

707-180 (P. 4)

US ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF PESTICIDES PROGRAMS  
REGISTRATION DIVISION (75-767)  
WASHINGTON, DC 20460

EPA REGISTRATION NO.

707-180

DATE OF ISSUANCE

JAN 8 1986

TERM OF ISSUANCE

NOTICE OF PESTICIDE:  REGISTRATION  
 REREGISTRATION  
(Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended)

NAME OF PESTICIDE PRODUCT

Lithane M-45 DF/75 Agricultural  
Fungicide

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

Rohm and Haas Company  
Independence Mall West  
Philadelphia, PA 19105

161 155928  
18 L

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

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

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

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

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

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Make the labeling changes listed below before you release the product for shipment:
  - a. Add the phrase "EPA Registration No. 707-180."
  - b. Under apples, the States of Ohio, Pennsylvania, and South Carolina are listed twice in the restrictions column.
  - c. Under wheat, the line "jointing stage and repeat at 7 to 10" was omitted.
3. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 Enclosure for a further description of final printed labeling.

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

*Henry M. Jacoby*

DATE

1/8/86

EPA Form 8570-6 (Rev. 5-76)

PREVIOUS EDITION MAY BE USED UNTIL SUPPLY IS EXHAUSTED.

88264:Fields:RD-85-05;KENCO:10/08/85;10/21/85;DKD:VO

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

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

  
Henry M. Jacoby  
Product Manager (21)  
Fungicide-Herbicide Branch  
Registration Division (TS-767)

Enclosure

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**ROHM AND HAAS COMPANY**

INDEPENDENCE MALL WEST  
PHILADELPHIA, PENNSYLVANIA 19105



**DITHANE<sup>R</sup> M-45 DF/75 AGRICULTURAL FUNGICIDE**

EPA Reg. No. \_\_\_\_\_

**ACTIVE INGREDIENTS:**

Mancozeb (A coordination product of zinc ion  
and manganese ethylene bisdithiocarbamate) ..... 75%

In which the ingredients are:

Manganese<sup>++</sup> ..... 15%  
Zinc<sup>++</sup> ..... 1.87%  
Ethylene bisdithiocarbamate ion (C<sub>4</sub>H<sub>6</sub>N<sub>2</sub>S<sub>4</sub>)-- ..... 58.13%

INERT INGREDIENTS ..... 25%  
100%

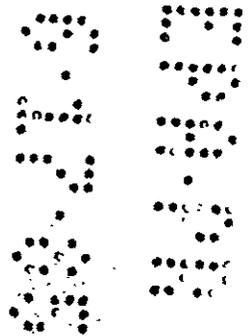
EPA Reg. No. 707-  
EPA Est. No. 707-PA-1  
U.S. Patent 3,379,610

ACCEPTED  
with COMMENTS  
by EPA Letter Dated:

**JAN 8 1986**

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
707-180

(0126H/327Z)  
5/14/85



DITHANE(R) M-45 DF/75 AGRICULTURAL FUNGICIDE  
EPA REG. NO. \_\_\_\_\_

DIRECTIONS FOR USE

NOTE: Before using this product, read the entire Precautionary Statements, Directions for Use and the Conditions of Sale and Warranty. If the Conditions of Sale and Warranty are not acceptable, return product unopened within thirty days of purchase to place of purchase.

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

REENTRY AND WORKERS PROTECTION STATEMENTS

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. 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.

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. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Written warnings must include the following information:

CAUTION

(Insert area of field description) treated with DITHANE M-45 DF/75 fungicide on (insert date of application). Do not enter treated areas without protective clothing until sprays have dried. In case of accidental exposure: Call a doctor (physician), clinic or hospital immediately. Explain that the victim has been exposed to DITHANE M-45 DF/75 fungicide and describe his condition. For further information see the "Statement of Practical Treatment."

Oral warnings must include the same information that is in the written warnings.

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## GENERAL USE INFORMATION

DITHANE M-45 DF/75 fungicide is a broad-spectrum protectant fungicide recommended for the control of fruit, field, vegetable, and ornamental crop diseases. Optimum disease control is achieved when the fungicide is applied in a regularly scheduled preventative spray program. The addition of an agricultural surfactant will improve fungicide performance by providing a more uniform spray deposit, increased foliar redistribution, and fungicide retention during periods of wet weather.

## USE RATE DETERMINATION

Carefully read, understand, and follow label use rates and limitations.

Under low disease conditions, minimum per application label rates can be used while maximum label rates and shortened spray schedules are recommended for severe or threatening disease conditions.

For proper application, determine the number of acres to be treated, the recommended label use rate, and the gallonage to be applied per acre. Prepare only the amount of spray solution required to treat the measured acreage. Careful calibration of spray equipment is recommended prior to use.

When applied via hand sprayers, 1 pound DITHANE M-45 DF/75 fungicide per 100 gallons or acre is equivalent to 1 level tablespoon per gallon spray solution.

