



PM 22 45728-7 4-3-98 1048
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

APR 3 1998

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Mr. Dennis W. Long
UCB Chemicals Corporation
1900 Lake Park Drive, Suite 315
Smyrna, Georgia 30080

Subject: Ferbam Granuflo® Fungicide
EPA Registration No. 45728-7
Your label amendment application dated November 26,
1997

Dear Mr. Long,

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

1. Make the following changes to the label:
 - a. Move the "AGRICULTURAL USE REQUIREMENTS" box to the "DIRECTIONS FOR USE" section, positioning it just before the "MIXING INSTRUCTIONS" heading.
 - b. In the fourth sentence in the first paragraph in the "AGRICULTURAL USE REQUIREMENTS" box, add the term "personal protective equipment" just before "(PPE)".
 - c. Since the application information chart in the "DIRECTIONS FOR USE" section includes dosage ranges, specify when and/or under what conditions the high and low rates should be used. Under the title of the application information chart in the "DIRECTIONS FOR USE" section, add back the statement:

"Under low disease conditions, minimum label rates per application can be used while maximum label rates and shortened spray schedules are recommended for severe or threatening disease conditions."
 - d. Under "CHERRIES" in the specific "DIRECTIONS FOR USE" column of the chart change the rate for control of Leaf Spot from "4.5 lbs." to "1.5 lbs.", as shown on your previously accepted label.

- 208
- e. On page 5, in the "CONIFERS" section of the chart, "Douglas" in Douglas Fir is misspelled.
 - f. Since Cranberries is considered an aquatic use, add "For terrestrial uses," back to the beginning of the second sentence in the first paragraph in the "ENVIRONMENTAL HAZARDS" section.
2. Submit one copy of your final printed labeling before you release the product for shipment.

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

If you have any questions about this letter, please contact John Bazuin at (703)305-7381.

Sincerely yours,

15/
Cynthia L. Giles-Parker
Product Manager (22)
Fungicide Branch
Registration Division (7505C)

Attachment: Label stamped "ACCEPTED with COMMENTS"

308



Ferbam Granuflo®

Fungicide

ACTIVE INGREDIENT:	BY WEIGHT
Ferbam (Ferric dimethyldithiocarbamate)	76.0%
INERT INGREDIENTS:	24.0%
	TOTAL 100.0%

For Agricultural or Commercial Use Only

EPA Reg. No. 45728-7

EPA Est. 32557-BEL-1

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 45728-7

ACCEPTED
with COMMENTS
In EPA Letter Dated

APR 3 1998

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 ON SKIN: Wash exposed skin with plenty of soap and water. If person feels unwell, get medical attention immediately.

IF IN EYES: Flush affected eyes with water for 15 minutes. Get medical attention.

IF INHALED: Remove exposed person to fresh air and allow to rest.

IF SWALLOWED: If conscious, wash out mouth and give patient plenty of water. Never give anything by mouth to an unconscious person. Get medical attention immediately, taking this labeled container with you. If medical aid is not readily available, induce vomiting and repeat until vomit fluid is clear.

Engineering Control Statements:

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.

For Emergencies Involving a Spill, Leak, Fire, Exposure, or Accident, Contact: CHEMTREC at (800) 424-9300.

For Other Emergencies, phone (770) 801-3248 or (770) 433-6421.

See Other Panels for Additional Precautionary Statements.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: May cause irritation of eyes, nose, throat and skin! Avoid breathing dust or spray mist. Avoid contact with eyes, skin or clothing.

The consumption of alcoholic beverages increases the toxic effects of Ferbam.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- ◆ Long-sleeved shirt and long pants
- ◆ Waterproof gloves
- ◆ Shoes plus socks
- ◆ Protective eyewear
- ◆ Chemical-resistant headgear for overhead exposure
- ◆ Dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C)

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.

User Safety Recommendations:

User 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. 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 apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated. Apply this product only as specified on this label. Do not contaminate water when disposing of equipment washwaters.

Do not allow this material to drift onto neighboring crops or non-crop areas or use in a manner or at a time other than in accordance with label directions because animal, plant or crop injury, illegal residues or other undesirable results may occur.

PHYSICAL OR CHEMICAL HAZARDS

Keep packages or dust away from sparks, flames or hot surfaces.

GENERAL USE INFORMATION

Ferbam Granuflo® (76% water-dispersible granules) is a broad spectrum fungicide for the control of certain diseases in fruit trees, small fruits and berries, ornamentals, conifers, and tobacco.

FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, OR ILLEGAL RESIDUES.

