



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

MAR 31 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Janice K. Sharp
E.I. DU PONT DE NEMOURS AND CO., INC.
Barley Mill Plaza, Walker's Mill
Wilmington, DE 19880

Subject: Label Amendment Submission of 07/07/93 in Response to PR Notice 93-7
EPA Reg. No. 352-354
DUPONY BENLATE FUNGICIDE

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



Recycled/Recyclable
Printed with Soy/Canola Ink on paper that
contains at least 50% recycled fiber

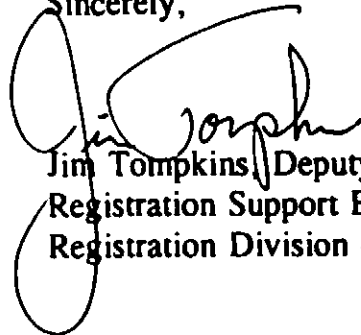
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division

Janice K. Sharp
E. I. DU PONT DE NEMOURS AND CO, INC.
BARLEY MILL PLAZA, WALKER'S MILL
WILMINGTON DE 19880

Comment for: EPA Reg Nr.352-354
DU PONT BENLATE FUNGICIDE

The following specific comments pertain to your WPS
labeling submission concerning the product
cited above:

Correct the typographical errors circled on your proposed
label.

4517

REGISTRATION CODE 0493-000
PACKAGE SIZE 6 - 2 POUND BAGS / CARTON 6 - 5 POUND BAGS / CARTON



BENLATE®

FUNGICIDE

WETTABLE POWDER

ACTIVE INGREDIENT	BY WEIGHT
Benomyl [Methyl 1-(butylcarbamoyl)-2-benzimidazolecarbamate]	50%
INERT INGREDIENTS	50%
TOTAL	100%

EPA Reg. No. 352-354

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.

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 after effects or permanent injury.

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

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

ACCEPTED
with COMMENTS
in EPA Letter Dated

PERSONAL PROTECTIVE EQUIPMENT

Handlers who may be exposed to the dilute through application or other task^S must wear:

- Long-sleeve shirt and long pants.
- Waterproof gloves.
- Chemical-resistant footwear plus socks.
- Chemical-resistant apron when cleaning equipment.

MAR 31 1981
Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
352-354

Handlers who may be exposed to the concentrate through mixing, loading, application, or other task^S must wear:

- Long-sleeve shirt and long pants.
- Waterproof gloves.
- Chemical-resistant footwear plus socks.
- Chemical-resistant apron when mixing or loading.

For exposures in enclosed areas, a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

For exposures outdoors, a 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.

ENGINEERING CONTROL STATEMENTS

Human flaggers must be in enclosed cabs.

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 part 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

The enclosed cabs must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 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.

PRECAUTIONARY STATEMENTS (continued on next page)

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PRECAUTIONARY STATEMENTS (continued)

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark, except for the registered aquatic use on rice. 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.

DIRECTIONS FOR USE

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

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

AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

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.
- Chemical-resistant footwear plus socks.

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 "Mertect" or "Topsin".

Do not tank mix "Benlate" with lime or alkaline pesticides such as Bordeaux mixture or lime sulfur.

Do not use on Greenhouse crops, including Hydroponic grown crops.

Do not use on any container grown crops.

Do not use on ornamentals.

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.

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.

6-17

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 beans, carrots, celery, peanuts, strawberries or tomatoes. Do not apply "Benlate" to any other crops using chemigation.

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 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.

