

MAY 5 2000

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 1812-414

MANZATE® 200 DF Fungicide

Dispersable Granules

ACTIVE INGREDIENTS:

BY WEIGHT

A coordination product of zinc ion and manganese ethylenebisdithiocarbamate in which the ingredients are:		75%
Manganese ⁺⁺	15.0%	
Zinc ⁺⁺	1.9%	
Ethylenebisdithiocarbamate ion (C ₄ H ₆ N ₂ S ₄) ⁻⁻	58.1%	
INERT INGREDIENTS		25%
TOTAL		100%

Contains 0.75 Pound of Mancozeb Per Pound of Product

KEEP OUT OF REACH OF CHILDREN

CAUTION

Statement 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. Consult a physician.

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. Consult a physician if irritation persists.

For medical emergencies involving this product, call toll free 1-888-324-7598.

See Label for Additional Precautions and Directions for Use.

Net Contents _____

GRIFFIN L.L.C.
VALDOSTA, GA 31601

EPA Reg. No. 1812-414
EPA Est. No. _____

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

CAUTION

MAY IRRITATE EYES, NOSE, THROAT AND SKIN. MAY BE HARMFUL IF ABSORBED THROUGH SKIN, INHALED OR SWALLOWED. Avoid breathing dust or spray mist. Avoid contact with skin, eyes and clothing. Keep away from fire or sparks.

Personal Protective Equipment

Applicators and other handlers (other than mixers and loaders) must wear:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Mixers and Loaders must wear:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear
- Chemical-resistant apron when mixing or loading

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow the 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:

When handlers use 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.

During aerial application, human flaggers must be in enclosed cabs.

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 PPE immediately after handling this product.
- Wash outside of gloves before removing.
- As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Cover or incorporate spilled treated seed. Do not contaminate water by disposing of equipment washwaters.

DIRECTIONS FOR USE

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

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to 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 over long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

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

Manzate 200 DF, a dispersible granule containing mancozeb, is recommended for use as a spray for the control of many important plant diseases.

APPLICATION INSTRUCTIONS

AS A SPRAY (Ground or Aerial Equipment) - Apply Manzate 200 DF at the rate shown; use sufficient water to provide thorough coverage, use 20 to 100 gallons per acre for ground equipment and no less than 2 gallons per acre for aircraft. Add Manzate 200 DF slowly to water in the spray tank with agitation, or premix thoroughly in separate holding tank for concentrate or aircraft sprayers. Continuous agitation is required to keep the product in suspension. A spreader-sticker spray adjuvant may be used with this product if needed; contact your local product distributor or Griffin representative for specific recommendations.

RESTRICTIONS **Foliar Applications**

Where EBDC Products Used Allow the Same Maximum Poundage of Active Ingredient Per Acre Per Season

If more than one product containing an EBDC active ingredient (maneb, mancozeb or metiram) is used on a crop during the same growing season and the EBDC products used allow the same maximum poundage of active ingredient per acre per season, then the total poundage of all such EBDC products used must not exceed any one of the specified individual EBDC product maximum seasonal poundage of active ingredient allowed per acre.

Where EBDC Products Used Allow Different Maximum Poundage of Active Ingredient Per Acre Per Season

If more than one product containing an EBDC active ingredient is used on a crop during the same growing season and the EBDC products used allow different maximum poundage of active ingredient per acre per season, then the total poundage of all such EBDC products used must not exceed the lowest specified individual EBDC product maximum seasonal poundage of active ingredient allowed per acre.

SEED TREATMENT

In addition to the maximum number of foliar applications permitted by the formula stated above, a single application for seed treatment may be made on crops which have registered seed treatment uses.

CHEMIGATION

Apply Manzate 200 DF Fungicide only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move irrigation systems. Do not apply Manzate 200 DF through any other type of irrigation system.

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

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

Do not 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 Manzate 200 DF as a continuous injection. In non-moving systems inject Manzate 200 DF 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 Manzate 200 DF 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 non-moving 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 Manzate 200 DF is flushed from system.