## MIXING

Slowly place into spray tank as it is being filled or thoroughly premix in a nurse tank for concentrate or aircraft sprayers. Add other co-applied fungicides, insecticides, growth regulators, micronutrients, and spray adjuvants after DITHANE M-45 DF/75 fungicide has been placed into suspension.

When preparing spray solutions for use in a hand sprayer, premix as a slurry in a small container, and then add to sprayer containing 1/3 to 1/2 the desired final water volume.

## COMPATIBILITY

DITHANE M-45 DF/75 fungicide is compatible with most commonly used agricultural fungicides, insecticides, and growth regulators. When preparing tank mixes, user should consult spray compatibility charts or State Extension Service Specialists prior to actual use.

## SPRAY ADJUVANTS

The addition of agricultural surfactants, to DITHANE M-45 DF/75 fungicide sprays, will improve initial spray deposits, fungicide redistribution, and weatherability. The following spray adjuvants have been especially formulated to optimize the performance of foliar applied agricultural chemicals:

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- TRITON(R) CS-7      A spreader-binder designed specifically for use in concentrate and low volume sprays applied by aircraft or ground equipment.
- TRITON(R) B-1956(R)      A water-dispersible, resin-based nonionic surfactant which resists re-wetting and removal by rain. Effective with dilute sprays applied by ground equipment.
- TRITON(R) AG-98      A low foam nonionic general purpose spray adjuvant. May be used in dilute or concentrate sprays applied by aircraft or ground equipment.

Place DITHANE M-45 DF/75 fungicide into suspension prior to adding an adjuvant to the spray mixture. Read and carefully observe the cautionary statements and all other information appearing on both product labels prior to spray preparation.

#### APPLICATION

##### Ground:

Thorough coverage foliar sprays generally result in optimum disease control. To achieve good coverage use proper spray pressure, gallonage per acre, nozzles (generally hollow cone), discs (generally D-5 to D-7), nozzle spacing, and tractor speed. Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration.

##### Hand Sprayers:

Thoroughly spray plant foliage until run-off.

##### Aerial:

A uniform initial spray deposit over the crop canopy generally results in optimum disease control. Each aircraft should be prechecked for droplet size, uniformity of spray pattern, swath width, and spray volume.

Nozzle selection - Hollow cone brass nozzles with a D series orifice disc and core (whirlplate) are recommended. Nozzles should point straight down or slightly backward.

Swath width - For most field and vegetable crops, swaths just beyond the wingspan of 36 to 40 feet for light aircraft and up to 45 feet for heavier aircraft are suggested. Optimum swath for helicopters is usually 5 to 10 feet beyond normal boom length.

Spray volume - On vegetable and field crops, 2 to 3 gallons of spray per acre is generally optimum; orchards and vineyards can be handled with spray volumes of 5 gallons per acre. Some tall or dense foliage crops, requiring greater penetration to the lower leaf surface, will require higher spray volumes.

Altitude - For most crops, the spray boom should be positioned 5 to 10 feet above the crop canopy.

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Flagging - Swaths should be marked at the end of the field with permanent flags or by a flagman. Swaths should be measured accurately with a chain or other device except when rows can be accurately counted.

DISEASE MONITORING:

DITHANE M-45 DF/75 fungicide is a broad spectrum protectant fungicide. If not applied on a routine protectant spray schedule, crops should be scouted on a weekly basis. Fungicide application should be made, at the recommended label use rate and spray schedule, at the first sign of disease, report of disease in the area, or during environmental conditions favorable for disease development.

RESTRICTIONS:

Users should carefully read, understand, and follow all use restrictions prior to using DITHANE M-45 DF/75 fungicide.

DIRECTIONS FOR USE:

Rate of  
 DITHANE M-45 DF/75 Fungicide  
 Per Application  
 lb./A

Remarks  
 (Also Refer to Directions For Use)

Restrict

Crop

Diseases Controlled

VEGETABLES:

Asparagus

Rust

2.0

Start applications when rust first appears and repeat at 10 day intervals. Four applications are usually sufficient.

Apply only on after spears h

Cantaloupes

Refer to melons

Carrots

Alternaria leaf spot  
 Cercospora leaf spot

1 1/2 to 2

Apply in 75 to 125 gallons spray per acre. Start applications when disease first threatens and repeat every 7 to 10 days as needed.

Do not apply w harvest.

Do not use tre food or feed.

The addition of a TRITON surfactant to spray solutions will improve performance.

Celery

Early blight  
 Late blight

2

Start applications in the plant bed when plants first come through the ground. Make further applications at 3 to 5 day intervals until plants are set in the field. Continue field applications on a 7 day schedule.

Do not apply harvest.

Remove excess residue remaining at harvest by stripping, trimming, and washing.

The addition of a TRITON surfactant to spray solutions will improve performance.