BEST AVAILABLE COPY

CROP / RATE TABLE

Crop	Disease	Limit /Acre /Crop	Rate, Minimum Gallonage	Initial Application	Repeat Application	PHI	Comments
Almonds	Brown Rot Blossom Blight (<i>Monilina</i>)	48 oz (3 lbs)	16 - 24 oz/A (1-1.5 lb/A) 10 gal/A air	Pink bud	Full bloom or 10 days later, whichever comes first	0 days	Do not use "Benlate" alone. non-Benzimidazole fungicide on disease susceptible varieties during half to full bloom.
Apple	Scab (<i>Venturia</i>) Powdery Mildew (<i>Podosphaera</i>)	80 oz (5 lbs)	6-12 oz/A 2-3 oz/100 gal dilute spray	1/2" green tip	7-14 day intervals	14 days	Do not use "Benlate" alone. non-Benzimidazole fungicide on disease susceptible varieties intervals. Spray injury may result if Cap... immediately before, or close... Do not graze live stock in tre...
	Fly Speck (<i>Schizothyrium</i>) Sooty Blotch (<i>Gloeodes</i>) Black Rot (<i>Botryosphaeria</i>)			Petal fall, or when disease threatens	14-21 day interval		
	Fruit rots Botrytis spp. Pennocillium spp. Gloeosporium spp.		6 oz/100 gal (0.38 lb)	3 - 2 weeks before harvest	None		
Apricots							See Stone Fruits
Avocados (FL-only)	Scab (<i>Spaceloma</i>) Cercospora Spot, Anthracnose	224 oz (14 lbs)	16-32 oz/A (1-2 lb/A) 10 gal/A air	Bud swell	3-4 week intervals	30 days	Do not use "Benlate" alone. non-Benzimidazole fungicide
Barley							See Wheat
BEANS Dry Lima Snap	White Mold (<i>Sclerotinia</i>) Gray Mold (<i>Botrytis</i>)	64 oz (4 lbs)	24-32 oz/A (1.5-2 lb/A) 3 gal/A air	Initial bloom (25-50%)	7-10 days later	14 days dry/snap	Can use through irrigation system For narrow-row (20-40") irrigation apply at initial bloom and repeat control of white mold may res...
			25 gal/A ground	Pacific NW - prior to first petal fall/row fill		28 days Lima	
	32 oz (2 lb)/A 25 gal/A ground		Band application at 10 - 20 % bloom(Dry beans)		For band sprays, a second a heavy disease conditions. A at high pressure provides bes...		
Snap	Fusarium Root Rot		6 oz/50 lb (seed trt) 12-16 oz/A (in-furrow spray) 15-20 gal/A	Seed treatment - apply dry in planter box. In-furrow spray - apply at planting.	None		Place 1/2 seed in planter box over the seed surface and sli... Add the remaining 1/2 of the Label treated seed "Do not us... purposes. This seed treated... Note: Treatment does not co...

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CROP / RATE TABLE

Crop	Disease	Limit /Acre /Crop	Rate, Minimum Gallonage	Initial Application	Repeat Application	PHI	Comments
Blueberries	Botrytis Blossom Blight, Mummy Berry	54 oz (4 lbs) before harvest. 64 oz (4 lbs) after harvest	16 oz (1 lb)/A	Green tip	7-10 day intervals through petal fall	21 days	Do not apply more than 4 - 16 oz applications before harvest. Do not use "Benlate" alone. Use only in combination with a labeled non-Benzimidazole fungicide. Do not use on container grown Blueberries.
	Anthraco nose Leaf spot	128 oz total (8 lbs)	16 oz (1 lb)/A	When disease appears	Repeat 14 days later. After harvest, make 4 applications at 14 day intervals as needed.		
BRASSICA (seed trt. only) Broccoli Brussel Sprouts Cabbage Chinese Cabbage Cauliflower Collard Kale Kohlrabi Mustard Greens Rape (Canola) Rutabagas Turnips	Seedborne Blackleg (Phoma)		8 oz (0.5 lb) per 1/2 to 3 pints water per 100 lb seed	Seed treatment (slurry)	None	NA	Make a slurry of 8 oz. of Benlate in sufficient water (1/2 - 3 pts.) to uniformly treat 100 lbs. of seed. Apply means of a slurry-type treater specifically designed approved for this purpose. An EPA approved dye which will impart an unnatural color to the treated seed must be used during treatment. Seeds must be planted any time after being well cured and seeds to dry before planting. Label treated seed "Do not use treated seed for food or oil purposes. This seed treated with "Benlate" F
BRASSICA (seed crop only; all of the crops above except Rape)	Sclerotinia White Mold	96 oz (6 lbs)	32 oz (2 lb)/A 5 gal/A air	First petal fall	14 day intervals	NA	Add a spreader sticker to aid in wetting plants. Do not graze treated areas. Do not used seed or plant parts for food or feed.
BRASSICA Brussel Sprouts	White Mold (Sclerotinia) Gray Mold (Botrytis) Anthraco nose Ring Spot	96 oz (6 lbs)	32 oz (2 lb)/A 3-10 gal/A air	When disease appears	7 day intervals	7 days	

