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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
1401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg.
Number:
5905-527

Date of Issuance:
APR 12 1996

NOTICE OF PESTICIDE:
☒ Registration
☐ Reregistration

(under FIFRA, as amended)

Term of Issuance:
Conditional

Name of Pesticide Product:
Chlorothalonil 90D

Name and Address of Registrant (include ZIP Code):

Dr. Beverly Neale
Helena Chemical Company
6075 Poplar Avenue, Suite 500
Memphis, TN 38119

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

2. Make the following label changes:

- a. Revise the EPA Registration Number to read, "EPA Reg. No. 5905-527".
- b. In the CONDITIONS OF SALE - LIMITED WARRANTY section, change the second sentence of the first paragraph to the following language (to change "Setre" to "Helena"):

Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions, the failure to follow the label directions, or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller.

Signature of Approving Official:

Theresa A. Stone

Date:

04/12/96

3. Submit two copies of the revised final printed label for the record.

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

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

If you have any questions, please contact Tobi Colvin-Snyder of my staff at 703-305-7381.

Sincerely yours,

Theresa A. Stowe

Theresa A. Stowe
Acting Team Leader (22)
Fungicide-Herbicide Branch
Registration Division (7505C)

3047

CHLOROTHALONIL 90D

AGRICULTURAL FUNGICIDE

(90% Water Dispersible Granules)

ACTIVE INGREDIENT:

Chlorothalonil (tetrachloroisophthalonitrile) 90.0%

INERT INGREDIENT: 10.0%

TOTAL 100.0%

ACCEPTED

APR 12 1996

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 5905-567

KEEP OUT OF REACH OF CHILDREN

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 the label, find someone to explain it to you in detail.)

STATEMENT OF PRACTICAL TREATMENT

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

IF SWALLOWED: Call a physician or poison control center. Do not induce vomiting. Drink promptly a large quantity of milk, egg white, gelatin solution, or, if these are not available, large quantities of water. Avoid alcohol.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

EPA REG. NO. 5905-
EPA EST. NO.

NET CONTENTS:

MANUFACTURED BY
HELENA CHEMICAL COMPANY
MEMPHIS, TN 38119

4017

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear: long-sleeved shirt and long pants, waterproof gloves, shoes plus socks, protective eyewear, and dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).

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 the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

This product is toxic to fish, aquatic invertebrates, and marine/estuarine organisms. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Apply only to areas specified on label. Do not contaminate water by disposal of equipment washwaters.

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 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 48 hours.

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

- Coveralls
- Waterproof gloves
- Shoes Plus Socks
- Protective Eyewear

STORAGE AND DISPOSAL

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

STORAGE: Store in a dry place.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide spray, 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 EPA Regional Office for guidance.

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

GENERAL INFORMATION

CHLOROTHALONIL 90D is an excellent fungicide when used according to label directions for control of a broad spectrum of plant diseases.

CHLOROTHALONIL 90D can be used effectively in dilute or concentrate sprays. Thorough, uniform coverage is essential for disease control. Coverage may be enhanced by adding SIJREFIX* spreader-sticker spray adjuvant.

Do not use on greenhouse-grown crops.

Do not combine in the spray tank with pesticides, surfactants, or fertilizers, unless your prior use has shown the combination physically compatible, effective, and noninjurious under your conditions of use. **Do not** combine with Dipel** 4L, Triton*** AG-98, or Triton B-1956 as phytotoxicity may result from the combination when applied to some crops on this label.

Dosage rates on this label indicate pounds of **CHLOROTHALONIL 90D** per acre, unless otherwise stated. Under conditions favoring disease development, the high rate specified and shortest application interval should be used.

The required amount of product should be added slowly into the spray tank during filling. With concentrate sprays, pre-mix the required amount in a clean container and add to the spray tank as it is being filled. Keep agitator running when filling spray tank and during spray operations.

