

PHQ 1 259-304 ' 1049

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MAR 27 1991

Mr. Ronald A. Hamlen
E.I. DuPont DeNemours & Company
Walker's Mill, Barley Mill Plaza
P.O. Box 80038
Wilmington, Delaware 19880-0038

Dear Mr. Hamlen:

Subject: Benomyl Revised Labeling
EPA Registration No. 352-354
Your Submission Dated March 26, 1991

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

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling.
 - a. On the product label, the reentry interval stated under "Notice" on the front page conflicts with the required reentry under "Direction for Use." Revise the label to include appropriate language under "Notice".
 - b. Under apples, delete the tank mix for benlate plus manzate 200 (product label).
2. Submit one (1) copy of your final printed labeling before your release the product for shipment.

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

Sincerely yours,

SL

Susan T. Lewis
Product Manager (21)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosure

BEST AVAILABLE COPY

CONCURRENCES

SYMBOL								
SURNAME								
DATE								

REGISTRATION CODE xx: 30

PACKAGE SIZE
6 - 2 POUND BAGS / CARTON
6 - 5 POUND BAGS / CARTON

PH 21
ACCEPTED
with COMMENTS
in EPA Letter Dated:

PH 21
BENLATE®

FUNGICIDE

WETTABLE POWDER

MAR 27 1991

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

ACTIVE INGREDIENT

Benomyl (Methyl 1-(butylcarbamoyl)-2-benzimidazolecarbamate)

BY WEIGHT

50%

INERT INGREDIENTS

50%

TOTAL 100%

EPA Reg. No. 352-354

U.S. Pats. 3,631,176

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION! MAY IRRITATE EYES, NOSE, THROAT AND SKIN.

Avoid breathing dust or spray mist. Avoid contact with skin, eyes, and clothing. Wash thoroughly after using.

Do not apply this product in such a manner as to directly or through drift expose workers, or other persons. The area being treated must be vacated by unprotected persons.

Protective clothing must be worn during periods of exposure. See Directions for Use.

This product may cause a temporary allergic skin reaction in a few susceptible persons. This condition should be treated as an allergic dermatitis. There is no evidence of aftereffects or permanent injury.

First Aid. In case of contact, flush skin or eyes with plenty of water, for eyes, get medical attention.

Aerial Mixer-Loaders. Wear a dust mask or a respirator during handling and mixing as this product may be harmful if inhaled. See Directions for Use.

For medical emergencies involving this product, call toll free 1-800-441-3637.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Do not apply directly to water. Do not apply where runoff is likely to occur. Drift and runoff from treated areas may be hazardous to fish in adjacent areas. Do not contaminate water when disposing of equipment washwaters. Do not apply when weather conditions favor drift from areas treated.

For registered aquatic uses: Aquatic organisms may be killed at recommended application rates.

PHYSICAL OR CHEMICAL HAZARDS

Keep away from fire or sparks.

NOTICE

Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Warnings must include the following information: "CAUTION Area treated with 'Benlate' on (date of application). Do not enter without appropriate protective clothing until sprays have dried. In case of contact, flush skin or eyes with plenty of water, for eyes, get medical attention."

DIRECTIONS FOR USE

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

Du Pont "Benlate" should be used only in accordance with recommendations on this label, or in separate published Du Pont recommendations available through local dealers.

Du Pont will not be responsible for losses or damages resulting from use of this product in any manner not specifically recommended by Du Pont. User assumes all risk associated with such nonrecommended use.

"Benlate" is a systemic fungicide recommended for the control of many important plant diseases. If treatment is not effective following use of "Benlate" as recommended, a resistant strain of the fungus may be present. If treatment is ineffective due to the presence of a benomyl-resistant strain, then neither "Benlate", nor any other benzimidazole or thiophanate type fungicide will effectively control that disease; consideration should be given to prompt use of other types of suitable fungicides.

The repeated exclusive use of "Benlate" may lead to buildup of resistant strains of fungi and loss of disease control. A spray program using other fungicides may delay resistant strain buildup. Consult your state extension specialist or official state recommendations for guidance on your particular crop and disease control situation.

NOTE: Do not tank mix or alternate "Benlate" with benzimidazole or thiophanate products such as "Merck" [1] or "Topsin" [2].

Do not enter or allow entry into treated areas for 24 hours after application unless wearing the protective clothing specified for this product or unless entering to perform post application activities on strawberries or bulbs.