OBSERVE ALL CAUTIONS AND LIMITATIONS ON LABELING OF ALL

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 (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.

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
- ◆ Chemical-resistant headgear for overhead exposure

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.

MIXING INSTRUCTIONS

Be sure equipment is clean before use; if it is contaminated with any material, crop injury or sprayer clogging may result. Calibrate spray equipment before use.

Fill the spray tank one-fourth to one-third full with clean water. Start agitation (proper agitation creates a rippling or rolling action on the liquid surface). Slowly add Ferbam Granuflo® at the recommended rate. Add water to fill spray tank. Mix thoroughly and apply at once. Maintain sufficient agitation during mixing and spraying operations to ensure a uniform spray mixture.

IMPORTANT: When spraying, thorough coverage is necessary to provide good disease control. Make new dilutions for each spraying. Consult State Agricultural Experiment Station recommendations or State Extension Service Specialist for spray schedules for timing and frequency of applications in your area.

When tank mixing other products with Ferbam Granuflo®, follow the proper sequence of adding products to the spray tank. Wettable powders or water-dispersible granules should be added to the water in the tank first, followed by flowable products, with emulsifiable concentrates added last. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

Ferbam Granuflo® is compatible with most commonly used insecticides and fungicides except Bordeaux mixture, lime, sulfur, fixed copper, and hydrated lime. When preparing tank mixes, user should consult spray compatibility charts or State Extension Service Specialist prior to actual use.

To assure the compatibility of Ferbam Granuflo® with other products, pour the products into a small container of water in the correct proportions. After thorough mixing, let stand for 5 minutes. If the combination remains mixed or can be re-mixed readily, the mixture is compatible.

BEFORE TANK MIXING FERBAM GRANUFLO® WITH OTHER REGISTERED PRODUCTS FOR ANY USE ON THIS LABEL, READ THE LABEL OF THE TANK MIX PARTNER TO BE CERTAIN IT IS LABELED FOR USE ON THE PARTICULAR CROP AND THAT USE PATTERNS ARE COMPATIBLE WITH THOSE OF FERBAM GRANUFLO®.

PRODUCTS USED IN MIXTURES

APPLICATION EQUIPMENT

AERIAL APPLICATION PROCEDURES

Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Do not apply directly to humans or animals.

APPLICATION THROUGH IRRIGATION SYSTEMS

Ferbam Granuflo® alone or in combination with other fungicides which are registered for application through irrigation systems, may be applied through irrigation systems. Apply this product only through center pivot, solid set, moving wheel, micro-sprinkler or drip irrigation systems. Do not apply this product through any other type or 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 Specialist, 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. 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.

OPERATING INSTRUCTIONS (SPRINKLER AND DRIP IRRIGATION SYSTEMS)

- The system must contain a functional check valve, 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, normally 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 shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 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 wind speed favors drift beyond the area intended (applies to sprinkler systems).

APPLICATION INSTRUCTIONS

Ferbam Granuflo® must be applied on the schedule specified in the specific crop use recommendations, not according to the irrigation schedule.

With the exception of cranberries, Ferbam Granuflo® has not been sufficiently tested when applied through irrigation systems to assure consistent product performance for all labeled uses. The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler or drip irrigation equipment. Users should check with State and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler or drip irrigation equipment.

- Center pivot irrigation equipment. (Use only with drive systems which provide uniform water distribution).
- Determine the size of the area to be treated.
- Determine the time required to apply 1/4 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of Ferbam Granuflo® required to treat the area covered by the irrigation system.
- Add the required amount of Ferbam Granuflo® and sufficient water to meet the

5078

injection time requirements to the solution tank.

- Maintain constant solution tank agitation during the injection period.
- Continue to operate the system until the Ferbam Granuflo® solution has cleared the sprinkler head.

SOLID SET AND MOVING WHEEL IRRIGATION EQUIPMENT

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 10 to 30 minute interval.
- Determine the amount of Ferbam Granuflo® required to treat the area covered by the irrigation system.
- Add the required amount of Ferbam Granuflo® into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during calibration.
- Inject Ferbam Granuflo® at the end of the irrigation cycle or as a separate application to maximize the effectiveness of the fungicide.
- Stop injection equipment after treatment is completed. Continue to operate the system until the Ferbam Granuflo® solution has cleared the last sprinkler head.