CROP	DISEASES CONTROLLED	RATE OF MANZATE 200 DF PER APPLICATION LBS/ACRE	TIMING/INTERVALS (Also refer to Directions for Use)	RESTRICTIONS/COMMENTS
Apples	(See Pomefruit)			
Asparagus	Cercospora leaf spot Rust	2	Start applications when rust first appears and repeat at 10 day intervals. Four applications are usually sufficient.	Apply only on asparagus ferns after spears have been harvested. Do not apply within 180 days of harvest in all states except CA and AZ (120 days). Do not apply more than 8 lbs (6 lbs active) per acre per season.
Asparagus Crown (planting stock)	Crown rot	1.0 lb/100 gals	Dip clean, loosely packed crowns into continuously agitated fungicide suspension for 5 minutes. Drain and plant as soon as possible.	Wash dirty crowns before dip treatment. Replace suspension in clean tank when discolored by soil.
Bananas (including plantain)	Sigatoka	2-3	Apply when leaves first appear and repeat every 14 to 21 days or as required. Use sufficient water to provide adequate coverage.	Do not apply more than 30 lbs (22.5 lbs active) per acre per growing cycle. Minimum preharvest interval (0 days).
Barley, Oats, Rye, Wheat (including triticale)	Helminthosporium leaf spot Leaf rust Septoria glume blotch Septoria leaf spot Tan spot	2	Start application at onset of disease or when plants are in the tillering to jointing stage and repeat at 7 to 10 day intervals.	Do not make more than three applications during the season. Do not apply more than 6 lbs (4.5 lbs active) per acre per crop. Do not apply within 26 days of harvest. Do not graze livestock in treated areas prior to harvest.

Caprifig (Non-food use)	Endosepsis (Fusarium) Mold	4 lbs/100 gals	Prepare mamme figs by making a shallow cut through the eye and then hand dividing to avoid wasp injury. Submerge mamme figs in the continuously agitated suspension for at least 15 minutes. Drain before placement in trees.	Use fresh dipping suspension after treating 4 to 5 batches of figs.
Corn (sweet corn for fresh use or processing; popcorn; and sweet corn for seed production, including hybrid seed)	Common rust Helminthosporium leaf blight Grey leaf spot	1.5	Use sufficient water for thorough coverage. Start applications when disease first appears and repeat at 4 to 7 day intervals.	Do not apply within 7 days of harvest. Do not apply more than 22.5 lbs (17 lbs active) per acre per crop east of the Mississippi and AR and LA. Do not apply more than 7.5 lbs (5.6 lbs active) per acre per crop west of the Mississippi except AR and LA. Do not feed treated forage to livestock.
Old and field corn for hybrid seed production)				Do not apply within 40 days of harvest. Do not apply more than 15 lbs (11.25 lbs active) per acre per crop. Do not feed treated forage to livestock.
Cotton (Southwest only)	Rust	1.25-2	Begin when rust first appears in the area. Repeat at 10 to 14 day intervals.	Do not apply after bolls open. Do not apply more than 8 lbs (6 lbs active) per acre per crop. Do not apply within 45 days of harvest. Do not feed treated forage to livestock. Do not feed gin trash to livestock. Do not graze livestock in treated areas.
Cranberries	Fruit rot	3-6	Start applications at mid-bloom and repeat at 7 to 10 day intervals.	Do not apply within 30 days of harvest. Do not apply more than 18 lbs (13.5 lbs active) per acre per season.
Cucumbers	Anthrachnose Cercospora leaf spot Downy mildew Gummy stem blight Scab	2-3	Start applications when plants are in the two-leaf stage and repeat at 7 to 10 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. Do not apply more than 24 lbs (18 lbs active) per acre per crop.
Fennel	Early blight Late blight	2	Begin in plant beds at emergence. Repeat at 7 to 10 day intervals.	Do not apply within 14 days of harvest. Do not apply more than 16 lbs (12 lbs active) per acre per crop. Do not graze treated area to livestock.