*SURFIX is a trademark of Helena Chemical Company. **Dipel is a registered trademark of Abbott Laboratories. ***Triton AG-98 and Triton B-1956 are trademarks of Rohm and Haas Company.

APPLICATION AND CALIBRATION TECHNIQUES FOR SPRINKLER IRRIGATION

Apply this product only through center pivot, motorized lateral move, traveling gun, solid set or portable (wheel move, side roll, end tow, or hand move) irrigation system(s). **Do not** apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

Do not apply this product through irrigation systems connected to a public water system. 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 per year.

Controls for both irrigation water and pesticide injection systems must be functionally interlocked, so as to automatically terminate pesticide injection when the irrigation water pump stops. A person knowledgeable of the irrigation system and responsible for its operation shall be present so as to discontinue pesticide injection and make necessary adjustments, should the need arise.

The irrigation water pipeline must be fitted with a functional, automatic, quick-closing check valve to prevent the flow of treated irrigation water back toward the water source. The pipeline must also be fitted with a vacuum relief valve and low pressure drain, located between the irrigation water pump and the check valve, to prevent back-siphoning of treated irrigation water into the water source.

Always inject CHLOROTHALONIL 90D into irrigation water after it discharges from the

irrigation pump and after it passes through the check valve. Never inject pesticides into the intake line on the suction side of the pump.

Pesticide injection equipment must be fitted with a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump. Interlock this valve to the power system, so as to prevent fluid from being withdrawn from the chemical supply tank when the irrigation system is either automatically or manually turned off.

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 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.

Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur. Do not apply when wind speed favors drift beyond the area intended for treatment.

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, in-patient 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.

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. These signs are in addition to any sign posted to comply with the Worker Protection Standard.

All words shall consist of letters at least 2-1/2 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**.

CHLOROTHALONIL 90D may be used through two basic types of sprinkler irrigation systems as outlined in Sections A and B below. Determine which type of system is in place, then refer to the appropriate directions provided for each type.

A. Center Pivot, Motorized Lateral Move, and Traveling Gun Irrigation Equipment

For injection of pesticides, these continuously moving systems must use a positive displacement injection pump, of either diaphragm or piston type, constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock and capable of injection at pressures approximately 2-3 times those encountered within the irrigation water line. Venturi applicator units cannot be used on these systems.

Fill chemical supply tank of injection equipment with water. Operate system for one complete revolution or run across the field, measuring time required, amount of water injected, and acreage covered. Thoroughly mix recommended amount of **CHLOROTHALONIL 90D** for acreage to be covered into the same amount of water used during calibration and inject into system continuously for one revolution or run. Mixture in the chemical supply tank must be continuously agitated during the injection run. Shut off injection equipment after one revolution or run, but continue to operate irrigation system until product has been cleared from last sprinkler head.

B. Solid Set and Portable (Wheel Move, Side Roll, End Tow, or Hand Move) Irrigation Equipment

With stationary systems, an effectively designed in-line venturi applicator unit is preferred which is constructed of materials that are compatible with pesticides; however, a positive-displacement pump can also be used.

Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over a thirty to forty-five minute period. Mix desired amount of product for acreage to be covered with water so that the total mixture plus water in the injection tank is equal to the quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. Agitation is recommended. **CHLOROTHALONIL 90D** can be injected at the beginning or end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is completed and continue to operate irrigation system until product has been cleared from last sprinkler head.

FIELD AND ROW CROPS

Apply in sufficient water to obtain adequate coverage of foliage. Gallonage to be used will vary with crop and amount of plant growth. Spray volume usually will range from 20 to 150 gallons per acre (200 to 1400 liters per hectare) for dilute sprays and 5 to 10 gallons per acre (50 to 100 liters per hectare) for concentrate ground sprays and aircraft applications. Both ground and aircraft methods of application are recommended unless specific directions are given for a crop. Application through sprinkler irrigation systems is not recommended unless specific directions are given for a crop. See application and calibration instruction below.