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CROP / RATE TABLE

Crop	Disease	Limit /Acre /Crop	Rate, Minimum Gallonage	Initial Application	Repeat Application	PHI	Comments
BRASSICA Chinese Cabbage Turnip Greens (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA only)	White Mold (<i>Sclerotinia</i>)	48 oz (3 lbs)	8 oz (0.5 lb)/A	When disease appears	7-10 day intervals	7 days	Do not make more than 6 application per crop p
	Cercospora/Cercosporella Leaf spots Anthracnose Powdery Mildew (<i>Erysiphe</i>)	24 oz (1.5 lbs)	8 oz (0.5 lb)/A 3-10 gal/A air	When disease appears	14 day intervals	14 days	Use limited to AL, AR, FL, GA, KY, LA, MS, NC, S Do not make more than 3 application per crop p
CANEBERRIES Raspberries Blackberries Boysenberries Loganberries Dewberries	Botrytis Powdery Mildew Penicillium Rots	60 oz (3.75 lb)	12 oz/A (0.75 lb/A)	Early bloom (5-10%)	Full bloom, followed at 14 day intervals	3 days	
Caprifigs (CA only) (mammae crop)	Endosepsis	4 oz (0.25 lb)	4 oz/25 gallons	Emmerse figs into solution	None	NA	Do not apply thorough irrigation systems.
Carrots	White Mold (<i>Sclerotinia</i>)	48 oz (3 lbs)	4-16 oz/A (0.25 - 1 lb) 5 gal/A air	When disease appears	7-10 day intervals	4 days	May be used through irrigation systems.
Celery	Early Blight (<i>Cercospora</i>) Late Blight (<i>Septoria</i>)	48 oz (3 lbs)	4-8 oz/A (0.25 - 0.5 lb) 5 gal/A air	When disease appears	7-10 day intervals	7 days	May be used through irrigation systems.
Cherries							See Stone Fruits
Chickpeas (ID and WA only)	Seedborne <i>Ascochyta rabiei</i>		10 oz/100 lb seed in 1/3 to 1/2 pints water	Seed treatment (slurry)	None	NA	Label treated seed "Do not use treated seed for or oil purposes. This seed treated with "Benlate" Will not control soil borne <i>Ascochyta</i> .
Citrus	Scab (<i>Elsinoe</i>)	96 oz (6 lbs)	24-48 oz/A (1.5-3 lb/A)	Light disease - 2/3 petal fall	None	1 day	Do not use "Benlate" alone. Use only in combination with a labeled non-benzimidazole fungicide or alternant sprays. Do not graze livestock in treated groves.
	Heavy disease - pinhead stage			2/3 Petal fall			
	Greasy Spot (<i>Mycosphaerella</i>)		24-48 oz/A (1.5-3 lb/A)	Mid June - mid July	None		
	Fruit decay (Green or Blue Mold, Stem-end-rot)		16-32 oz/A (1.0-2 lb/A)	Single application 3 weeks - 1 day before harvest	None		