<p>Grapes (East of the Rocky Mountains)</p>	<p>Black rot Bunch rot Deadarm Downy mildew</p>	<p>1.5-4</p>	<p>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 7 to 10 day intervals until fruit is set.</p> <p>For late season control of black rot, deadarm and downy mildew, the use of other approved and recommended fungicides is suggested.</p>	<p>Do not apply within 66 days of harvest. Do not apply more than 24 lbs (18 lbs active) per acre per season.</p>
<p>(West of the Rocky Mountains)</p>		<p>1.5-2.5</p>		<p>Do not apply within 66 days of harvest except in CA where no application can be made after bloom. Do not apply more than 7.5 lbs (5.6 lbs active) per acre per season.</p>
<p>Melons Cantaloupes Casaba Crenshaw Honeydew Watermelon</p>	<p>Alternaria leaf spot Anthracnose Downy mildew Gummy stem blight Cercospora leaf spot</p>	<p>2-3</p>	<p>Start applications when plants are in the two-leaf stage and repeat at 7 to 10 day intervals. Use sufficient water and direct spray to provide thorough coverage of both upper and lower leaf surfaces. Some varieties are sensitive to Manzate 200 DF fungicide. Consult State Cooperative Extension Service Specialist prior to use.</p>	<p>Do not apply within 5 days of harvest. Do not apply more than 24 lbs (18 lbs active) per acre per season.</p>
<p>Oats</p>	<p>(See barley)</p>			
<p>Onions (dry bulb) Garlic and Shallots</p>	<p>Botrytis leaf blight Downy mildew Neck rot Purple blotch</p>	<p>3</p>	<p>Follow a protective spray schedule starting when diseases are first reported in the areas and repeat at 7 day intervals throughout the season.</p>	<p>Do not apply within 7 days of harvest. Do not apply to exposed bulbs. Do not apply more than 30 lbs (22.5 lbs active) per acre per crop.</p>
<p>(furrow drench)</p>	<p>Smut</p>		<p>Apply 3 lbs per acre as a furrow drench at time of planting onion seeds. Use 75 to 125 gallons of water per acre.</p>	<p>Do not use more than 2.25 lbs active per acre (29,000 linear feet of furrow) with an 18 inch row spacing.</p>

Papaya	Anthracnose (Colletotricum) Phytophthora fruit rot Black spot (Cercospora)	2.0-2.5 (minimum 50 gals per acre)	Begin at flowering; treat central column crown, blossom area and developing fruit. Repeat at 14 to 21 day intervals.	Do not use more than 35 lbs (26.25 lbs active) per acre per crop. Minimum pre-harvest interval (0 days).
Peanuts	Cercospora leaf spot Rust	1-2	Start application when disease first appears or is reported in area. Repeat sprays at 7 to 14 day intervals. Reduce sprays to a 7 day interval during humid weather.	Do not apply within 14 days of harvest. Do not use more than 16 lbs (12 lbs active) per acre per crop. Do not feed treated vines to livestock.
Peanuts (Tank mix with "Benlate" Fungicide)*	Ascochyta web blotch Cercospora leaf spot Rust	1.5 plus 4 ozs "Benlate"	Begin 35 to 40 days after planting or when disease threatens. Repeat at 7 to 14 day intervals (7 to 10 days for rust).	Do not apply within 14 days of harvest. Do not use more than 12 lbs Manzate 200 DF (9 lbs active) per acre per crop. Do not feed treated vines to livestock. * Use in accordance with the most restrictive of label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.
Pears	(See Pomefruit)			
Pineapple (Seed-Piece Treatment Only)	Phytophthora heart rot	3.2 lbs/10 gals. Use up to 100 gals of suspension to treat clean propagation material for one acre.	Dip planting material in fungicide suspension prior to planting. Stir frequently to prevent settling.	Prepare new suspension when 2/3 of volume is used or sooner if noticeably discolored by soil from plant material.
Pomefruits Apples Pears Crabapples Quince	Rusts Scab Fabrea leaf spot	6.0 Maximum per acre use rate based on thorough coverage dilute sprays. Use 50 gal minimum per acre. Consult State Extension Service if necessary to adjust for variable tree size.	Pre-Bloom/Bloom Use: Begin application at 1/4 to 1/2 inch green tip and continue on a 7 to 10 day schedule through bloom. Use either the "Pre-Bloom/Bloom" or "Extended Application" schedule. DO NOT COMBINE OR INTEGRATE THE TWO TREATMENT SCHEDULES	Do not apply more than 6 lbs (4.5 lbs active) per acre per application. Do not apply after bloom. Do not apply more than 24 lbs (18 lbs active) per acre per year. Do not graze livestock in treated areas. It is recommended that this product be used in an Integrated Pest Management Program.
Pomefruits Apples Pears Crabapples Quince	Rusts Scab Fabrea leaf spot	3.0 Maximum per acre use rate based on thorough coverage dilute sprays. Use 50 gal minimum per acre. Consult State Extension Service if necessary to adjust for variable tree size.	Extended Application Schedule or for Use in Tank Mixtures: For implementation of IPM programs, applications based on tree-row volume, or for use as a resistance management tool; begin applications at 1/4 to 1/2 inch green tip and continue applications on a 7 to 10 day schedule through the second cover spray. Use either the "Pre-Bloom/Bloom" or "Extended Application" schedule. DO NOT COMBINE OR INTEGRATE THE TWO TREATMENT SCHEDULES	Do not apply more than 3 lbs (2.25 lbs active) per acre per application. Do not apply within 77 days of harvest. Do not apply more than 21 lbs (15.75 lbs active) per acre per year. Do not graze livestock in treated areas. It is recommended that this product be used in an Integrated Pest Management Program.