CROP: Bean (Snap)

DISEASE: Rust

RATE PER ACRE: 1-1/8 to 2-1/2 lbs.

DISEASE: Botrytis blight (gray mold)

RATE PER ACRE: 2-1/2 lbs.

APPLICATION DIRECTIONS: Use in sufficient water to obtain adequate coverage. Begin applications during early bloom stage or when disease first threatens and repeat at weekly intervals or as necessary to maintain control. **Do not** apply within 7 days of harvest. **Do not** graze treated areas or feed treated plant parts to livestock.

CROP: Beans (Dry), Navy, Pinto, Kidney, Lima, Blackeye

DISEASES: Rust, Anthracnose, Downy mildew, Cercospora leafspot (blackeye only)

RATE PER ACRE: 1-1/8 to 1-3/4 lbs.

APPLICATION DIRECTIONS: Use in sufficient water to obtain adequate coverage. Begin applications during early bloom stage and repeat at 7 to 10 day intervals. For use only on beans harvested dry with pods removed. **Do not** apply within 6 weeks before harvest. **Do not** allow livestock to graze in treated areas or feed treated plant parts to livestock.

CROP: Cabbage, Chinese Cabbage (tight-headed varieties only), Cauliflower, Broccoli, Chinese Broccoli, Brussels Sprouts

DISEASES: Alternaria leafspot, Downy mildew

RATE PER ACRE: 1-1/4 lb.

APPLICATION DIRECTIONS: Use in sufficient water to obtain adequate coverage. Begin applications after transplants are set in field, or shortly after emergence of field-seeded crop, or when conditions favor disease development. Repeat at 7 to 10 day intervals or as necessary to maintain control. **Do not** apply within 7 days of harvest to Chinese cabbage or Chinese broccoli.

DISEASES: Ring spot (California only)

RATE PER ACRE: 1-1/2 lbs.

APPLICATION DIRECTIONS: For field-seeded brussels sprouts, begin applications at time of early sprout development or when conditions favor disease development. Repeat at 7 to 10 day intervals or as necessary to maintain control.

CROP: Carrot

DISEASES: Cercospora (Early) blight, Alternaria (Late) blight

RATE PER ACRE: 1-1/4 to 1-1/2 lbs.

APPLICATION DIRECTIONS: Use in sufficient water to obtain adequate coverage. Start applications when disease threatens and repeat at 7 to 10 day intervals or as necessary to maintain control. May be applied through sprinkler irrigation equipment. See calibration directions preceding this section.

CROP: Celery

DISEASES: Cercospora (Early) blight, Septoria (Late) blight

RATE PER ACRE: 7/8 to 1-1/4 lbs.

DISEASE: Basal stalk rot (*Rhizoctonia solani*)

RATE PER ACRE: 1-3/4 to 2-1/2 lbs.

DISEASE: Pink rot (suppression)

RATE PER ACRE: 2-1/2 lbs.

APPLICATION DIRECTIONS: Use 7/8 to 1-1/4 lbs. per acre on a 3 to 5 day spray schedule or 1-3/4 to 2-1/2 lbs. per acre on a 7 day schedule. Start applications when transplants are set in the field. Apply in sufficient water to obtain adequate coverage. **Do not** apply within 7 days of harvest. May be applied through sprinkler irrigation equipment. See calibration directions preceding this section.

DISEASES: Early blight, Late blight

RATE PER ACRE: 1-1/4 to 1-1/2 lbs. per 100 gal.

APPLICATION DIRECTIONS: For celery seedbeds, apply 125 gallons per acre twice weekly or as needed to maintain control. Start applications shortly after crop

emergence. Use the higher rate under severe disease conditions.

CROP: Corn (sweet), Corn grown for seed

DISEASES: Helminthosporium leaf blights, Rust

RATE PER ACRE: 5/8 to 1-1/2 lbs.

