity. For drier areas, where 2 to 4 applications are recommended during critical infection periods and at long intervals, use 4 to 5.67 pounds per acre, according to disease pressure incidence and planting density.

COFFEE, Coffee Berry Disease (Collectotrichum coffeanum). Apply first spray at 4 to 5.33 pounds per acre after flowering and before onset of long rains and then at 21 to 28 days interval until picking. Use higher rates when rainfall is heavy and disease pressure is high. Bacterial Blight (Pseudomonas syringae). Apply 4 to 5.33 pounds per acre. Begin spray program before onset of the long rains and continue throughout the rainy season at 14 to 21 day intervals. The critical time of spraying to control this disease is just before, during, and after flowering(s), especially when coinciding with wet weather. Use the higher rates when rainfall is heavy and disease pressure is high. Leaf Rust (Hemileia vastatrix). Apply 1.33 to 2.67 pounds per acre before the onset of rain and then at 21-day intervals while the rains continue. Use higher rates when rainfall is heavy and disease pressure is high. Iron Spot (Cercospora coffeicola) and Pink Disease (Corticium salmonicolor). Apply 1.33 pounds per acre as a concentrate or dilute spray. Begin treatment at the start of wet season and continue at monthly intervals for three applications.

GUAVA, Anthracnose, Red Algae. Apply 2 pounds per acre beginning just prior to flowering and repeat weekly until just prior to harvest.

LITCHI, Anthracnose. Apply 2 pounds per acre beginning just prior to flowering and repeat weekly until just prior to harvest.

MAMEY SAPOTE, Anthracnose, Algal Leaf Spot. Apply 4 to 5 pounds per acre when conditions favor disease development. Repeat at 14 to 30 day intervals as needed.

MANGO (Florida), Anthracnose. Apply monthly after fruit set until harvest at 5.33 to 6.67 pounds per acre.

PAPAYA, Anthracnose. Apply 2 to 6.67 pounds per acre beginning before disease is expected to appear. Repeat at 10 to 14 day intervals or at 5 to 7 day intervals during periods of heavy rainfall. Use the higher rates when conditions favor disease. The addition of a suitable spreader-sticker may be desirable especially during periods of heavy rains.

PASSION FRUIT, Anthracnose. Apply 4 pounds per acre beginning just prior to flowering and repeat weekly.

SUGAR APPLE (Annona), Anthracnose. Apply 8 pounds per acre beginning just prior to flowering and repeat weekly.

VEGETABLE CROPS

BEAN (dry, green), Brown Spot Bacterial Blight (Halo & Common). For protective sprays, apply first application when plants are six inches high. Apply on 7 to 14 day schedule depending on local conditions. Use .67 to 2 pounds per acre depending on disease severity.

CRUCIFERS, Broccoli, Brussels Sprout, Cabbage, Cauliflower, Kale, (Collard, Mustard and Turnip greens), Black Rot (Xanthomonas), Black Leaf Spot (Alternaria), Downy Mildew. Apply .33 to .67 pound per acre at 7-day intervals after transplants are set in the field. Use higher rate when conditions favor disease.

NOTE: Reddening of older leaves may occur on Broccoli at the higher rate and flecking of wrapper leaves may occur on cabbage.

CUCURBITS, Cantaloupe, Cucumber, Honeydew, Muskmelon, Pumpkin, Squash, and Watermelon Alternaria Leaf Spot, Angular Leaf Spot, Anthracnose, Downy Mildew, Powdery Mildew, Gummy Stem Blight, Watermelon Bacterial Fruit Blotch (SUPPRESSION). Apply at 1.33 pounds per acre beginning when conditions are favorable for disease development and repeat at 5 to 7 day intervals, as needed depending on disease severity.

NOTE: Crop injury may occur from application at shorter intervals. Discontinue use if injury occurs.

CARROT, Alternaria Leaf Spot, Carrot Blight (Cercospora). When disease threatens apply 1.33 pounds per acre at 7 to 14 day intervals depending on disease severity.

CELERY & CELERIAC, Cercospora Early, Septoria Late & Bacterial Blights. Apply as soon as plants are first established in the field at 1.33 pounds per acre, then every 5 to 7 days depending on disease severity and weather.

EGGPLANT, Alternaria Blight, Anthracnose, Phomopsis. Use 1.33 pounds per acre before disease appears. Repeat at 7 to 10 day intervals. (EXCEPT CALIFORNIA)

ENDIVE, **ESCAROLE**, *Downy Mildew*. Apply .67 to 1.33 pounds per acre. Begin treatment when disease first appears and repeat every 7 to 10 days as needed to suppress disease.

GARLIC, LEEK, ONION, *Purple Blotch & Downy Mildew.* Apply at 1.33 pounds per acre when plants are 4 to 6 inches high and repeat at 7 to 10 day intervals. *Bacterial Blight*, apply .67 to 1 pounds per acre.

LETTUCE, *Downy Mildew.* Apply .67 to 1.33 pounds per acre. Begin treatment when disease first appears and repeat every 7 to 10 days as needed to suppress disease.

PEA, *Powdery Mildew*. Begin spray treatment when disease symptoms first appear. Use 1 to 2 pounds per acre according to disease severity. Repeat applications at weekly intervals.

PEPPER, *Bacterial Spot*. When disease threatens, apply 1.33 to 2 pounds per acre in sufficient water for adequate coverage at 5 to 10 day intervals depending on disease severity.