Potatoes	Early blight Late blight	1-2	Begin applications when plants are 4 to 6 inches high by applying 1 lb per acre. As the vines increase in size, apply 1.5 to 2 lbs per acre at intervals of 5 to 10 days or 1 lb per acre at 3 to 5 day intervals.	Do not apply more than 15 lbs (11.2 lbs active) per acre per crop. Do not use within 3 days of harvest in CT, DE, FL, MA, ME, MI, NH, NY, OH, PA, RI, VT, WI, and within 14 days elsewhere. Vine-kill should occur 14 days before harvest. It is recommended that this product be used in an Integrated Pest Management Program.
Potatoes Seedpiece (treatment)	Fusarium decay Seedborn common scab	1.25 per 50 gal	Dip whole or cut potato tubers in 1.25 lbs Manzate 200 DF 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 potatoes for food or feed purposes.
Squash (Summer squash, including edible gourds)	Downy mildew	2-3	Start applications when plants are in the two-leaf stage and repeat at 7 to 10 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. Do not apply more than 24 lbs (18 lbs active) per acre per crop.

Sugar Beets	Cercospora leaf spot	1.5-2	Begin when disease first threatens. Repeat at 7 to 10 day intervals.	Do not apply within 14 days of harvest. Do not apply more than 14 lbs (10.5 lbs active) per acre per crop. Do not feed treated sugar beet tops to livestock.
Tomatoes (East of the Mississippi River)	Anthracnose Early blight Gray leaf spot Late blight Leaf mold Septoria leaf spot	0.75-1.5	Start application when seedlings emerge or transplants are set. Repeat at 3 to 7 day intervals throughout the season.	Do not apply within 5 days of harvest. Do not apply more than 22.4 lbs (16.8 lbs active) per acre per crop.
		1.5-3	Start application when seedlings emerge or transplants are set. Repeat at 7 to 10 day intervals throughout the season.	
	Bacterial speck and spot			Use a full rate of a fixed copper fungicide in tank mix combination with a half to full rate of Manzate 75 DF. Follow the application interval recommended on the copper fungicide label.
Tomatoes (West of the Mississippi River)	Anthracnose Early blight Gray leaf spot Late blight Leaf mold Septoria leaf spot	0.75-1.0	Start application when seedlings emerge or transplants are set. Repeat at 3 to 7 day intervals throughout the season.	Do not apply within 5 days of harvest. Do not apply more than 8.5 lbs (6.4 lbs active) per acre per crop.
		1.5-2	Start application when seedlings emerge or transplants are set. Repeat at 7 to 10 day intervals throughout the season.	
	Bacterial speck and spot			Use a full rate of a fixed copper fungicide in tank mix combination with a half to full rate of Manzate 75 DF. Follow the application interval recommended on the copper fungicide label.
Watermelon	(See Melons)			
Wheat (including triticale)	(See Barley)			