(0126H/327L)

Rate of  
DITHANE M-45 DF/75 Fungicide  
Per Application  
1b./A

Remarks  
(Also Refer to Directions For Use)

Restrictions

Crop	Diseases Controlled	Rate of Application	Remarks	Restrictions
Corn (sweet, popcorn)	Helminthosporium leaf blights common rust	1½	Use sufficient water for thorough coverage. Start applications when disease first appears and repeat at 4 to 7 day intervals.  The addition of TRITON B-1956 or TRITON CS-7 to spray solutions will improve performance.	Do not apply within 7 days of harvest.  Do not feed treated forage to livestock.
Cucumbers	Refer to melons			
Fennel	Refer to celery.			Do not apply within 7 days of harvest.
Melons	Alternaria leaf spot Anthracnose Cercospora leaf spot Downy mildew Gummy stem blight Scab	2 to 3¼	Start applications when plants are in the two leaf stage and repeat at 5 to 7 day intervals.  Use sufficient water and direct spray, to provide thorough coverage of both upper and lower leaf surfaces.	Do not apply within 5 days of harvest.
Muskmelons	Refer to melons			

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spray solutions will improve performance.

Do not allow spray or drift to contact bulbs after lifting from soil.

(furrow drench)	Smut	3 $\frac{1}{4}$	Apply 3 lbs. per acre as a furrow drench at time of planting onion seeds.  Use 75 to 125 gallons water per acre.	Do not use more than 2.4 actual per acre (29,000 feet of furrow) with an row spacing).
Potatoes	Early blight Late blight	1 to 2	Begin application when plants are 4 to 6 inches high by applying 1 lb. per acre. As the vines increase in size, apply 1 $\frac{1}{2}$ to 2 lbs. per acre on a 7 to 10 day spray schedule throughout the season. Reduce the spray interval under heavy disease conditions or weather conditions favorable for rapid disease development.  The addition of a TRITON surfactant to spray solutions will improve performance.	
(Seedpiece treatment)	Fusarium decay Seedborne common scab	-	Dip whole or cut potato tubers in 1 1/3 lb. DITHANE M-45 DF/75 fungicide per 50 gallons of water. Place treated tubers in a clean container following treatment and plant as soon as possible. Spread treated seedpieces in a cool place if held before planting.	Do not use treated seed for food or feed purposes
Squash, summer		Refer to melons		

(0126H/327Z)

rate of  
DITHANE M-45 DF/75 Fungicide  
Per Application

Crop	Diseases Controlled	Rate of Application		Remarks (Also Refer to Directions For Use)	Restrictions
		lb./A	lb./100 sq. ft.		
Tomatoes	Anthracnose Early blight Gray leaf spot Late blight Leaf mold	1½ to 3¼	-	Start applications when seedlings emerge or transplants are set and repeat at 7 day intervals throughout the season.  The addition of a TRITON surfactant to spray solutions will improve performance.	Do not apply within 5 days of harvest.
Watermelons	Refer to melons				
<b>FRUITS AND NUTS:</b>					
Apples	Bitter rot Black rot Brown rot Fly speck Rusts Scab Sooty blotch	10 3/4	1 to 2	For apple scab control, apply every 7 to 14 days throughout the season starting with a green tip of delayed dormant spray and continue through cover sprays. For control of rust diseases, begin applications during bloom period and for other diseases listed, begin applications at first cover spray. When using low volume air blast sprays, adjust the mixing rate accordingly.  To avoid uneven, blotchy residues from high volume dilute sprays add 2 to 3 ounces TRITON B-1956 per 100 gallons of spray in the last 1 or 2 applications before harvest. Concentrate applications usually leave a uniform, even deposit.	Do not apply within 21 days of harvest in Arkansas, Delaware, Illinois, Indiana, Kansas, Kentucky, Maryland, Missouri, New Jersey, North Carolina, Ohio, Pennsylvania, South Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia, or within 30 days of harvest in other states not mentioned above.  Do not graze livestock in treated areas.
Bananas	Sigatoka	2 to 4¼	-	Apply when leaves first appear and repeat every 2 to 3 weeks or as required. Use sufficient water to provide adequate coverage.  The addition of a TRITON surfactant to spray solutions will improve performance.	

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Cranberries	Fruit rots	3/4 to 6 1/2	-	Start applications at mid-bloom and repeat at 7 to 10 day intervals as required.	Do not apply within 30 d harvest.
Grapes (California only)	Bunch rot Deadarm Downy mildew	1 1/3 to 4 1/4	-	Apply in sufficient water to provide thorough coverage starting when new shoots are 1/2 to 1 1/2 inches long. Repeat when shoots are 3 to 5 inches long, when shoots are 8 to 10 inches long, and then at 10 to 14 day intervals until fruit is set.	Do not apply after fruit (California only).
(Other areas)	Black rot Deadarm Downy mildew				Do not apply within 66 d harvest.
Papaya	Anthracoise Phytophthora fruit rot	2 to 2 3/4	-	Start applications at flowering and continue at 7 to 14 day intervals. Direct spray to crown and blossom area.  Use 6 to 8 ounces TRITON B-1956 spreader-sticker per acre.	