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CROP / RATE TABLE

Crop	Disease	Limit /Acre /Crop	Rate, Minimum Gallonage	Initial Application	Repeat Application	PHI	Comments
CONIFERS (PINE) Austrian Red Scots	Tip Blight (<i>Diplodia</i>)	48 oz (3 lbs)	16 oz (1 lb)/100 gal	Bud break	10-14 days later just before needles emerge from sheath. Then again 10-14 days after needle emergence.	NA	Do not graze livestock in treated areas.
CONIFERS (FIR) Douglas	Swiss Needle Cast(<i>Phaecryptopus</i>) Rhabdocline Needle cast	80 oz. (5 lbs.)	16 oz./50-100 gals. (1 lb./50-100 gals)	Early May	4 weeks intervals; No more than 5 applications	NA	Addition of a spreader sticker will improve covera lower Gallonage with Mist-blower types of spraye gallonege with conventional sprayers. Do not graze livestock in treated areas.
CONIFERS (seedling trt.) Longleaf	Brown Needle Blight (<i>Scirrhia</i>)		1 oz/9.5 oz dry Kaolinite clay for seedling roots	Wet seedling roots in clean water, then apply "Benlate" -Kaolinite mixture to wet roots.	NA	NA	Do not apply mixture to seedling foliage. During process, avoid excessive drying of roots or expo temperatures greater than 90F or less than 32F.
Loblolly Longleaf Slash	Fusarium and Rhizoctonia Root Rot		2 oz/50 oz Kaolinite clay, plus enough water to make a slurry	Thoroughly cover seedling roots with slurry	NA	NA	"Benlate" does not control <i>Pythium</i> or <i>Phytophth</i> .
CUCURBITS Cucumber Melon Pumpkin Squash	Anthracnose (<i>Colletotrichum</i>) Gummy Stem Blight (<i>Didymella</i>) Powdery Mildew Target Spot (<i>Corynespora</i>)	32 oz (2 lbs)	4 - 8 oz/A (0.25 - 0.5 lb) 8 oz/A (0.5 lb) / 5- 10 gal/A air 50 gal/A ground	When disease appears or when runners form	7-14 day intervals	14 days	7-day interval recommended for target spot. Do not use in Greenhouses. May be used through irrigation systems.
Melons	Cephalosporium Wilt	8 oz (0.5 lbs)	8 oz / A	In-furrow at planting	None		Do not use less than 10 Gallons of solution per ac
Currants	Powdery Mildew (<i>Sphaerotheca</i>)	60 oz (3.75 lb)	12 oz/A (0.75 lb)	Early bloom	Full bloom followed by 7-14 day intervals	21 days	
Dandelions (FL only)	White Mold (<i>Sclerotinia</i>)	32 oz (2 lbs)	8 oz/A (0.5 lb)	When disease appears	7 day intervals	7 days	FL only

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CROP / RATE TABLE

Crop	Disease	Limit /Acre /Crop	Rate, Minimum Gallonage	Initial Application	Repeat Application	PHI	Comments
Garlic (CA only)	Penicillium clove rot	16 ox (1 lb)	16 oz/100 gal (1 lb/100 gal)	Completely immerse garlic cloves in suspension for a min. of 5 minutes	None		Solution tank must be agitated continuously by mechanical means. After treatment remove cloves from solution and over sand. Dry cloves after treatment and prior to planting.
Grapes	Botrytis Bunch Rot	96 oz (6 lbs)	16 - 24 oz/A (1-1.5 lb/A) 15 gal/A air	First bloom (1-5%)	14 days after first bloom; Additional sprays 3-4 weeks before harvest (sugar increase) and 14 days later if conditions favor disease.	7 days	"Benlate" does not control Rhizopus, Alternaria, or Bunch Rots. These rots occur most frequently in high temperatures such as San Joaquin and Sacramento Valleys of California. Do not use "Benlate" alone. Use only in combination with a labeled non-Benzimidazole fungicide. Do not use "Benlate" on grapes that are grown for raisins. Apply immediately after cutting and before rain or spores come in contact with fresh wood.
	Anthracnose (<i>Elsinoe</i>) Isariopsis Leaf spot		24 oz (1.5 lb)/A 15 gal/A air	4-10" shoot growth	10-14 day intervals until harvest, 4 week intervals to vines after harvest		
	Eutypa Dieback		3.2 oz/gal	Immediately after pruning by painting on or spraying	NA		
Grapes (East of Rockies)	Powdery Mildew (<i>Uncinula</i>) Black Rot (<i>Guignardia</i>) Bitter Rot (<i>Melanconium</i>)	96 oz (6 lbs)	12-24 oz/A (0.75-1.5 lb/A) 15 gal/A air	Foliar emergence	14-21 day intervals		
Loganberries							See Caneberries
Macadamia Nuts (HI only)	Botrytis Blossom Blight	84 oz (5.25 lb)	28 oz/A (1.75 lb)	7-14 days before bloom	7-14 day intervals through bloom		
Mangoes	Anthracnose	192 oz (12 lb)	16-32 oz/A (1-2 lb/A)	Panicle emergence (2")	7 day intervals through fruit set, followed by 3-4 week intervals	14 days	Do not use "Benlate" alone. Use only in combination with a labeled non-Benzimidazole fungicide.
Melon							See Cucurbits