FLOWERS, FOLIAGE PLANTS, AND ORNAMENTALS

**NOT INTENDED FOR USE ON FRUIT TREES BY HOMEOWNERS.
TREATED PLANTS MUST NOT BE USED FOR FOOD OR FEED PURPOSES.**

Apply in the field, nursery or greenhouse as a thorough coverage spray, using 1 to 2 lbs. Manzate 200 DF per acre (1-1/2 to 3 tsp. per gal).

Plant sensitivities to Manzate 200 DF have been found to be acceptable in specific genera and species listed on this label, however, phototoxicity may occur. Due to the large number of species and varieties of ornamentals and

nursery plants, it is impossible to test each one for sensitivity to Manzate 200 DF. Neither the manufacturer or seller has determined whether or not Manzate 200 DF can be safely used on ornamental or nursery plants not listed on this label. The user should determine if Manzate 200 DF can be used safely prior to commercial use. In a small area, apply the recommended rates to the plants in question, i.e. bedding plants, foliage, etc., and observe for 7 to 10 days for symptoms of phytotoxicity prior to commercial use. Use Manzate 200 DF in commercial greenhouses and nurseries for control of fungal diseases of flowers, foliage and ornamentals.

Aerial Application: For aerial applications made to field-planted ornamentals, apply 1 to 2 lbs. per acre; a minimum rate of 10 gals of spray per acre should be used during aerial applications.

Application of Dilute Sprays: Apply as thorough coverage spray using using 1 to 2 lbs. per acre or 1 to 2 lbs. per 100 gals of water. Begin application at first sign of disease and repeat at 7 to 10 day intervals as needed; use shorter interval during periods of frequent rains or when severe disease conditions persist. Manzate 200 DF may be used alone or in combination with other fungicides as a maintenance spray. Use higher rate and shorter intervals during periods of excessive wetness and rapid plant growth.

Manzate 200 DF is recommended for use on certain flower, foliage and ornamental plants listed in the table below for control of the following diseases and pathogens:

PLANT	PATHOGEN CONTROLLED:
Abutilon	Alternaria, Cercospora, Cladosporium, Colletotrichum, Puccinia
Daisy	Botrytis, Cercospora, Whetzelia
Ageratum	Alternaria, Sclerotium, Rhizoctonia, Puccinia
Aglaonema	Alternaria
Almond, ornamental	Botrytis, Cladosporium, Coryneum, Gloeosporium, Monilinia
Andromeda	Exobasidium, Rhytisma, Venturia
Anthurium	Colletotrichum, Gloeosporium
Apple	Alternaria, Cephalosporium, Colletotrichum, Coryneum, Elsinoe, Fusarium, Gloeosporium, Gymnosporangium, Helminthosporium, Leptosphaeria, Monilinia, Monochaetia, Mycosphaerella, Pestalotia, Venturia
Arborvitae	Alternaria, Botrytis, Cercospora, Coryneum, Lophodermium, Mycosphaerella, Pestalotia
Ash	Cercospora, Cylindrosporium, Gloeosporium, Puccinia, Rhizoctonia, Sphaeropsis
Ash, Mountain	Gymnosporangium
Aster	Alternaria, Ascochyta, Botrytis, Colletotrichum, Fusarium, Phomopsis, Phyllosticta, Ramularia, Rhizoctonia, Septoria, Puccinia, Uromyces
Azalea	Alternaria, Botrytis, Cladosporium, Colletotrichum, Cylindrocladium, Ovulinia
Baby's Breath	Botrytis, Rhizoctonia
Basswood	Cercospora, Phyllosticta