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Crop	Diseases Controlled	Rate of DITHANE M-45 DF Fungicide Per Application		Remarks (Also Refer to Directions For Use)	Restrictions
		lb./A	lb./100 gals.		
Pears	Refer to apples				Do not apply within 15 days of harvest.  Do not graze livestock in treated areas.

Pear psylla nymphs	10 3/4	1 1/4	Effective control of young nymphs can be obtained by using 2 to 3 consecutive sprays. Applications should start at petal fall and continue at 7 to 10 day intervals. As new growth occurs, it must be protected by spraying. Timing of sprays should coincide with the initial appearance of pear psylla nymphs. Specific timing of sprays should be obtained from State Agricultural Experiment Station workers or State Extension Service specialists.
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(Postharvest sprays)		1 1/2 to 2	Use a full coverage spray of 800 to 1000 gallons spray per acre. Timing of spray should be under direction of State Agricultural or Extension Service workers.
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Quince	Refer to apples			Do not apply within 15 days of harvest.  Do not graze livestock in treated areas.
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Crop	Diseases Controlled	Rate of		Remarks (Also Refer to Directions For Use)	Restrictions
		DITHANE M-45 DF/75 Fungicide Per Application			
		lb./A			
FIELD CROPS:					
Barley	Refer to wheat				
Corn (Field, Hybrid Seedcorn)	Helminthosporium leaf blights common rust	1 1/2		Start application when disease symptoms first appear and depending on severity of infection, continue on a 4 to 14 day schedule.  The addition of TRITON B-1956 or TRITON CS-7 to spray solutions will improve performance.	Do not apply within 40 days of harvest.
Cotton (Southwest U.S. Only)	Rust	1 1/3 to 2		Start applications when rust first appears and repeat at 10 to 14 day intervals until disease threat is past.	Do not apply after bolls are open. Do not graze livestock in treated areas or feed gin trash to livestock.
Oats	Refer to wheat				
Peanuts	Cercospora leaf spot Rust	1 to 2		Start applications when disease first appears or is reported in area. Repeat sprays at 10 to 14 day intervals. Reduce sprays to a 7 day interval during humid weather.	Do not apply within 14 days of harvest.  Do not feed treated vines to livestock.
Rye	Refer to wheat				

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Wheat

Helminthosporium  
blights and leaf spots  
Leaf rust  
Tan Spot  
Septoria leaf spot  
Septoria glume blotch

2

Start application at onset of disease  
or when plants are in the tillering to

day intervals.

The addition of a TRITON surfactant to  
spray solutions will improve  
performance.

Do not make more than  
applications during t

Do not apply within 2  
harvest.

Do not graze livestock  
areas within 26 days  
application.

(012611/3272)

Slurry Seed Treatment  
 Rate for 4%  
 DITHANE M-45 DF/75 Fungicide  
 oz./bu.      oz./100 lbs.

Remarks  
 (Also Refer to Directions For Use)

Restrictions

Treated seed should be labeled,  
 "Must not be used for food, feed,  
 or oil purposes".

SEED TREATMENT:

Crop	Diseases Controlled	1.4 to 2.1	2.9 to 4.5
Barley	Covered smut False loose smut Damping-off Seed rot Seedling blights		
Corn (field)	Damping-off Seed rots Seedling blights	1.6 to 3.2	2.9 to 5.8
Cotton (acid delinted)	Damping-off Seedling blights	--	3.2
(reginned)	Damping-off Seedling blights	--	6.4
Flax	Damping-off Seed rots Seedling blights	2.1 to 4.3	3.8 to 7.6

GENERAL USE DIRECTIONS:

Seeds to be treated should be cleaned  
 and well cured prior to treatment.

DITHANE M-45 DF/75 fungicide may be  
 applied to dry seed with conventional  
 slurry seed treating equipment. For best  
 results, the seed must be completely and  
 uniformly covered with fungicide.

For seed treatment, a dye must be added  
 to DITHANE M-45 DF/75 fungicide which  
 will impart an unnatural color to the  
 seed.

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Slurry Seed Treatment  
 Rate for  
 DITHANE M-45 DF/75 Fungicide  
 Per Application

Crop	Diseases Controlled	Rate for		Remarks (Also Refer to Directions For Use)	Restrictions
		oz./bu	oz./100 lbs.		
Oats	Damping-off Seed rots Seedling blights Smuts	1.4 to 2.1	4.3 to 6.7		
Peanuts (shelled)	Damping-off Seed rots Seedling blights	2.1 to 4.3	8.5 to 17.0		
Rice	Damping-off Seed rots Seedling blights	--	2.1 to 4.3	Apply before, during or after soaking in water.	
Rye	Bunt Damping-off Seed rots Seedling blights	1.4 to 2.1	2.5 to 3.8		
Safflower	Seedborne rust ( <i>Puccinia carthami</i> )	--	2.1		
Sorghum	Covered kernel smut Damping-off Seed rots Seedling blights	1.6 to 2.7	2.9 to 4.8		

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Rate of  
DITHANE M-45 DF/75 Fungicide  
Per Application

oz.

oz./bu      oz./100 lbs.