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CROP / RATE TABLE

Crop	Disease	Limit /Acre /Crop	Rate, Minimum Gallonage	Initial Application	Repeat Application	PHI	Comments
Mushrooms (<i>Agaricus</i>)	Verticillium Spot (Dry Bubble)	4 oz per (0.25 lb) 1000 sq ft / crop	16 oz/100 gal (use 12.5 gal per 1000 sq ft bed)	In new bed: apply after casing, repeat at pinning	In production bed: apply after picking, repeat 10 days later	2 days	
Nectarines							See Stone Fruits
Onions (seed crop only; CA only)	Botrytis		16 oz (1 lb)/A	When disease appears	7 day intervals		Do not use treated Onions for food or feed.
Oranges							See Citrus
Papaya	Anthrachnose Powdery Mildew (<i>Oidium</i>)	224 oz (14 lbs)	16-32 oz/A (1-2 lb/A)	Bud expansion	3-4 week intervals	14 days	Do not make more than 7 applications per year.
Peaches							See STONE FRUITS
Peanuts	Cercospora Leaf spot Rust (<i>Puccinia</i>) Ascochyta Web Blotch	48 oz (3 lbs)	4 oz/A (0.25 lb) 5 gal/A air	35-40 days after planting or when disease appears	Leaf spot 10-14 days Rust 7-10 days Web Blotch 7-14 days	14 days	Do not use "Benlate" alone. Use only in combinat labeled non-Benzimidazole fungicide such as "Ma DF at 1 1/2 lb per acre. May be used through irrigation systems.
	Blackhull (<i>Threlaviopsis</i>)		4 oz/A				
Pears	Scab (<i>Venturia</i>) Powdery Mildew (<i>Phyllactinia</i>)	80 oz (5 lbs)	12-24 oz/A (0.75-1.50 lb/A)	1/2" green tip	7-14 day intervals	14 days	Do not use "Benlate" alone. Use only in combinat labeled non-Benzimidazole fungicide. Do not graze livestock in treated orchards .
	Flyspeck, Sooty Blotch		(4 to 6 oz/100 gal dilute spray)	Petal fall or when disease threatens	14-21 day intervals		
	Fruit rots Botrytis spp. Pennocillium spp. Gloeosporium spp.		6 oz/100 gal (0.38 lb)	3 - 2 weeks before harvest	None		
Pecans	Scab (<i>Fusicladium</i>) Brown Leaf spot (<i>Cercospora</i>) Downy Spot (<i>Mycosphaerella</i>) Powdery Mildew (<i>Microsphaera</i>) Liverspot Zonate Leaf spot Fungal Leaf Scorch.	48 oz (3 lbs)	8-16 oz/A (0.5-1.0 lb/A) 10 gal/A air	Bud break or leaf unfolding	Nut formation, and 3-4 week intervals thereafter	15 shuck split	Do not use "Benlate" alone. Use only in combinat labeled non-Benzimidazole fungicide. Use higher rates on trees over 30 ft. tall. Spray oils may be added. Do not apply after shuck split.

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CROP / RATE TABLE

Crop	Disease	Limit /Acre /Crop	Rate, Minimum Gallonage	Initial Application	Repeat Application	PHI	Comments	
Pine							See Conifers	
Pineapple (seed piece)	Pineapple Butt Rot (<i>Thielaviopsis paradoxa</i>)	NA	20 oz/100 gals (1 1/4 lbs/ 100 gals)	Immerse seed pieces to give thorough wetting; remove and allow to drain.	None	NA		
Pistachio (CA only)	Shoot Blight (<i>Botrytis</i> , <i>Botryosphaeria</i>)	32 oz (2 lbs)	24-32 oz/A (1.5-2 lb/A) 100 gal/A grnd.	First bloom	None		Do not apply by air.	
Plums							See Stone Fruits	
Pome Fruits							See Apples, Pears	
Pumpkin							See Cucurbits	
Rape							See Brassica Crops	
Raspberries							See Caneberries	
Rice (excludes CA)	Blast (<i>Pycularia</i>)	64 oz (4 lbs)	16 - 32 oz (1.0 - 2.0 lb)/A 3-10 gal/A air	Late booting (just prior to head emergence)	7-10 days later or at 90% head emergence from boot	21 days Straw	The most effective way to control blast is to use preventive treatment program. Do not apply to field or drain treated water into crayfish or catfish are farmed. Do not apply to stubble rice . Do not use treated water to irrigate other crop. Do not use in CA. <u>Toxic to fish. Keep out of lakes streams or ponds apply when weather conditions favor drift from.</u>	
	Sheath Blight (<i>Rhizoctonia</i>)			Scout at 1/2" internodes, spray at 5-15% infection				10-14 days later
	Stem Rot (<i>Sclerotium</i>) Narrow Brown Leaf spot (<i>Cercospora</i>) Leaf smut (<i>Entyloma</i>) Sheath Rot (<i>Acrocyndrium</i>)			Between 1/2-3/4" internodes and late booting				14 days later
Rutabagas							See Brassicas	
SEED CROPS (Grown for seed ; CA only) Anise Brussel Sprouts Cabbage Cardoon Cauliflower Chickory	Powdery Mildew		16 oz (1 lb)/A 5 gal/A air	When disease appears	7-14 day intervals	NA	Do not use seed or plant parts for food or feed	