APPLICATION DIRECTIONS: Use in sufficient water to obtain adequate coverage. Begin applications when conditions favor disease development and repeat at 4 to 7 day intervals or as required to maintain control. Under severe disease conditions, use 1-1/4 to 1-1/2 lbs. per acre. **Do not** apply within 14 days of harvest. **Do not** apply to sweet corn to be processed. **Do not** allow livestock to graze in treated fields. **Do not** ensile treated corn or use as livestock forage.

CROP: Cranberry

DISEASES: Fruit rots, Lophodermium leaf/twig blight

RATE PER ACRE: 3-1/2 to 5-3/4 lbs.

APPLICATION DIRECTIONS: Apply at early bloom and repeat at 10 to 14 day intervals. Under severe disease conditions, use the 5-3/4 lb/acre rate on a 10 day schedule. **Do not** apply more than 3 times per season, or within 50 days before harvest. **Do not** apply to bogs when flooded or allow release of irrigation water from bogs for at least 3 days following application.

May be applied through sprinkler irrigation equipment. Use 300 gallons of water per acre through solid set systems only. See calibration directions preceding this section.

CROP: Cucurbits: Cucumber, Cantaloupe, Muskmelon, Honeydew melon, Watermelon, Squash, Pumpkin

DISEASES: Anthracnose, Downy mildew, Target spot

RATE PER ACRE: 1-1/4 to 1-1/2 lbs.

DISEASES: Cercospora leafspot, Gummy stem blight (black rot), Alternaria leaf blight, Scab, Powdery mildew (*Sphaerotheca* only)

RATE PER ACRE: 1-1/2 to 2-1/2 lbs.

APPLICATION DIRECTIONS: Use in sufficient water to obtain adequate coverage. Begin applications when plants are in first true leaf stage or when conditions are favorable for disease development. Repeat applications at 7 day intervals. Under severe disease conditions, shorten spray interval.

May be applied through sprinkler irrigation equipment (solid set, portable wheel move, or center pivot systems only). See calibration directions preceding this section.

DISEASES: Cucumber belly rot (*Rhizoctonia solani*)

RATE PER ACRE: 7 lbs.

APPLICATION DIRECTIONS: Use in sufficient water to obtain runoff to soil surface. Make a single application when vines begin to form. May be applied through sprinkler irrigation equipment as directed above.

CROP: Grasses grown for seed

DISEASES: Stem rust, Leaf rust, Stripe rust, Septoria leafspot, Glume blotch, Bipolaris and Drechslera leafspots

RATE PER ACRE: 7/8 to 1-1/8 lbs.

DISEASES: Selenophoma (eyespot)

RATE PER ACRE: 7/8 to 1-3/4 lbs.

APPLICATION DIRECTIONS: Use in sufficient water to obtain adequate coverage. Begin applications during stem elongation when conditions favor disease development. Re-apply at flag (top) leaf emergence and repeat applications at 14 day intervals. **Do not** apply within 14 days of harvest. **Do not** allow livestock to graze in treated areas or feed treated plant parts to livestock.

CROP: Mint

DISEASES: Rust, Septoria leafspot

RATE PER ACRE: 1-1/8 lbs.

APPLICATION DIRECTIONS: Use in sufficient water to obtain adequate coverage. Begin applications when emerging plants are 4-8 inches high. Repeat applications at 7 to 10 day intervals or as necessary to maintain control. **Do not** apply more than 3 times per season. **Do not** apply within 80 days of harvest. **Do not** feed fresh or extracted mint hay from treated fields to livestock. Based on available residue data, use on mint is restricted to Indiana, Michigan, and Wisconsin.

CROP: Onion (dry bulb)

DISEASES: Botrytis leaf blight/blast, Botrytis neck rot (suppression), Purple blotch

RATE PER ACRE: 7/8 to 1-3/4 lbs.