MICRO-SPRINKLER OR DRIP IRRIGATION SYSTEMS

GENERAL INSTRUCTIONS

- Each run of the irrigation system must be calibrated separately to determine the time it takes water to move through the system and to make sure all emitters in the system are putting out the same amount of water.
- Only pressure injection or venturi equipment are recommended.
- Figure the area to be treated in each irrigation run.
- Measure the output of each of the emitters or drip tubes closest to and farthest from the injector site.
- For calibration, substitute a concentrated detergent (such as Wisk) or a soluble fertilizer for the Ferbam Granuflo® in the injector tank. The detergent will bubble as it leaves the emitters. The time period over which bubbles occur should be checked for both the closest and farthest emitters. If these times are not within two minutes of each other, adjust the dilution ratio and/or the injection rate.
- If a soluble fertilizer is used, measure the time intervals with a salt bridge. If a drip system is being calibrated, substitute soluble fertilizer for the Ferbam Granuflo® in the injector and measure the time intervals with a salt bridge.

STEP-BY-STEP INSTRUCTIONS

- Before starting to calibrate, operate the system until all the emitters are putting out at equal flow rates or until the system is operating at full pressure.
- Make up an indicator solution of detergent or fertilizer, using the same ratio to be used when mixing Ferbam Granuflo®.
- Set the injector to apply the indicator solution at the injection rate to be used in the actual Ferbam Granuflo®.
- Attach a 5 inch length of flexible tubing over the emitter closest to the injection point, another length over the emitter farthest away. Both emitters should be monitored to determine the time intervals that the indicator solutions are observed.
- Begin injecting the indicator solution. Direct the flow from the tubes at the emitters into a small container. Begin timing when the indicator solution is first detected. Stop timing when the indicator solutions are no longer detected.
- If the period of detection of the indicator solution between the two emitters is within two minutes of each other, comparable coverage will be obtained. If it is not, make adjustments by increasing the dilution ratio, using more water per part of Ferbam Granuflo®, or adjust the injector to a slower flow rate.
- Once the system is calibrated, dilute the needed amount of Ferbam Granuflo® with water using a minimum of 10 parts water per 1 part Ferbam Granuflo®.
- Do not begin to inject Ferbam Granuflo® into the system until all emitters are producing equal flow rates or until the system is at full pressure.
- Inject the Ferbam Granuflo® into the system at the end of the irrigation in 1/2 to 1 inch of irrigation water.

STORAGE AND DISPOSAL

Pesticide Storage: Keep away from fire and sparks.

Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.

For Emergencies Involving a Spill, Leak, Fire, Exposure, or Accident, contact CHEMTREC at (800) 424-9300.

For Other Emergencies, phone (770) 801-3248 or (770) 433-6421.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter, or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

Pesticide Disposal: Pesticide wastes are toxic. 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 EPA Regional Office for guidance.

Container Disposal: Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

NOTICE - READ CAREFULLY

Dealers Should Sell in Original Packages Only.

TERMS OF SALE OR USE:

On purchase of this product, buyer and user agree to the following conditions:

- **Warranty:** UCB makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Except as so warranted, the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.
- **Directions and Recommendations:** Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller and are assumed by the buyer at his own risk.
- **Use of Product:** UCB's recommendations for the use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made to the effect of such or the results to be obtained if not used in accordance with directions or established safe practice.
- **Damages:** Buyer's or user's exclusive remedy for damages for breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid and shall not include incidental or consequential damages.



Chemicals Corporation
2000 Lake Park Drive
Smyrna, GA 30080

Granuflo® is a Registered Trademark of UCB S.A., a Belgian corporation.