POTATO, Early & Late Blight. Apply at 3 to 10 day intervals starting when plants are 6 inches high. Apply .67 to 1 pound per acre in those locations where disease is light and up to 2 to 2.67 pounds per acre where

disease is severe. Colorado Potato Beetle, (SUPPRESSION ONLY) Application of CHAMP DP at rates and timing recommended for control of early and late blight may provide suppression of the Colorado Potato Beetle.

SPINACH, Anthracnose, Cercospora Leaf Spot, Downy Mildew, White Rust Blue Mold. Apply 1.33 to 2.67 pounds per acre. Begin treatment when disease first appears and repeat every 7 to 10 days as needed to suppress disease.

NOTE: Flecking may occur on spinach leaves.

TABLE BEET, BEET GREENS, Cercospora Leaf Spot. Apply 1.33 to 2.67 pounds per acre when condition favor disease. Repeat treatment at 10 to 14 day intervals as needed. The addition of an agricultural spray oil is recommended.

TOMATO, Early Blight Late Blight. When disease threatens, apply 1.33 to 2 pounds per acre at 7 to 10 day intervals, or as necessary. Bacterial Speck. Apply at 1.33 pounds per acre at 10 to 30 day intervals beginning when the disease threatens. Use more frequent applications when disease pressure is high. Bacterial Spot, Anthracnose, Gray Leaf Mold & Septoria Leaf Spot. When disease threatens, apply 1.33 to 2.67 pounds per acre at 7 to 10 day intervals, more frequently when disease is severe.

WATERCRESS, Cercospora Leaf Spot. Apply 1.33 pounds per acre when plants are established in the field. Repeat at 7 to 14 day intervals up to four applications per crop in at least 50 gallons of water per acre.

MISCELLANEOUS

ATEMOYA, Anthracnose. Apply 2 pounds per acre just prior to flowering and repeat weekly until just prior to harvest.

CARAMBOLA, Anthracnose. Apply 4 pounds per acre just prior to flowering and repeat weekly until just prior to harvest.

CHIVES, Downey Mildew. Apply 1.33 pounds per acre when plants are established in the field. Repeat at 7 to 10 day intervals as needed.

DILL, *Phoma Leaf Spot, Rhizoctonia Foliage Blight.* Apply 1.75 pounds per acre when plants are established in the field. Repeat at 7 to 10 day intervals as needed.

DOUGLAS FIR, Rhabodocline Needlecast. Apply 1.33 pounds per acre at bud break and repeat at 3 to 4 week intervals. Apply in a tank mix with other registered pesticide if disease pressure is moderate to severe.

GINSENG, Alternaria Leaf & Stem Blight. CHAMP DP may be applied at 1.75 pounds per acre as a tankmix with two pounds iprodione 50WP in 100 gallons of water per acre. Begin iprodione 50WP-CHAMP DP applications as soon as plants have emerged in spring. Applications should be repeated every seven days until plants become dormant in fall. Apply fungicides at least eight hours before rain, giving the fungicides time to dry on the plants. Use of a spreader-sticker is advised.

NOTE: Alternaria Leaf & Stem Blight is most severe in humid conditions such as those found in the dense canopies of two-, three- and four-year old ginseng. Complete and thorough spray coverage is required for control.

PARSLEY, *Bacterial Blight (Pseudomonas spp.)* Apply 2 pounds per acre when plants are first established in the field and repeat at 5 to 7 day intervals.

PERSIMMON, Cercospora Leaf Spot. Apply 1 1/3 lbs. per acre beginning in May/June, during leaf flush, and repeat at 14 day intervals throughout the season depending on disease severity.

TURFGRASS

Apply 0.9 pound of CHAMP DP per 1,000 square feet in 5 gallons of water to control algae. CHAMP DP may be used alone or in combination with other registered fungicides as a maintenance spray.

NOTE: Phytotoxicity may occur depending upon varietal differences. If injury occurs discontinue use. Do not apply in spray solutions with a pH of less than 6.5.

GREENHOUSE AND SHADEHOUSE CROPS

CHAMP DP may be used in greenhouses and shadehouses to control diseases on crops listed on this label. Specific directions are provided below for certain crops and the grower should be aware that the sensitivity of crops grown under such conditions differ greatly from field conditions. The user must determine if CHAMP DP can be used safely prior to commercial application by testing a small area and observing the results for 7 to 10 days.

One level tablespoon of CHAMP DP per 1,000 square feet is equivalent to 0.9 pound per acre. Begin application at first sign of disease and repeat at 7 to 14 day intervals as needed.

CUCUMBER, Angular Leaf Spot, Downey Mildew. Apply 1.25 to 1.5 tablespoons weekly when plants begin to vine.

EGGPLANT, Alternaria Blight, Anthracnose, Phomopsis. Apply 1.5 tablespoons at first sign of disease and repeat at 7 to 14 day intervals as needed.

PEPPER, *Bacterial Spot.* Apply 1.5 to 2.25 tablespoons when conditions first favor disease and at 5 to 10 day intervals as needed.

TOMATO, Anthracnose, Bacterial Speck, Bacterial Spot, Early Blight, Grey Leaf Mold, Late Blight, Septoria Leaf Spot. Apply 1.5 to 2.25 tablespoons when conditions first favor disease and at 7 to 10 day intervals as needed.

NOTE: Do not use CHAMP DP on Citrus seedlings grown in greenhouses or shadehouses.

WARRANTY STATEMENT

AGTROL INTERNATIONAL warrants that the product conforms to the chemical description on the label and is reasonably fit for the purposes set forth on the label when used according to directions under normal use conditions. THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. This warranty does not extend to the handling or use of this product contrary to label instructions or under abnormal conditions or under conditions not reasonably foreseeable to seller and buyer assumes all risk of any such use.

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