Remarks

(Also Refer to Directions For Use)

Restrictions

Crop

Diseases Controlled

Tomatoes

Damping-off  
Seed rots  
Seedling blights

--                      8.5

Wheat

Bunt  
Damping-off  
Seed rots  
Seedling blights

1.4 to 2.1    2.3 to 3.5

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Crop	Diseases Controlled	Rate of DITHIANE M-45 DF/75 Fungicide Per Application oz./1000 Sq. Ft.	Remarks (Also Refer to Directions For Use)	Restrictions
TURF:	Helminthosporium melting-out Rust (leaf, stem, stripe)	4	GENERAL USE DIRECTIONS: Start application when grass greens-up in spring or when disease first appears and repeat at 7 to 14 day intervals or until disease threat is past.	Do not graze treated areas.  Do not feed clippings to livestock.
	Copper Spot Fusarium blight Powdery mildew Red thread Slime mold	4 to 8½	When conditions are especially favorable for disease development, apply maximum fungicide use rate on a 7-day spray schedule.	
	Algae	6½	Apply in sufficient water to provide adequate coverage.	
	Dollar spot	6½ to 8½		
	Rhizoctonia brown patch	4	Apply on a 7-day spray schedule.	
	Pythium blight	0½	Begin applications at first sign of disease and repeat applications at 5-day intervals, or more frequently, if conditions are especially favorable for disease development.	
	Fusarium snow mold	6½ to 8½	Apply at 2 to 6 week intervals during winter.	

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<u>Crop</u>	<u>Diseases Controlled</u>	<u>Remarks</u> <u>(Also Refer to Directions For Use)</u>	<u>Restrictions</u>
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ORNAMENTALS:

GENERAL INSTRUCTIONS:

For outdoor or greenhouse use, apply the equivalent of 1½ lbs. DITHANE M-45 DF/75 fungicide per 100 gals.

The addition of TRITON B-1956 to spray solutions will improve performance.

Begin spraying when plants are well leafed out or at first sign of disease in a full coverage spray at 7 to 10 day intervals throughout season or follow State Extension Service recommendations for disease control on the following ornamental plants:

African violet	Botrytis blight
Anthurium	Anthracnose spadix rot
Arborvitae	Cercospora blight
Ash, mountain	Entomosporium leaf spot Guignardia leaf blotch

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Crop	Diseases Controlled	Remarks (Also Refer to Directions For Use)	Restrictions
Ash, white	Anthracnose Cylindrosporium leaf spot		
Aster, perennial	Puccinia rusts		
Aucuba japonica	Alternaria leaf spot Anthracnose		
Azalea	Petal blight Cylindrocladium rot Phytophthora twig and bud blight	Apply in a full coverage spray, 2 to 3 times a week, while flowers are opening. Direct spray into flowers and thoroughly spray ground under bushes.	
Begonia	Botrytis blight		
Buffaloberry	Cylindrosporium leaf spot		Do not use fruit for food or feed purposes.
Camellias	Petal blight	Refer to azalea	
Carnation	Rust Septoria leaf spot		
Cedar, red (Juniper)	Cercospora blight Phomopsis blight		
Chrysanthemum	Ascochyta blight Botrytis petal spot Rust	Apply twice weekly during blooming period.	

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<u>Crop</u>	<u>Diseases Controlled</u>	<u>Remarks</u> <u>(Also Refer to Directions For Use)</u>	<u>Restrictions</u>
Conifers	Lophodermium needle cast Pine gall rust Scirrhia brown spot	Begin application in spring or early summer before infection occurs. Repeat after heavy rains and at two week intervals as long as needed.	
Cordyline	Cercospora leaf spot		
Crabapple (Ornamental)	Cedar - apple rust Scab Sphaeropsis leaf spot		
Cypress, Arizona ( <u>Cupressus</u> sp.)	Cercospora blight Monochaetia canker		
Dahlia	Botrytis blight		
Dieffenbachia	Leptosphaeria brown spot		
Dogwood, flowering	Anthracnose Elsione leaf spot Septoria leaf spot	Apply when buds begin to open, when bracts have fallen, 4 weeks later and again in late summer after flower buds for next season have formed.	

(012611/3272)

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<u>Crop</u>	<u>Diseases Controlled</u>	<u>Remarks</u> <u>(Also Refer to Directions For Use)</u>	<u>Restrictions</u>
Dracaena	Fusarium leaf spot	F <sub>3</sub>	
Elm	Black Leaf spot		
Euonymus	Anthracoese		
Fatsia	Anthracoese		
Fern	Rhizoctonia blight		
Ficus	Cercospora leaf spot		
Firethorn (Pyracantha)	Fusicladium scab		
Fir, Douglas	Swiss needle cast		
Fuchsia	Botrytis blight Rust		
Geranium	Rust		
Gladiolus	Botrytis blossom blight Curvularia leaf spot	Make regular weekly applications starting before diseases appear and increase to 2 or 3 applications per week during periods of heavy disease and during rainy weather.  On flower spikes, reduce spray concentration to 3/4 lb. per 100 gals.	