WORK SAFETY RULES

Keep all unprotected persons, children, livestock and pets away from treated area or where there is danger of drift.

During mixing and loading of the concentrated product wear the following protective clothing and equipment:

Long sleeve shirt and long legged pants, chemical resistant gloves, chemical resistant apron, chemical resistant shoes, shoe coverings, or boots. Wear a dust mask or a respirator approved by the National Institutes of Occupational Safety and Health (30 CFR Part 11) when mixing or loading for aerial application.

Wear the following protective clothing during application, equipment repair, equipment cleaning, and during reentry to treated areas before expiration of the 24-hour reentry interval:

Long sleeve shirt and long legged pants; chemical resistant gloves, chemical resistant shoes, shoe coverings, or boots. During aerial application from enclosed cockpits wear long sleeve shirt and long legged pants. A clean pair of chemical resistant gloves must be carried in the cockpit and worn during exiting from the aircraft.

Important! Before removing gloves, wash them with soap and water. Always wash hands, face, and arms with soap and water before smoking, eating, drinking or toileting.

After work, take off all clothes and shoes. Shower using soap and water. Wear only clean clothes. Do not use contaminated clothing. Wash protective clothing and protective equipment with soap/detergent and water after each use. Personal and protective clothing worn during use must be laundered separately from household articles. Clothing or

protective equipment heavily contaminated or drenched with benomyl must be destroyed according to state or local regulations. Heavily contaminated or drenched clothing cannot be adequately decontaminated.

Flaggers must be in totally enclosed vehicles.

Apply as a spray with ground equipment (except as otherwise directed), using sufficient water to obtain thorough coverage of plants. Under severe disease conditions use the higher rate and shorter interval specified for each crop; also, for tree crops, use the higher rate for large mature trees. For aerial application (listed crops only) use the following gals. per acre: Rice and Soybeans, 3 to 10; Cabbage (seed crop), Celery, Cucurbits, Peanuts and Sugar Beets, 5 to 10; Almonds, Avocados, Beans, Pecans, Stone Fruits and Strawberries, 10 to 20; Grapes, 15 to 20; Roses, Flowers, Ornamentals and Shade Trees, 20 gals. per acre minimum.

For use in small gardens and orchards (less than 1 acre), application rates may be converted to lbs. per 100 gals. by dividing the lbs. per acre rate in half, and applying the resulting spray mixture at the rate of 4.5 gals. per 1000 sq. ft. (1 lb. "Benlate" per 100 gals. equals 1 tablespoonful per gal.)

Add required amount of "Benlate" to necessary volume of water in spray tank agitated by hydraulic or mechanical means; continuous agitation is required to keep the material in suspension. Do not tank mix "Benlate" with lime or alkaline pesticides such as Bordeaux mixture or lime sulfur.

Where use of spray oil is recommended (apples, peanuts, pecans, stone fruits), use a nonphytotoxic superior-type (60 to 70 second viscosity) spray oil; add as last ingredient to spray tank. Before applying other pesticides in conjunction with spray oil or immediately before or after oil application, consult product labels. Observe all cautions and limitations on labeling of all products used in mixtures.

Grazing or feeding livestock is prohibited on forage and hay of benomyl treated wheat, and on forage and hay of barley, oats, rye and wheat following seed treatment.

CHEMIGATION: Apply "Benlate" only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move irrigation systems only on crops specifically designated in the "Directions for Use" for that particular crop. Do not apply "Benlate" through any other type of irrigation system or on any other crops.

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

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.

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.

Specific Instructions for Public Water Systems:

1. 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.
2. 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.

- 3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 4. The pesticide injection pipeline must 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.
- 5. 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.
- 6. 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
- 7. Do not apply when wind speed favors drift beyond the area intended for treatment

Specific Instructions for Sprinkler Irrigation Systems:

- 1. 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
- 2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump
- 3. 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
- 4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops
- 5. 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.
- 6. 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
- 7. Do not apply when wind speed favors drift beyond the area intended for treatment
- 8. Good agitation is required in the injection tank

- 9. In moving systems, apply specified dosage of "Benlate" as a continuous injection. In nonmoving systems inject "Benlate" for 15 to 30 minutes at end of cycle. Use the least amount of water possible consistent with uniform coverage
- 10. Mix the amount of "Benlate" needed for acreage to be treated into the quantity of water determined during prior calibration. For moving systems inject into the system continuously for one complete revolution of the field. For nonmoving systems inject into system for the time established during calibration.
- 11. Stop injection equipment after treatment is completed and continue to operate irrigation equipment until all "Benlate" is flushed from system.