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CROP / RATE TABLE

Crop	Disease	Limit /Acre /Crop	Rate, Minimum Gallonage	Initial Application	Repeat Application	PHI	Comments
SEED CROPS (Grown for seed ; CA only) Corn Cucumbers Dill Melons Peas Peppers, Bell Squash	Powdery Mildew		16 oz (1 lb)/A 5 gal/A air	When disease appears	7-14 day intervals	NA	Do not use seed or plant parts for food or feed pu
Spinach (seed treatment)	Fusarium Wilt		16-32 oz/100 lb seed (1 - 2 lbs) in 1/2 to 2 pints water	Treat seed using slurry-type treater	None		Label treated seed "Do not use treated seed for or oil purposes. This seed treated with "Benlate"
Soybeans (seed or food crop)	Diaporthe Pod and Stem Blight Anthracnose (<i>Glomerella</i>) Septoria Brown Spot Cercospora Frog-eye Leaf spot Purple Seed Stain	32 oz (2 lbs)	8-32 oz/A (0.5-2 lb/A) 5-10 gal/A air	Early pod set (pods 1/8 - 1/4" long at 1 of 4 main stem upper nodes)	14-21 days later (as needed)	35 days	Do not graze or feed vines or hay to livestock.
	Aerial Blight (<i>Rhizoctonia</i>)		16 oz (1 lb)/A 5-10 gal/A air	When disease threatens	14-21 days later (as needed)		
Squash							See Cucurbits
STONE FRUIT Apricots Nectarines Peaches Plums Prunes continued on next page	Brown Rot Blossom Blight (<i>Monilinia</i>) Powdery Mildew Peach Scab (<i>Venturia</i>)	64 oz (4 lbs)	16-32 oz (1-2 lb) per A East of Rockies 24-32 oz (1.5-2 lb) per A West of Rockies 10 gal/A air	Apply at early bloom before infection occurs: apricots - early red bud peaches/nectarine s - pink bud plums/prunes - green tip	<u>Brown Rot Blossom Blight</u> : full bloom or 10 days later with a non-benzimidazole fungicide <u>Powdery Mildew or Peach Scab</u> : full bloom or 10 days later. At shuck fall and 14 days later, use a non-Benzimidazole fungicide	3 days	Do not use "Benlate" alone. Use only in combinat labeled non-Benzimidazole fungicide. For aerial application, fly over every row or cent "Benlate" does not control peach leaf curl, shot h bacterial blast, nor fruit rots caused by <i>Rhizopus</i> : <i>Alternaria</i> spp. Do not graze livestock in treated orchards. Peach scab is not labeled west of the Rockie mo