(0126H/327Z)

CropDiseases Controlled(Also Refer to Directions For Use)Restrictions

Hawthorn	Cedar - apple rust Fabraea leaf spot Frogeye leaf spot Hawthorn rust Scab
Holly	Purple spot
Hollyhock	Anthracnose Cercospora leaf spot Puccinia rusts
Honeysuckle	Herpobasidium blight
Horsechestnut, Buckeye	Alternaria leaf spot Guignardia leaf blotch
Hydrangea	Botrytis blight Cercospora leaf spot
Iris	Didymellina leaf spot Myrosporum ink spot
Juniper	Phomopsis blight

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Crop	Diseases Controlled	Remarks (Also Refer to Directions For Use)	Restrictions
Laurel, mountain	Cercospora leaf spot Petar blight	Refer to azalea <sup>47</sup>	
Ligustrum	Cercospora leaf spot		
Lily	Botrytis blight		
Magnolia	Gloeosporium leaf spot		
Maple	Alternaria leaf spot Phyllosticta leaf spot		Do not use on sugar maples intended for the production of maple syrup.
Marigold	Botrytis blossom blight		
Narcissus	Botrytis blight (fire) Smoulder		
Oak	Actinopelte leaf spot Taphrina leaf spot		
Orchid (Dendrobium)	Botrytis blossom blight		
Pachysandra	Volutella blight	Use a drenching spray of 2 lbs. per 50 gallons of water per 5,000 sq. ft. of bed. Start application at first sign of disease and apply at least 5 applications at 10 to 14 day intervals.	

(0126H/327Z)

<u>Crop</u>	<u>Diseases Controlled</u>	<u>Remarks</u> (Also Refer to Directions For Use)	<u>Restrictions</u>
Pansy	Anthracoze		
Peony	Botrytis blossom blight Phytophthora blight	Apply in early spring and early fall, drenching soil around plants as well as the foliage. Promptly destroy all infected plant parts.	
Peperomia	Cercospora leaf spot		
Philodendron	Dactylaria leaf spot Phytophthora leaf spot		
Photinia	Entomosporium leaf spot		
Pleomele	Fusarium leaf spot		
Poinsettia	Sphaceloma scab		
Rhododendron	Cercospora leaf spot Discosia leaf spot Petal blight	Refer to azalea	
Rose	Black spot Cercospora leaf spot Rust		
Schefflera	Alternaria blight		
Skunkbush sumac	Cylindrosporium leaf spot		
Snapdragon	Rust		

(0126H/327Z)

26/3/5

<u>Crop</u>	<u>Diseases Controlled</u>	<u>Remarks</u> <u>(Also Refer to Directions For Use)</u>	<u>Restrictions</u>
Statice	Cercospora frog-eye		
Syngonium	Cephalosporium leaf spot		
Tulip	Botrytis blight (fire)		
Venus Flytrap	Anthraxnose		
Viburnum	Downy Mildew Ramularia leaf spot		
Walnut	Anthraxnose		Do not use treated walnuts for food or feed purposes.
Zinnia	Alternaria leaf blight		

(0126H/327Z)

5/21/74

<u>Crop</u>	<u>Diseases Controlled</u>	<u>Rate of DITHIANE M-45 DF/75 Fungicide Per Application</u>	<u>Remarks (Also Refer to Directions for Use)</u>
<b>MISCELLANEOUS:</b>			
Asparagus crowns	Crown rot	1 lb. per 100 gals.	<p>Place loosely packed crowns into a burlap bag and soak, with gentle agitation, in the fungicide solution for 5 minutes. Remove bag, drain well, and plant crowns as soon as possible.</p> <p>A tank large enough to hold a single burlap bag will treat 2 bags of crowns. Clean dipping suspension should then be prepared in a clean tank.</p> <p>Dirty crowns should be pre-washed to remove excess soil.</p>
Caprifig	Endosepsis (Fusarium) Assorted molds	1 lb. per 25 gals.	<p>Prepare mamme figs by making a shallow cut through the eye and then hand dividing to avoid wasp injury. Submerge mamme figs in the fungicide suspension for a minimum of 15 minutes.</p> <p>The fungicide suspension should be stirred frequently to prevent settling out.</p> <p>Fresh dipping solutions should be used after treatment 4 or 5 hatches of figs. After treatment, figs should be drained prior to placement in trees.</p>

(0126H/3272)