ALMONDS: Brown Rot Blossom Blight - Apply 1 to 1 1/2 lbs per acre at pink bud. Under severe disease conditions and on highly susceptible varieties, make a second application during half-'o'-full bloom

APPLES: For applications through cover sprays, use "Benlate" as a tank mixture as detailed below. Apply 200 to 500 gals. of spray per acre with hydraulic ground equipment or equivalent amount of products per acre with concentrate sprayers. Do not graze livestock in treated orchards

"Benlate" + "Manzate" 200 Fungicide: Scab, Powdery Mildew, Sooty Blotch, Flyspeck, Cedar Apple Rust, Quince Rust, Bitter Rot, Black Rot, Brown Rot - Use 2 to 3 ozs "Benlate" plus 12 ozs "Manzate" 200 per 100 gals of water; 1 qt spray oil may be added per 100 gals. Apply at 1/2" green tip and repeat at 7- to 14- day intervals (or as needed) through the cover sprays

Use the 3 oz. rate of "Benlate" and add spray oil to the spray mixture for varieties more susceptible to powdery mildew, and for scab if an application is missed during an infection period (apply as soon as possible after infection period in order to deactivate scab and to prevent further infection). Do not apply within 30 days of harvest

"Benlate" + Captan: Scab, Powdery Mildew, Sooty Blotch, Flyspeck, Bitter Rot, Black Rot - Use 2 to 3 ozs "Benlate" plus 12 to 16 ozs Captan 50WP Fungicide (or 7 1/2 to 10 ozs Captan 80WP) per 100 gals of water. Apply at 1/2" green tip and repeat at 7- to 14-day intervals (or as needed) through the cover sprays. Use the 3 oz rate of "Benlate" for varieties more susceptible to powdery mildew. If an application is missed during an infection period, apply the higher rates as soon as possible after the infection period in order to deactivate scab and to prevent further infection. NOTE: Spray injury may result if Captan is used with, immediately before, or closely following an oil spray

Postharvest Fruit Rots (Botrytis spp., Penicillium spp., Gloeosporium spp.) - Make a single application of 6 ozs "Benlate" per 100 gals anytime from 3 weeks before harvest up to day of harvest

AVOCADOS (Florida): Scab, Cercospora Spot, Anthracnose -Apply 1 to 2 lbs per acre; begin when buds swell and repeat at 3- to 4-week intervals. Do not apply within 30 days of harvest

BEANS: White Mold (Sclerotinia), Gray Mold, (Botrytis) - Use on beans grown as fresh vegetables, for processing, or for the dry bean market. Apply 1 1/2 to 2 lbs. per acre at 25% to 50% bloom, repeat at peak bloom. For narrow-row (20-40") irrigated dry beans in Montana, Nebraska, Colorado and Wyoming, apply at initial bloom and repeat 7 to 10 days later, only partial control of white mold may result

Do not apply within 14 days of harvest (28 days for lima beans) do not use where crop is grown only for forage purposes

BLUEBERRIES Apply 1 lb. per acre. Do not make more than 4 applications before harvest, do not apply within 21 days of harvest. **Mummy Berry, Botrytis Blossom Blight** - Apply at green tip and repeat at 7- to 10-day intervals through petal fall. **Anthraxnose Leafspot** - Apply when disease first appears and make one additional application 14 days later. After harvest, make up to 4 applications to the bushes at 14-day intervals as needed.

CABBAGE (Seed Crop - Pacific Northwest) White Blight (Sclerotinia Stalk Rot)- Apply 2 lbs. per acre by aircraft in 5 to 10 gals. of water; add a spreader-slicker to aid in wetting plants. Make first application at first petal fall; make two additional applications at 14-day intervals if conditions favor development of disease. Note: Do not graze treated areas; do not use seed or plant parts for food or feed purposes.

CANE BERRIES: RASPBERRIES, BLACKBERRIES, BOYSENBERRIES, LOGANBERRIES, DEWBERRIES: Botrytis, Powdery Mildew, Penicillium Rots - Apply 3/4 lb. per acre at early bloom (5 to 10%) and at full bloom; make up to 3 additional applications at 14-day intervals as needed. Do not apply within 3 days of harvest.