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CROP / RATE TABLE

Crop	Disease	Limit /Acre /Crop	Rate, Minimum Gallonage	Initial Application	Repeat Application	PHI	Comments	
STONE FRUIT Apricots Nectarines Peaches Plums Prunes	Fruit Brown Rot, (<i>Monilinia</i>)			3-21 days before harvest	Use additional non-Benzimidazole sprays as needed	3 days	Do not use "Benlate" alone. Use only in combination with non-Benzimidazole fungicide. For aerial application, fly over every row or center. "Benlate" does not control peach leaf curl, shot hole, or blast, nor fruit rots caused by <i>Rhizopus</i> spp. and <i>Alter</i> Do not graze livestock in treated orchards. Peach scab is not labeled west of the Rocky mountain	
	Peaches		Cytospora Canker	2 Tbsp/16 oz wound dressing	During dormancy (may use spray oil)			Full bloom to petal fall, and at shuck fall. As a wound dressing, apply to pruned or cut surface.
	Plums and Prunes		Black Knot, (<i>Dibotryon</i>)	12-24 oz/A 10 gal/A air	Early bloom (green tip)			7-10 day intervals through mid-June
Cherries	Brown Rot Blossom Blight (<i>Monilinia</i>) Powdery Mildew Cherry Leaf spot (<i>Mycosphaerella</i>)	96 oz (6 lbs)	16-32 oz (1-2 lb) per A East of Rockies 24-32 oz (1.5-2 lb) per A West of Rockies 10 gal/A air	Early popcorn stage	Blossom Blight - Full bloom or 10 days later with non-Benzimidazole fungicide Powdery Mildew - Full bloom or 10 days later. Use a non-Benzimidazole fungicide at shuck fall and again 14 days later. Cherry Leaf spot - 10-14 day intervals; one application 2-3 weeks after harvest.	3 days		
			Fruit Brown Rot					
Strawberries	Gray Mold (<i>Botrytis</i>) Powdery Mildew Leaf Scorch Leaf Blight Mycosphaerella Leaf spot	80 oz (5 lbs)	8-16 oz/A (0.5-1 lb/A) 10 gal/A air	16 oz/A at 10% bloom and at full bloom	8 oz/A at 10-14 day intervals	0 days	Do not use "Benlate" alone. Use only in combination with non-Benzimidazole fungicide. May be used through irrigation systems.	
			Anthrachnose	16 oz (1 lb)/A 10 gal/A air	Plant establishment			7 day intervals

CROP / RATE TABLE

Crop	Disease	Limit /Acre /Crop	Rate, Minimum Gallonage	Initial Application	Repeat Application	PHI	Comments
Sugarbeets	Cercospora Leaf spot		6-8 oz/A 5-10 gal/A air	When disease appears	14-21 day intervals	21 days	Do not use "Benlate" alone. Use only in combination with labeled non-Benzimidazole fungicide.
Tomatoes	Gray Mold (<i>Botrytis</i>) Leaf Mold (<i>Cladosporium</i>) White Mold (<i>Sclerotinia</i>) Cercospora Leaf spot Phoma Leaf spot Target spot (<i>Corynespora</i>)	80 oz (5 lbs)	Field - 8-16 oz/A (0.5-1 lb/A) 5 gal/A air 50 gal/A ground	When disease appears	7-14 day intervals	0 days	Do not use "Benlate" alone. Use only in combination with labeled non-Benzimidazole fungicide. May be used through irrigation systems.
Turnips and Turnip Greens							See Brassica
Wheat	Strawbreaker Foot Rot (<i>Pseudocercospora</i>)	48 oz (3 lbs)	12-32 oz/A (0.75-2 lb/A) 5-10 gal/A air	At full tillering but before elongation		21 days	Where resistance is suspected or known to exist, do not use "Benlate" alone. Use in combination with non-Benzimidazole fungicide. Do not allow live stock to graze in treated field.
Wheat	Powdery Mildew (<i>Erysiphe</i>) Leaf Rust (<i>Puccinia</i>) Helminthosporium Leaf Blight		4-8 oz/A (0.25-0.5 lb/A) 15 gal/A -ground 5 gal/A -air	Boot stage to early heading	14 days later	21 days	For effective control of these diseases, tank mix with Manzate 200/A. Time applications to keep flag disease. Do not use "Benlate" alone.
Wheat	Septoria Leaf and Glume Blotch Powdery Mildew (<i>Erysiphe</i>) Leaf Rust	48 oz (3 lbs)	4 oz/A (0.25 lb/A) 15 gal/A -ground 5 gal/A -air	Boot stage	14 days later		Tank mix with 2-4 oz(0.125 -0.25 lb) Bayleton/A. Time applications to keep flag leaf free of disease.
Wheat, Oats, Barley, Rye (seed treatment)	Bunt, Common Bunt, Flag Smut, Loose Smut, Covered Smut, Oat Smut		1-2 oz/bushel seed	Dry or slurry seed treatment			Label treated seed "Do not use treated seed for animal or oil purposes. This seed treated with "Benlate". Do not graze plants grown from treated seed.
Yams (PR only)	Anthrachnose (<i>Collectotrichum</i>)	224 oz (14 lbs)	16-32 oz/A (1-2 lb/A)	When disease appears	3-4 week intervals	90 days	

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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.

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