Crop	Diseases Controlled	Rate of DITHANE M-45 DF/75 Fungicide Per Application	Remarks (Also Refer to Directions For Use)
Conifers	Foliar	4½ lbs. per 100 gals.	<p>For use in nursery and newly transplanted plantings.</p> <p>Apply at 21-day intervals during periods of sprinkler irrigations and at monthly intervals during the rest of the year when beds are not covered with snow.</p> <p>The addition of TRITON B-1956 to spray solutions is recommended.</p>
Pineapples	Phytophthora heart rot	3.4 lbs. per 10 gals.	<p>Dip planting material in fungicide solution prior to planting. Stir solution frequently to prevent settling out.</p> <p>A new solution should be prepared when at least two-thirds of the volume has been used or sooner if soil from plant material has noticeably discolored the solution.</p> <p>Depending on the cleanliness and size of planting stock, up to 100 gallons of fungicide solution should be used to treat the propagative materials used to plant one acre.</p>

(0126H/327Z)

(0126H/327Z)

<u>CROP</u>	<u>CO-APPLIED FUNGICIDE</u>	<u>FOR IMPROVED CONTROL OF:</u>	<u>USE RATE PER APPLICATION</u>	<u>DITHIANE DF/75 FUNGICIDE USE RATE PER APPLICATION</u>	<u>(ALSO</u>
Apples	BENLATE 50 Wpa)	Powdery mildew	2 to 3 ozs./100 gals.	3/4 to 1 lb./100 gals.	
	TOPSIN-M 70 Wpa)				
	BAYLETON 50 WP		1/2 to 2 ozs./100 gals.	1 to 2 lbs./100 gals.	
	KARATHANE WD	Powdery mildew Mite suppression	1/2 to 3/4 lbs./100 gals.		
	KARATHANE LC		4 to 6 fl. ozs./100 gals.		
Barley	BAYLETON 50 WP	Powdery mildew Rust (leaf, stem, stripe)	2 to 4 ozs./A	2 lbs./A	
Celery	BENLATE 50 Wpa)	Early blight Late blight	4 oz./A	1 1/2 to 2 lbs./A	
	TOPSIN-M 70 Wpa)				
	FIXED COPPERS	Bacterial leaf spot	Manufacturers label use rate	2 lbs./A	
Cucumbers	Refer to melons				

(0126H/327Z)

<u>CROP</u>	<u>CO-APPLIED FUNGICIDE</u>	<u>FOR IMPROVED CONTROL OF:</u>	<u>USE RATE PER APPLICATION</u>	<u>DITHANE M-45 DF/75 FUNGICIDE USE RATE PER APPLICATION</u>	<u>REMARKS (ALSO REFER TO USE DIRECTIONS)</u>
Grapes	BAYLETON 50 WP	Powdery mildew	2 to 6 ozs./A	1 1/2 to 4 1/4 lbs./A	
	KARATHANE WD	Powdery mildew	1 to 2 1/2 lbs./A		Do not use in California.
	KARATHANE LC		4 to 8 fl. ozs./100 gal.		
	BENLATE 50 WP		3/4 to 1 lb./A		
Melons	BENLATE <sup>a</sup> )	Target spot Gummy stem blight Powdery mildew Anthracnose	4 to 8 ozs./A	2 to 3 1/4 lbs./A	
	KARATHANE WD	Powdery mildew	8 to 12 ozs./A		Do not use in California.
	KARATHANE LC		3 to 4 fl. ozs./100 gal.		
	DIFOLATAN 80 SPRILLS	Gummy stem blight	1 1/2 to 2 lb./A		Do not use on squash or pumpkins.
Peanuts	BENLATE 50 WP <sup>a</sup> )	Early leaf spot Late leaf spot Ascochyta web blotch	4 ozs./A	1 to 2 lbs./A	
	TOPSIR-M 70 WP <sup>a</sup> )				

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54/56

<u>CROP</u>	<u>CO-APPLIED FUNGICIDE</u>	<u>FOR IMPROVED CONTROL OF:</u>	<u>USE RATE PER APPLICATION</u>	<u>OITHANE M-45 DF/75 FUNGICIDE USE RATE PER APPLICATION</u>	<u>REMARKS (ALSO REFER TO USE DIRECTIONS)</u>
Pears	BAYLETON 50 WP	Powdery mildew	1/2 to 2 ozs./100 gals.	1 to 2 lbs./100 gal.	
	KARATHANE WD	Powdery mildew Mite suppression	1/2 to 3/4 lbs./100 gals.		Do not use in California.
	KARATHANE LC		4 to 6 ozs./100 gal.		
Potatoes	Triphenyl Tin Hydroxide (TPTH)	Early Blight	1/2 to full label use rate	1 1/2 to 2 lbs./A	
Pumpkins	Refer to melons				DIFOLATAN may not be used on pumpkins.
Roses, Flowers, Ornamentals, and shade trees	BENLATE 50 WP	Powdery mildew Leaf spots	1/2-1 lb./100 gal.	1 1/2 lb./100 gal.	
	TOPSIN-M 70 WP				
	KARATHANE WD	Powdery mildew Mite suppression	6 to 8 oz./100 gal.		
Squash, summer	Refer to melons				DIFOLATAN may not be used on squash.