CELERY: Early Blight (Cercospora), Late Blight (Septoria) - Apply 1/4 to 1/2 lb. per acre; begin when disease first appears and repeat at 7- to 10-day intervals. Do not apply within 7 days of harvest.

CITRUS: Scab - Apply 1 1/2 to 3 lbs. per acre. Under conditions of severe disease pressure, apply at pinhead stage (just prior to first flush) and repeat at 2/3 petal fall, otherwise, make a single application at 2/3 petal fall.

Greasy Spot - Make a single application of 1 1/2 to 3 lbs. per acre during the period mid-June to mid-July.

Fruit Decay (Green Mold, Blue Mold, Stem-end Rot) - Make a single application of 1 to 2 lbs. per acre anytime from 3 weeks prior to harvest up to day of harvest.

Note: Do not graze livestock in treated groves.

CUCURBITS: CUCUMBERS, MELONS, PUMPKINS, SUMMER AND WINTER SQUASH: Target Spot (Cucumbers), Gummy Stem Blight, Powdery Mildew, Anthracnose - Apply 1/4 to 1/2 lb. per acre, for aerial application, use 1/2 lb. per acre. Begin applications when plants begin to run or when disease first appears, and repeat at 7- to 14-day intervals as needed. For target spot, use 7-day intervals as needed.

GRAPES: Botrytis Bunch Rot - Apply 1 to 1 1/2 lbs. per acre at first bloom (no later than 5% bloom) and repeat 14 days later if severe disease conditions persist. Make an additional application 3 to 4 weeks before harvest or when sugar begins to build, repeat 14 days later if conditions favorable for disease persist. "Benlate" does not control bunch rots caused by other organisms such as *Rhizopus* spp., *Alternaria* spp., and *Diplodia* spp.; these rots occur most frequently in high temperature areas such as the San Joaquin and Sacramento Valleys of California. **Powdery Mildew, Black Rot, Bitter Rot - East of Rockies** - Apply 3/4 to 1 1/2 lbs. per acre when foliage first develops and repeat at 14- to 21-day intervals, or as needed, until berries are full size.

Note: Do not apply within 7 days of harvest.

MACADAMIA NUTS (Hawaii): Botrytis Blossom Blight - Apply 1 3/4 lbs. per acre, a surfactant may be added to the spray to improve wetting of foliage. Begin applications 1 to 2 weeks prior to bloom, and repeat at 7- to 14-day intervals through the bloom period.

MANGOES: Anthracnose - Apply 1 to 2 lbs. per acre. Begin applications at first appearance of panicles (approx. 2" long), and repeat at weekly intervals until all fruits are set. Continue at 3- to 4-week intervals. Do not apply within 14 days of harvest.

MUSHROOMS: Veil Plum Spot (Dry Bubble)- Use 1 lb. per 100 gals. and apply to bed surface at the rate of 12 1/2 gals. per 1000 sq. ft. Apply immediately after casing and repeat at pinning. Alternatively, if disease has occurred, apply to beds after picking and repeat 10 days later. Do not apply within 2 days of harvest.

PEANUTS: "Benlate" + "Manzate" 200 Fungicide: Cercospora Leafspot, Rust, Ascochyta Web Blotch - Apply 1/4 lb. "Benlate" plus 1 1/2 lbs. "Manzate" 200 per acre; spray oil may be added at the rate of 1 pt. to 1 qt. per acre. Begin applications 35 to 40 days after planting or when disease first appears. Repeat at following intervals; for *Cercospora* leafspot, 10 to 14 days; for rust, 7 to 10 days; for *ascochyta* web blotch, 7 to 14 days. Do not apply within 14 days of harvest, do not graze or feed treated vines, hay, or hulls to livestock.

PEARS: Scab, Powdery Mildew, Sooty Blotch, Flyspeck - Use 4 to 6 ozs. per 100 gals. of water, apply 200 to 500 gals. of spray per acre with hydraulic ground equipment or equivalent amount of "Benlate" per acre with concentrate sprayers. Apply at 1/2" green tip and repeat at 7- to 14-day intervals (or as needed) through the cover sprays. If an application is missed during an infection period, use 6 ozs. per 100 gals. and apply as soon as possible after the infection period in order to deactivate scab and to prevent further infection. Do not graze livestock in treated orchards.