6078

FERBAM GRANUFLO® APPLICATION INFORMATION SPECIFIC TO CROP

CROPS*	DISEASES	POUNDS FERBAM GRANUFLO®		DIRECTIONS FOR USE
		per acre	per 100 gal	
APPLES	Apple Scab (<i>Venturia inaequalis</i>) Cedar Apple Rust (<i>Gymnosporangium</i> spp.) Sooty Blotch (<i>Gloeodes pomigena</i>)	4-6 lbs	1 to 1.5 lbs ⁽⁴⁾	Apply from pre-bloom through early cover sprays as needed.
	Apple Scab (<i>Venturia inaequalis</i>) Black Rot (<i>Botryosphaeria obtusa</i>) Bitter Rot (<i>Glomerella cingulata</i>) Sooty Blotch (<i>Gloeodes pomigena</i>) Fly Speck (<i>Schizothyrium perexiguum</i>) Brook's Spot (<i>Mycosphaerella pomi</i>)	3 to 3 lbs	0.75 to 2 lbs ⁽⁶⁾	Apply in late season sprays. Where Bitter rot and Brook's spot are severe problems, use the maximum labeled rate. On Golden Delicious, Jonathan, Baldwin, and other varieties of apples which are especially apt to Russet, some injury may result from the use of this type of material if used in the early season or bloom applications. The best time for use is in the cover sprays. When used in combination with sulfur, do not apply within 10 days to 2 weeks of an oil spray nor just prior to or during periods of excessively high temperatures. DO NOT apply within 7 days of harvest.
CHERRIES	Brown Rot (<i>Monilinia</i> spp.) Leaf Spot (<i>Blumeriella jaapii</i>)	4.5 lbs	1.5 lbs ⁽³⁾	Apply from petal fall through cover sprays. May also use 1 pound Ferbam Granuflo® plus 3 pounds of wettable sulfur in petal fall and cover sprays. To aid in the control of Leaf Spot, apply 4.5 lbs immediately after harvest but prior to leaf drop. Applications may be made up to day of harvest.
CITRUS: Grapefruit, Limes Lemons, Oranges Tangerines, Tangelos	Anthracnose Scab (<i>Elsinoe fawcettii</i>) Postbloom Fruit Drop (<i>Colletotrichum gloeosporioides</i>)	15 lbs	1.5 lbs ⁽⁶⁾	Apply during pre-bloom periods and 2/3 petal fall. May be applied in late summer and early fall if a heavy flush of growth appears. May be applied up to the day of harvest.
	Rough Lemon Nursery Stock	Scab (<i>Elsinoe fawcettii</i>)	15 to 25 lbs	1.5 to 2.6 lbs ⁽⁵⁾
CRANBERRIES	Fruit Rots Lophodermium Twig Blight (<i>Lophodermium hypophyllum</i>)	6 lbs	2 lbs ⁽³⁾	Begin applications early in blossoming period and repeat at 2 week intervals for a total of 5 applications. DO NOT apply within 28 days after mid-bloom. Ferbam Granuflo® 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.
	Fairy Ring (<i>Psilocybe agrariella</i>)	0.09 b ft ²	9 lbs ⁽¹⁾	Treat an area 3 feet beyond the advancing line of dead vines and 2 feet within this line. Apply in the fall immediately after harvest. RESTRICTION: Do not use water from treated cranberry bogs for irrigating other crops.
GRAPES	Black Rot (<i>Guignardia bidwellii</i>)	4 lbs	2 lbs ⁽²⁾	Apply just before bloom, just after bloom, and as disease conditions warrant. DO NOT make more than 3 applications per season. DO NOT apply within 7 days of harvest.

* Not for use in California

- ⁽¹⁾ Based on dilute sprays of 100 gallons per acre.
- ⁽²⁾ Based on dilute sprays of 200 gallons per acre.
- ⁽³⁾ Based on dilute sprays of 300 gallons per acre.
- ⁽⁴⁾ Based on dilute sprays of 400 gallons per acre.
- ⁽⁵⁾ Based on dilute sprays of 1000 gallons per acre.

7018

FERBAM GRANUFLO® APPLICATION INFORMATION SPECIFIC TO CROP

CROPS*	DISEASES	POUNDS FERBAM GRANUFLO® per acre per 100 gal		DIRECTIONS FOR USE
PEACHES AND NECTARINES	Leaf Curl (<i>Taphrina deformans</i>)	4.5 lbs	1.5 lbs ⁽³⁾	Apply during the dormant period in the fall after leaves drop or in the Spring before buds begin to swell. If Leaf Curl has been severe, make 2 applications, one in the Fall and one in the Spring during the dormant period. DO NOT apply within 21 days of harvest.
PEARS	Scab (<i>Venturia pyrina</i>) Sooty Blotch (<i>Gloeodes pomigena</i>)	6 lbs	1.5 lbs ⁽³⁾	Make applications at pink, calyx, first and second cover sprays, and 1 pound in summer sprays.
	Fabraea Leaf Blight (<i>Diplocarpon mepili</i>) Fruit Spot (<i>Mycosphaerella pomi</i>)	4 lbs	1 lbs ⁽³⁾	Make applications in summer cover sprays. DO NOT apply within 7 days of harvest.
TOBACCO (plant beds)	Blue mold (<i>Peronospora tabacina</i>)		2 to 3 lbs	Apply at a rate of 3 gallons per 100 square yards when plants are small, increasing to 6 gallons when plants are ready for transplanting. Begin applications when plants are the size of a dime or when Blue Mold is reported in the area, and repeat twice weekly until plants are transplanted.