APPLICATION DIRECTIONS: Apply in sufficient water to obtain thorough coverage of tops. Recommended for use with disease monitoring systems which adjust fungicide rates and frequency of application according to disease hazard. Apply as follows:

	Low Disease Hazard & Prior to Infection	Low Disease Hazard & Some Disease Present	High Disease Hazard
Rate per Acre:	7/8 lb.	1-1/8 lbs.	1-3/4 lbs.
Frequency:	10 days	7 to 10 days	7 days

For suppression of neck rot (*Botrytis* spp.) during storage, a minimum of three weekly applications prior to lifting, using 1-1/8 to 1-3/4 lbs. per acre, is recommended. **Do not** apply within 7 days of harvest.

CROP: Onion (green bunching), Leek Shallot, Garlic, Onion grown for seed

DISEASES: Botrytis leaf blight/blast, Purple blotch, Downy mildew (suppression)

RATE PER ACRE: 1-1/8 to 2-1/4 lbs.

APPLICATION DIRECTIONS: Use in sufficient water to obtain thorough coverage of tops. Begin applications prior to favorable infection periods, and repeat at 7 to 10 day intervals for as long as conditions favor disease. Use the high rate and a 7 day

schedule of applications when heavy dew or rain persists. **Do not** apply within 7 days of harvest on garlic. **Do not** apply more than 3 times per season or within 14 days of harvest on green bunching onions, leeks, or shallots. If additional disease control is needed before harvest, use another registered fungicide.

CROP: Papaya

DISEASES: Alternaria fruit spot, Anthracnose, Stem end rot

RATE PER ACRE: 1-3/4 to 3-1/4 lbs.

APPLICATION DIRECTIONS: Apply with ground equipment only, in sufficient water to obtain adequate coverage of fruit and leaves. Begin treatment when conditions favor development of disease and continue treatments at 14 day intervals until weather conditions no longer favor disease development. **Do not** graze livestock in treated area or feed processing by-products to livestock.

CROP: Parsnip

DISEASES: Alternaria leafspot, Downy mildew, Anthracnose, Botrytis blight (gray mold), Bottom rot (*Rhizoctonia*)

RATE PER ACRE: 1-1/8 to 1-3/4 lbs.

APPLICATION DIRECTIONS: Apply in sufficient water to obtain adequate coverage. Make the first application at the first sign of disease or when conditions are favorable for infection. Continue applications on a 7 to 10 day schedule. **Do not** apply more than 4 times per season or within 10 days of harvest. **Do not** feed treated plant parts to livestock.

CROP: Passion Fruit (Hawaii only)

DISEASES: Alternaria fruit and leaf spot, (passion fruit brown spot)

RATE PER ACRE: 1-1/2 lbs.

APPLICATION DIRECTIONS: Apply with ground equipment in sufficient water to obtain adequate coverage of fruit and leaves. Begin treatment when fruit spots appear (April to July) and continue treatments at 14 day intervals until weather conditions no longer favor disease development. **Do not** graze in treated area or feed vines or processing by-products to livestock used for food.

CROP: Peanut

DISEASES: Cercospora (early) leaf spot, Cercosporidium (late) leaf spot

RATE PER ACRE: 1 to 1-1/4 lbs.

DISEASES: Rust, Web blotch

RATE PER ACRE: 1-1/4 lbs.

APPLICATION DIRECTIONS: Apply in sufficient water for adequate coverage when leaf wetness first occurs and before disease symptoms appear, generally 30 to 40 days after planting; repeat at 10 to 14 day intervals. When late leafspot prevails or when rust or web blotch occur, apply 1-1/4 lbs. per acre at 10 day intervals for the remainder of the season. **Do not** apply within 14 days of harvest. **Do not** allow livestock to graze in treated areas. **Do not** feed hay or threshings from treated fields to livestock. May be applied through sprinkler irrigation equipment. See calibration directions preceding this section.