Postharvest Fruit Rots (Botrytis spp., Penicillium spp., Gloeosporium spp.) - Make a single application of 6 ozs. per 100 gals. anytime from 3 weeks before harvest up to day of harvest.

Overwintering Scab - Apply 8 ozs. per 100 gal. after harvest but before leaf drop. Thorough wetting of foliage is necessary.

PECANS: Pecan Scab, Brown Leafspot, Downy Spot, Powdery Mildew, Liverspot, Zonate Leafspot, Fungal Leaf Scorch - Apply 1/2 to 1 lb. per acre, use the higher rate on trees over 30 ft. tall. For aerial application (Ark., La., Miss., Okla., Tex., only), use 1 lb. per acre. Spray oil may be added at the rate of 1 to 2 gals. per acre. Apply at pre-pollination when young leaves are unfolding, when small nuts are forming, and thereafter at 3- to 4-week intervals. Do not apply after shucks split.

PINEAPPLE: Pineapple Butt Rot (Thielaviopsis paradoxa) - Use 1 1/4 lbs. per 100 gals. of water as a pre-plant dip treatment. Immerse seedpieces to give thorough wetting, remove and allow to drain.

RICE (Except California) - Do not apply within 21 days of harvest. Do not apply to stubble rice. Do not apply to fields where crayfish or catfish farming is practiced, nor drain water from treated areas into areas where such farming is practiced. Water drained from treated areas must not be used to irrigate other crops.

Rice Blast, Stem Rot - Apply 1 to 2 lbs. per acre at booting and repeat at heading.

SOYBEANS: Do not apply within 35 days of harvest, do not graze or feed treated soybean vines or hay to livestock.

Diaporthe Pod-and-Stem Blight, Anthracnose, Septoria Brown Spot, Cercospora Frogeye Leafspot, Purple Seed Stain - Apply 1/2 to 1 lb. per acre. For determinate varieties (generally grown in the South) apply at early pod set when majority of pods are 1/8 to 1/2" in length, for indeterminate varieties (generally grown in the North), apply when pods near the top of the plant are 1/2 to 1" in length. Make one additional application 14 to 21 days later.

STONE FRUITS, APRICOTS, CHERRIES, NECTARINES, PEACHES, PLUMS, PRUNES: Treatment is most effective if applied just before rainfall. For aerial application, fly over every row or center.

EAST OF ROCKY MOUNTAINS- Use 3/4 to 1 1/2 lbs. per acre on trees up to 12 ft. tall, over 12 ft., use 1 1/2 to 2 lbs. per acre.

Brown Rot Blossom Blight - Apply at bloom stages (apricots - red bud, peaches, nectarines - pink bud, cherries - early popcorn; plums and prunes - green tip); for this application only, "Benlate" may be used in combination with spray oil. Make a second application at 75% to 100% bloom. If blossoming is prolonged or conditions favorable for disease persist, apply at petal fall.

Fruit Brown Rot - After blossom blight sprays, make two preharvest applications beginning 3 weeks before harvest up to day of harvest

Peach Scab, Powdery Mildew - Use same schedule as for Brown Rot Blossom Blight plus applications at shuck split, shuck fall and 14 days later.

Cherry Leaf Spot - Use same schedule as for Brown Rot Blossom Blight and continue at 10- to 14-day intervals through harvest. Make an additional application 2 to 3 weeks after harvest.

WEST OF ROCKY MOUNTAINS - Use 1 1/2 to 2 lbs. per acre.

Brown Rot Blossom Blight - Apply at early bloom stages (apricots - red bud, peaches, nectarines - pink bud; cherries - early popcorn; plums and prunes - green tip); for this application only, "Benlate" may be used in combination with spray oil. If blossoming is prolonged or conditions favorable for disease persist, make a second application 14 days later.

Fruit Brown Rot - After blossom blight sprays, make a preharvest application (before rain) any time from 3 weeks before harvest to day of harvest. Make a second application if conditions favorable for disease persist or harvest is prolonged. Preharvest applications are most effective when applied with ground equipment, using sufficient volume to provide thorough and uniform coverage of fruit.