CONIFERS*

Pine Seedling Plant Beds	Fusiform Rust		1 to 2 lbs	Begin applications when plants emerge and apply at 3 to 7 day intervals as needed.
Slash and Long Leaf Pines	Southern Cone Rust (<i>Cronartium strobilinum</i>)		2 lbs	Use 2 pounds per 100 gallons of water and add 4 to 8 ounces of a suitable spreader/sticker. Begin applications at time of flowering when strobili are emerging from bud scales. Repeat at 5 day intervals until conelet stage. Direct spray to flower-bearing portions of tree crowns.
Nursery Conifer Seedling Crops	Botrytis		1.5 to 2 lbs	Use a hydraulic sprayer and add a suitable spreader/sticker to the tank mix. Spray for complete coverage, wetting the foliage thoroughly. Begin applications when cool, moist conditions favor disease development. Repeat at 7 to 10 day intervals to maintain control as long as favorable disease conditions persist.
Spruce	Spruce Cone Rust		2 lbs	Make applications at pollination. Spray to run-off. To ensure all trees are treated at pollination, applications may be required 1 week before and after pollination.
Douglas Fir Christmas Trees	Melampsora Needle Rust		2 lbs	Make a single application in the Spring when new shoot growth is 0.5 to 2 inches in length.
Shasta Fir Christmas Trees	Puccineastrum Needle Rust		2 lbs	Make a single application in the Spring when new shoot growth is 0.5 to 2 inches in length.
Conifers	Lophodermium Needle Cast		2 lbs	Begin applications in Spring or early Summer before infection occurs. Repeat after heavy rains and at 10 to 14 day intervals as long as needed.

* Not for use in California

- ⁽¹⁾ Based on dilute sprays of 100 gallons per acre.
- ⁽²⁾ Based on dilute sprays of 200 gallons per acre.
- ⁽³⁾ Based on dilute sprays of 300 gallons per acre.
- ⁽⁴⁾ Based on dilute sprays of 400 gallons per acre.
- ⁽⁵⁾ Based on dilute sprays of 1000 gallons per acre.

8 of 8

ORNAMENTALS*

General Directions, unless otherwise specified, include: Use 1 to 1.5 pounds per 100 gallons of water, applying at 7 to 10 day intervals during growing season to control the diseases on the ornamentals listed below. The black residue from the use of this product may be undesirable on some ornamentals.

Asters, Columbine, Begonias, Golden Glow, Cyclamens, Delphiniums, Iris, Hollyhocks, Laurel, Hydrangeas, Phlox, Morning Glory, Ivy, Geraniums, Verbena, Primrose, Zinnias, Snapdragon, Lilacs, Oriental Poppy, Palm (Areca), Sweet Peas	Leaf Spot	1 to 1.5 lbs	See General Directions above.
Azaleas	Leaf Spot, Petal Blight	1 to 1.5 lbs	Apply at 3 to 4 day intervals during bloom to plants, flowers, and litter around plants.
Cacti and Succulents	Drechslera Stem Rot	2 to 3 lbs	See General Directions above.
Camellia	Petal Blight	1 to 1.5 lbs	Apply as a monthly soil drench and to soil and litter around plants at 3 to 4 day intervals during bloom.
Carnations, Chrysanthemums	Septoria Leaf Spot	1 to 1.5 lbs	See General Directions above.
Carnations, Phlox, Delphiniums, Roses, Geraniums, Morning Glory, Marigolds, Primrose, Snapdragons, Hollyhock	Rust	1 to 1.5 lbs	See General Directions above.
Carnations, Scheffleras	Alternaria Blight	1 to 1.5 lbs	See General Directions above.
Cyclamens	Botrytis Rot	1 to 1.5 lbs	See General Directions above.
Gardenias	Botrytis Rot, Stemphylium and Septoria Leaf Spots	1 to 1.5 lbs	See General Directions above. Apply at 3 to 4 day intervals.
Gladiolus	Botrytis Blight, Leaf Spot	2 lbs	See General Directions above.
Juniper	Cedar Rust	1 to 1.5 lbs	See General Directions above.
Lillies	Botrytis (fire)	1.5 lbs	Begin applications when disease first appears and repeat at 10 to 14 day intervals as long as disease conditions exist. Planting densities may affect the level of control.
Orchids	Rust	2 lbs	See General Directions above.
Ornamental cuttings	Damping-off Rots	1 to 1.5 lbs	Drench soil and dip cuttings before setting. Do not use on Hydrangea cuttings.
Peonies, Poinsettias, Tulips	Botrytis Blight	1 to 1.5 lbs	See General Directions above.
Roses	Black Spot, Blossom Blight	1 to 1.5 lbs	See General Directions above. For Black Spot, begin applications when first leaves unfold.
Roses Snapdragons	Anthracoise	1 to 1.5 lbs	See General Directions above.

* Not for use in California