CROP: Potato

DISEASES: Late blight, Early blight, Botrytis vine rot

RATE PER ACRE: 5/8 lb. - then - 7/8 to 1-1/4 lbs./A

APPLICATION DIRECTIONS: Apply as a banded treatment directed over the foliage, beginning when vines are first exposed and leaf wetness occurs. Repeat applications at 7 to 10 day intervals until vines close, then increase rate as described below. In addition to the early-season applications above, as vines close between rows increase water carrier volume to cover the denser canopy and begin broadcast application patterns. Continue applications at 7 to 10 day intervals. Use the highest registered rate weekly when disease conditions are severe.

May be applied through sprinkler irrigation equipment (solid set, portable wheel move, center pivot, or motorized lateral move systems only). **Do not** exceed a 10 day interval between applications when using this technique. Follow calibration and application directions preceding this section.

CROP: Soybean Determinate (Southern) Varieties

DISEASES: Anthracnose, Diaporthe pod and stem blight, Frogeye leafspot (*Cercospora sojina*), Purple seed stain, *Cercospora* leaf blight (*Cercospora kikuchii*), Septoria brown spot

APPLICATION DIRECTIONS: Apply in sufficient water to obtain complete coverage, using at least five gallons of water per acre for aerial application. Use the three application program in areas having a history of moderate to severe disease intensity. May be applied through sprinkler irrigation equipment. Follow application and calibration directions preceding this section. **Do not** exceed total of 3 applications per season. **Do not** apply within 6 weeks of harvest. **Do not** feed treated plant parts to livestock or allow grazing in treated fields.

RATE PER ACRE: 1-1/8 to 2 lbs.

APPLICATION DIRECTIONS: Two application program - Make the first application at early pod set (R3) stage, when majority of pods are 1/8 to 3/8 inch in length and the second at beginning of seed formation (R5) which occurs about 14 days later.

RATE PER ACRE: 7/8 to 1-1/2 lbs.

APPLICATION DIRECTIONS: Three application program - Make the first application at the beginning of flowering (R1), the second at early pod set (R3) and the third at beginning of seed formation (R5).

DISEASE: Stem canker (*Diaporthe phaseolorum* var. *caulivora*)

RATE PER ACRE: 7/8 lb.

APPLICATION DIRECTIONS: Apply in 10 to 20 gallons of water per acre, as a band treatment directing spray to provide coverage of entire plant. Make one application at emergence of second trifoliate leaves (V2). If conditions favor continued infection, make additional applications at 10 to 14 day intervals.

CROP: Soybean Indeterminate (Northern) Varieties

DISEASES: Anthracnose, Diaporthe pod and stem blight, Frogeye leafspot (*Cercospora sojina*), Purple seed stain, *Cercospora* leaf blight (*Cercospora kikuchii*), Septoria brown spot

APPLICATION DIRECTIONS: Apply in sufficient water to obtain complete coverage, using at least five gallons of water per acre for aerial application. Use the three application program in areas having a history of moderate to severe disease intensity. May be applied through sprinkler irrigation equipment. Follow application and calibration directions preceding this section. **Do not** apply more than 3 times per season or within 6 weeks of harvest. **Do not** feed treated plant parts to livestock or

allow grazing in treated fields.

RATE PER ACRE: 1-1/8 to 2 lbs.

APPLICATION DIRECTIONS: Two application program - Make the first application when largest pods are 1 to 1-1/2 inches in length and make the second application 14 days later. May be co-applied with **Benlate* 50WP** as a tank mix for disease control in indeterminate (northern) soybeans. Use 7/8 lb. plus 8 ounces of **Benlate 50WP** per acre. Make the first application when pods near the top of plants are 1/2 to 1 inch in length and a second application 14 days later.

RATE PER ACRE: 7/8 to 1-1/2 lbs.