Powdery Mildew - Use same schedule as Brown Rot Blossom Blight plus applications at shuck split, shuck fall, and 14 days later

Cherry Leafspot - Use same schedule as for Brown Rot Blossom Blight and continue at 10- to 14-day intervals through harvest. Make an additional application 2 to 3 weeks after harvest

NOTE: "Benlate" does not control peach leaf curl, shot hole (*Coryneum* blight) or bacterial blast, nor fruit rots caused by *Rhizopus* spp and *Alternaria* spp. Do not graze livestock in treated orchards

STRAWBERRIES: Gray Mold (*Botrytis*) Powdery Mildew, Leaf Scorch, Leaf Blight, Leafspot - Apply 1 lb. per acre at 10% bloom and at full bloom, continue at 10- to 14-day intervals, using 1/2 lb per acre Anthracnose - Apply 1 lb. per acre when plants are established (plant bed or field) and repeat at 7-day intervals

Transplants: *Botrytis* Crown Rot, Leaf Spot - Use 1/2 lb per 100 gals of water. Immerse plants to give thorough wetting, remove and allow to drain

SUGARBEETS: *Cercospora* Leafspot - Apply 3/8 to 1/2 lb per acre. Begin application when disease first appears and repeat at 14- to 21-day intervals as needed. Do not apply within 21 days of harvest.

SUGARCANE: (HAWAII) Pineapple Disease (*Ceratocystis paradoxa*) - Apply to cut seedpieces either as a cold dip or a hot dip

Cold Dip - Use 1/2 lb per 100 gals of water (1:1600) Immerse seedpieces to give thorough wetting, remove and allow to drain

Hot Dip - Use 1/4 lb per 100 gals of water (1:3200) Maintain temperature of the dip at 50 degrees C. Soak seedpieces for 20 to 30 minutes, remove and allow to drain

NOTE: Do not use treated seedpieces for food or feed purposes

TOMATOES - Field Greenhouses: Gray Mold (*Botrytis*), Leaf Mold (*Cladosporium*), White Mold (*Sclerotinia*), *Cercospora* Leafspot, *Phoma* Leafspot - For field tomatoes, apply 1/2 to 1 lb. per acre; for greenhouse, use 1/2 to 1 lb. per 100 gals. of water. Begin applications when disease first appears and repeat at 7- to 14-day intervals as needed

ROSES, FLOWERS, ORNAMENTALS, SHADE TREES - Field and Greenhouse: Foliar Spray - Begin applications when disease first appears and repeat at 10- to 14-day intervals throughout the growing season; shorten interval during humid, rainy weather. Use at the following rates: 1/2 lb. per 100 gals. (1 tablespoonful per 2 gals.) - For Powdery Mildew, *Botrytis* Gray Mold. 1 lb. per 100 gals. - for Anthracnose (for shade trees and woody ornamentals, begin at bud break and make 2 or 3 additional applications at 10- to 14-day intervals); Black Spot of roses; *Cercospora*, *Entomosporium*, *Ramularia*, and *Septoria* Leaf Spots, *Ascochyta* and *Phomopsis* blights; *Didymellina* Leafspots of iris; *Corynespora* leafspot of Ligustrum; *Ovulinia* Blight of azalea and rhododendron (begin as flowers open); Scab of pyracantha and flowering crab. Addition of a surfactant to the spray mixture improves distribution of the spray on hard-to-wet plants such as roses. For aerial application, use 1/2 to 1 lb. per acre.

Drench Treatment - *Botrytis*, *Fusarium*, *Rhizodonia* and *Sclerotinia* stem, crown and root rots on herbaceous annuals, perennials and bedding plants; *Cylindrocladium* and *Thielaviopsis* rots on woody ornamentals such as azaleas, rhododendrons, conifers, and poinsettias - Use 1 lb per 100 gals., apply as a drench or heavy spray (1 to 2 pts. per sq. ft.) after transplanting into propagation beds or containers. Repeat at 2- to 4-week intervals during periods favorable for disease. "Benlate" does not control *Pythium* spp. or *Phytophthora* spp

Preplant Dip Treatment - For diseases listed under Drench Treatment, use 1 lb per 100 gals. of water, immerse plants or cuttings for 10 to 15 minutes, remove and allow to drain.