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CROP	CO-APPLIED FUNGICIDE	FOR IMPROVED CONTROL OF:	USE RATE PER APPLICATION	FUNGICIDE USE RATE PER APPLICATION	REMARKS (ALSO REFER TO USE DIRECTIONS)
Sugar Beets	BENLATE 50 WP)	Cercospora leaf spot	4 oz./A		
	TOPSIN-M 70 WP)				
	MERTECT 340-Fa)		6 fl. oz./A		
	Triphenyl Tin Hydroxide (TPTH)		1/2 to full label rate		
Tomatoes	Fixed Coppers	Bacterial leaf spot	Manufacturers Label use rate		1 1/2 to 3 1/4 lbs./A
	DYRENE 50 WP	Gray leaf spot	1/2 to 1 lb./A		
	BENLATE 50 WP	Botrytis gray mold Sclerotinia white mold			
Wheat	BAYLETON 50 WP	Powdery mildew Rust (leaf, stem, stripe)	2 to 4 ozs./A		2 lbs./A

(0126H/327Z)

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MERTECT is a registered trademark of Merck and Co., Inc.

TOPSIN-M is a registered trademark of Nippon Soda Co., Ltd.

CONDITIONS OF SALE AND WARRANTY:

Rohm and Haas warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. ROHM AND HAAS MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE. Handling, storage and use of the product by Buyer or User are beyond the control of Rohm and Haas and Seller. Risks such as crop injury, ineffectiveness or other unintended consequences resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pests, drift to other crops or property or failure to follow label directions will be assumed by the Buyer or User. IN NO CASE WILL ROHM AND HAAS OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.

HEC:tf  
(0126H/327Z)

36/36  
ACCEPTED  
with COMMENTS  
in EPA Letter Dated:

JAN 8 1986

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

707-180

Container

DITHANE M-45 DF/75

AGRICULTURAL FUNGICIDE

KEEP OUT OF REACH OF CHILDREN

### CAUTION

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

May cause irritation of nose, throat, eyes and skin. Do not breathe dust or spray mist. PROTECTIVE CLOTHING consisting of long pants, long-sleeved shirt, gloves, hat and boots must be worn during mixing and loading.

##### STATEMENTS OF PRACTICAL TREATMENT

IF SWALLOWED: Dilute by giving 2 glasses of water to drink and call a physician. Never give anything by mouth to an unconscious person.

IF INHALED: Move subject to fresh air.

IF IN EYES: Flush eyes with large amounts of water for at least 15 minutes. Consult a physician if irritation persists.

IF ON SKIN: Wash affected skin areas with soap and water.

##### ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water or wetlands. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment or disposal of wastes.

Before using this product, read the entire Precautionary Statements, Conditions of Sale and Warranty, Directions for Use, Use Restrictions and Storage and Disposal Instructions on back panel and attached use directions. If the Conditions of Sale and Warranty are not acceptable, return the product unopened within thirty days of purchase to the place of purchase.

#### ACTIVE INGREDIENTS

Mancozeb	
A coordination product of zinc ion and manganese ethylene bisdithiocarbamate	75%
In which the ingredients are	
Manganese **	15%
Zinc **	1.87%
Ethylene bisdithiocarbamate ion (C <sub>4</sub> H <sub>8</sub> S <sub>4</sub> )	58.13%
INERT INGREDIENTS	25%
TOTAL	100%

EPA Reg. No.  
EPA Est. No.

U.S. Patent 3,379,610  
\*Copyright 1984 Rohm and Haas Company

NET CONTENTS 3 LBS. (1.36 kg)

#### CONDITIONS OF SALE AND WARRANTY

Rohm and Haas warrants that the product conforms to its chemical description as reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. ROHM AND HAAS MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE. Handling, storage and use of the product by Buyer or User beyond the control of Rohm and Haas and Seller. Risks such as crop injury, ineffectiveness or other unintended consequences resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pests, drift to other crops or property or failure to follow label directions will be assumed by the Buyer or User. IN NO CASE WILL ROHM AND HAAS OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INCIDENTAL DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its label. SEE PAMPHLET IN BOTTOM FLAP FOR USE DIRECTIONS.

#### RE-ENTRY AND WORKER PROTECTION STATEMENTS

Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive re-entry intervals for various crops treated with this product, consult your State Department of Agriculture for further information. Do not use 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. SEE USE DIRECTIONS FOR ADDITIONAL RE-ENTRY STATEMENTS.

#### STORAGE AND DISPOSAL

**STORAGE:** Keep away from fire and sparks. Store in a cool, dry, well-ventilated area. Do not allow to become wet or overheated in storage. decomposition, impaired activity, or fire may result. Keep container closed when not in use.

**PESTICIDE DISPOSAL:** Do not contaminate water, food or feed by storage or 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 bag into application equipment. Then dispose in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Sweep or shovel into containers for disposal or reworking. Keep dusting to a minimum. Flush containers with a large amount of water to a chemical or sanitary sewer containing a settling pit.

9947-ROa

54Y-1485 REV. — Rohm and Haas — OC — 6/7/84  
Disc. 34 — File 1



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