APPLICATION DIRECTIONS: Three application program - Make the first application one week after first flowering and continue applications at 14 day intervals.

*Benlate is a registered trademark of E.I. DuPont de Nemours and Co., Inc.

CROP: Tomato

DISEASES: FOLIAGE (apply every 7-10 days): Early blight, Late blight, Gray leafspot, Gray leaf mold, Septoria leafspot, Target spot

RATE PER ACRE: 1-1/8 to 1-3/4 lbs.

DISEASES: FRUIT (apply every 7-14 days beginning at fruit set): Anthracnose, Alternaria fruit rot (black mold), Rhizoctonia fruit rot, Late blight fruit rot, Botrytis gray mold

RATE PER ACRE: 1-3/4 to 2-1/4 lbs.

APPLICATION DIRECTIONS: Apply in sufficient water to obtain adequate coverage. Begin applications when dew or rain occur and disease threatens. Use the highest rate and shortest interval specified when disease conditions are severe. May be combined in the spray tank with EPA-registered pesticide products that claim copper as the active ingredient and are labeled for control of bacterial diseases of tomatoes. Check the copper manufacturer's label for specific instructions, precautions, and limitations prior to mixing. **Do not** use with **Copper-Count*N** in concentrated spray suspensions. May be applied through sprinkler irrigation equipment (solid set or portable wheel move systems only). See calibration directions preceding this section.

*Copper-Count is a registered trademark of Mineral Research and Development Co.

TREE AND ORCHARD CROPS

Apply **CHLOROTHALONIL 90** in sufficient water and with proper calibration to obtain uniform coverage of tree canopy. Application with ground equipment is preferable to aerial application, because ground applications generally give better coverage of the tree canopy. If application with ground equipment is not feasible, product may be applied with aircraft using at least 20 gallons per acre. When concentrate sprays are used or when treating non-bearing or immature trees, the lower rate listed may be used. **Do not** allow livestock to graze in treated areas. The following spray volumes are recommended as gallons of spray per acre:

<u>CROP</u>	<u>SPRAY VOLUME</u> (Gallons per Acre)
Peach,	20 (concentrate)
Nectarine,	to
Apricot,	300 (full dilute)
Tart Cherry,	

Plum,
Prune

Sweet Cherry 20 (concentrate)
to
400 (full dilute)

Conifers:	Dilute	Concentrate
Forest stands	Not used	10 to 20 (aircraft)
Christmas trees	100	10 to 50 (aircraft or ground equipment)
Nursery beds	100	5 to 10 (ground equipment only)

CROP: Peach, Nectarine, Apricot, Cherry, Plum, Prune

DISEASES: Leaf curl, Coryneum blight (shot-hole)

RATE PER ACRE: 2-1/2 to 3-1/2 lbs.

RATE PER 100 GAL*: 7/8 to 1-1/8 lbs.

APPLICATION DIRECTIONS: For best control of both diseases apply at leaf fall in late autumn, using sufficient water and proper sprayer calibration to obtain uniform coverage. When conditions favor high disease levels, use the high rate of application and apply once or twice more in mid to late winter before budswell. If the leaf fall application is not practical, application for control of leaf curl may be made at any time prior to budswell the following spring. Where Coryneum blight (shot-hole) occurs, also apply at budbreak to protect newly emerging leaves and at shuck split to prevent fruit infections.

DISEASES: Brown rot blossom blight, Lacy (russet) scab (plum/prune)

RATE PER ACRE: 2-1/2 to 4-1/2 lbs.

RATE PER 100 GAL*: 7/8 to 1-1/8 lbs.

APPLICATION DIRECTIONS: Use 3-1/2 to 4-1/2 lbs. per acre on trees taller than 20 ft. and 2-1/2 to 3-1/2 lbs. per acre on smaller trees. Make one application at popcorn (pink, red, or early white bud) and a second application at full bloom. If weather conditions favor disease development, make an additional application at petal fall.