BULBS (Easter Lily, Tulip, Gladiolus, Daffodil, Iris): *Fusarium* and *Penicillium* Rots - Use 1-2/3 lbs. per 100 gals. of water (2 tablespoonfuls per gal.) Soak cleaned bulbs for 15 to 30 minutes in warm dip (80 to 85 degrees F), preferably within 48 hours after digging. Dry bulbs after treatment. If bulbs are for forcing, treat after bulbs have been heat-cured

STORAGE AND DISPOSAL

STORAGE: Never allow "Benlate" to become wet during storage. This may lead to certain chemical changes which will reduce the effectiveness of "Benlate" as a fungicide. Keep container tightly closed when not in use. Store product in original container only, away from other pesticides, fertilizer, food or feed

PRODUCT DISPOSAL: Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility

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.

NOTICE TO BUYER Purchase of this material does not confer any rights under patents of countries outside of the United States

NOTICE OF WARRANTY

Du Pont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with the directions under normal use conditions. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Du Pont. In no case shall Du Pont be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. **DU PONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

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6 BENLATE

ACCEPTED
with COMMENTS
in EPA Letter Dated:



27 1991

**BENLATE® FUNGICIDE
APPLES AND PEARS**

Use only as directed. This product is a fungicide, registered under EPA Reg. No. 352-354.

BENLATE® FUNGICIDE

(EPA REG. NO. 352-354)

FOR TREATMENT OF VARIOUS DISEASES OF APPLES AND PEARS

DIRECTIONS FOR USE

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

HOW TO USE

POME FRUITS: USE "BENLATE" ONLY IN COMBINATION WITH LABELED NON-BENZIMIDAZOLE FUNGICIDES (Such as Captan)

DO NOT USE "BENLATE" ALONE. See non-benzimidazole fungicide label for complete use instructions. Apply as a spray with properly calibrated and maintained equipment, using sufficient water to obtain thorough coverage of trees. If you have questions about calibration, you should contact state extension service specialists, equipment manufacturer or other experts.

CROP	DISEASE	RATES	TIMING AND USE INSTRUCTIONS	COMMENTS
APPLES	SCAB, POWDERY MILDEW	6.0-12.0 oz/acre (2.0-3.0 oz/100 gals dilute spray)	Begin applications at 1/2" green tip stage and repeat at 7 to 14 day intervals or as needed while risk of infection exists. Under severe disease pressure or on disease susceptible varieties, use higher rate.	DO NOT APPLY MORE THAN 80 OZ PER ACRE PER SEASON DO NOT APPLY WITHIN 14 DAYS OF HARVEST
	FL SPECK, SOOTY BLOTCH, BLACK ROT	6.0-12.0 oz/acre (2.0-3.0 oz/100 gals)	Begin application at petal fall or when risk of infection exists and repeat at 14 to 21 day intervals or as needed. Under severe disease pressure or on disease susceptible varieties, use higher rate.	DO NOT GRAZE LIVESTOCK IN TREATED ORCHARD
PEARS	SCAB POWDERY MILDEW	12.0-24.0 oz/acre (4.0-6.0 oz/100 gals dilute spray)	Begin applications at 1/2 inch green tip stage and repeat at 7 to 14 day intervals or as needed while risk of infection exists. Under severe disease pressure or on disease susceptible varieties, use higher rate. If an application is missed during a scale infection period, use the high rate and apply as soon as possible after the infection period to deactivate scab and to prevent further infection.	DO NOT APPLY MORE THAN 80 OZ PER ACRE PER SEASON DO NOT APPLY WITHIN 14 DAYS OF HARVEST DO NOT GRAZE LIVESTOCK IN LIVE IN TREATED ORCHARD
	FLY SPECK SOOTY BLOTCH	12.0-24.0 oz/acre (4.0-6.0 oz/100 gals dilute spray)	Begin application at petal fall or when risk of infection exists and repeat at 14 to 21 day intervals or as needed. Under severe disease pressure or on disease susceptible varieties, use higher rates.	

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NOTE: Do not use alkaline pesticides, such as basic copper sulfate, bordeaux mixture or lime sulfur as a tank mixture with "Benlate".

Do not contaminate water when disposing of equipment washwaters.

IMPORTANT

BEFORE USING "BENLATE", READ AND CAREFULLY OBSERVE THE CAUTIONARY STATEMENTS AND ALL OTHER INFORMATION APPEARING ON THE PRODUCT LABEL.

This bulletin contains new or supplemental instructions for use of this product which may not appear on package label. Follow the instructions carefully.

This label must be in the possession of the user at the time of pesticide application.

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