DISEASES: Cherry leafspot; Peach, Nectarine, Apricot scab

RATE PER ACRE: 2-1/2 to 4-1/2 lbs.

RATE PER 100 GAL*: 7/8 to 1-1/8 lbs.

APPLICATION DIRECTIONS: In addition to the bloom applications listed above, make one application at shuck-split. Do not apply after shuck-split and before harvest. If additional disease control is needed before harvest, use another registered fungicide.

For control of cherry leafspot after harvest, make one application to foliage within 7 days after fruit is removed. In orchards with a history of high leafspot incidence, make a second application 10-14 days later.

CROP: Conifers

DISEASE: Swiss needlecast

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RATE PER ACRE: 2-1/4 to 4-1/2 lbs.

RATE PER 100 GAL*: 2-1/4 to 4-1/2 lbs.

APPLICATION DIRECTIONS: Single application technique: In Christmas tree plantations or forest stands, make one application in the spring when new shoot growth is 1/2 to 2 inches in length.

DISEASE: Scleroderris canker (pines), Swiss needlecast

RATE PER ACRE: 1-1/8 to 2-1/4 lbs.

RATE PER 100 GAL*: 1-1/8 to 2-1/4 lbs.

DISEASE: Sirococcus tip blight

RATE PER ACRE: 1-3/4 to 3 lbs.

RATE PER 100 GAL*: 1-3/4 to 3 lbs.

DISEASES: Rhizosphaera needlecast (spruces), Scirrhia brown spot (pines)

RATE PER ACRE: 4-1/2 lbs.

RATE PER 100 GAL*: 4-1/2 lbs.

APPLICATION DIRECTIONS: Make the first application in spring when new shoot growth is 1/2 to 2 inches in length. Make additional applications at 3 to 4 week intervals until conditions no longer favor disease development. For use in nursery beds, apply the highest rate specified on a 3 week schedule.

DISEASE: Rhabdocline needlecast (Douglas fir)

RATE PER ACRE: 1-1/8 to 2-1/4 lbs.

RATE PER 100 GAL*: 1-1/8 to 2-1/4 lbs.

APPLICATION DIRECTIONS: Apply at budbreak and repeat at 3 to 4 week intervals until needles are fully elongated and conditions no longer favor disease development. In plantations of mixed provenance, or when irregular budbreak occurs, apply weekly until all trees have broken bud, then every 3 to 4 weeks as specified above. In nursery beds, use the high rate on a 3 week schedule.

DISEASES: Cyclaneusma and Lophodermium needlecasts (pines)

RATE PER ACRE: 2-1/4 to 4-1/2 lbs.

RATE PER 100 GAL*: 2-1/4 to 4-1/2 lbs.

APPLICATION DIRECTIONS: Apply in early spring prior to budbreak. Repeat applications at approximately 6 to 8 week intervals, until spore release ceases in late fall. Apply monthly during periods of frequent rainfall, and where Lophodermium infections occur during dormancy (Pacific Northwest). During drought periods, applications may be suspended, then resumed upon next occurrence of needle wetness.

DISEASES: Botrytis seedling blight, Phoma twig blight

RATE PER ACRE: 1-1/8 to 2-1/4 lbs.

RATE PER 100 GAL*: 1-1/8 to 2-1/4 lbs.

APPLICATION DIRECTIONS: Begin applications in nursery beds when seedlings are 4 inches tall and when cool, moist conditions favor disease development. Make additional applications at 7 to 14 day intervals as long as disease favorable conditions persist.

*Volumetric rates to be used only with full dilute spray volume specified on this label for tree and orchard crops.

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

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions, the failure to follow the label directions, or good application practices, all of which are beyond the control of Setre Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. The Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damage and in no event shall damages or any other recovery of any kind against the Company exceed the price of the product which causes the alleged loss, damage, injury, or other claim. The Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income.

The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.