Begonia	Botrytis, Gloeosporium, Cercospora, Rhizoctonia
Birch	Cylindrosporium, Gloeosporium, Glomerella, Melampsoridium, Taphrina
Bougainvillea	Colletotrichum
Boxwood	Fusarium, Volutella
Buckeye	Cercospora, Glomerella, Guignardia, Monchaetia, Phyllosticta, Septoria, Taphrina
Buffalo berry	Cylindrosporium, Puccinia, Rhizoctonia, Septoria
Catalpa	Alternaria, Cercospora, Gloeosporium, Phomopsis, Rhizoctonia
Camellia	Botrytis, Cercospora, Elsinoe, Exobasidium, Glomerella, Pestalotia, Phomopsis, Phyllosticta
Carnation	Alternaria, Botrytis, Cladosporium, Colletotrichum, Fusarium, Helminthosporium, Septoria, Stemphylium, Uromyces
Cedar	Lophodermium, Gymnosporangium
Cherry, ornamental	Alternaria, Cercospora, Cladosporium, Coccoomyces, Coryneum, Fusicladium, Monilinia, Phomopsis, Phyllosticta, Taphrina
Chinese evergreen	Colletotrichum, Gloeosporium
Chrysanthemum	Alternaria, Ascochyta, Bipolaris, Botrytis, Cercospora, Cylindrosporium, Helminthosporium, Phyllosticta, Septoria, Stemphylium
Coleus	Alternaria, Botrytis, Phyllosticta
Columbine	Botrytis, Rhizoctonia, Ascochyta, Cercospora, Septoria, Puccinia
Coryline	Cercospora
Cotoneaster	Cercospora, Phyllosticta, Venturia
Crabapple	Marssonina, Phyllosticta, Septoria, Gymnosporangium, Venturia
Croton	Gloeosporium
Mexican heather Cuphea	Gloeosporium, Rhizoctonia
Cyclamen	Botrytis, Cladosporium, Fusarium, Glomerella, Phyllosticta, Ramularia
Cypress	Coryneum, Fusarium, Gymnosporangium, Lophodermium, Monchaetia, Pestalotia, Phomopsis
Dahlia	Alternaria, Botrytis, Fusarium, Rhizoctonia
Daisy, Shasta	Cylindrosporium, Septoria, Fusarium
Daisy, Transvall	Alternaria, Botrytis, Gloeosporium
Delphinium	Ascochyta, Botrytis, Cercospora, Diaporthe, Fusarium, Phyllosticta, Puccinia, Ramularia, Septoria, Volutella
Dieffenbachia	Cephalosporium, Colletotrichum, Gloeosporium, Glomerella, Leptosphaeria
Dogwood	Ascochyta, Botrytis, Cercospora, Colletotrichum, Elsinoe, Phyllosticta, Septoria

Dusty Miller	Fusarium, Puccinia
Elm	Botryosphaeria, Cephalosporium, Cercospora, Coryneum, Cyndrosporium, Fusarium, Gloeosporium, Monochaetia, Mycosphaerella, Phomopsis, Phyllosticta, Rhizoctonia, Sphaeropsis, Taphrina
Euonymus	Cercospora, Colletotrichum, Gloeosporium, Marssonina, Ramularia, Septoria, Whetzelinia
Fern	Botrytis, Cercospora, Curvularia, Cyndrosporium, Glomerella, Phyllosticta, Taphrina
Ficus	Alternaria, Ascochyta, Cephalosporium, Cercospora, Cladosporium, Colletotrichum, Fusarium, Gloeosporium, Glomerella, Mycosphaerella, Phomopsis, Stemphylium
Fir (Abies)	Cephalosporium, Phomopsis, Sphaeropsis, Lophodermium, Melampsora
Firethorn	Fusarium, Fusicladium, Rhizoctonia
Fittonia	Rhizoctonia
Four-o'clock	Cercospora, Rhizoctonia
Fuchsia	Botrytis, Phomopsis, Septoria
Gardenia	Alternaria, Botrytis, Diaporthe, Mycosphaerella, Pestalotia, Phomopsis, Phyllosticta, Rhizoctonia
Geranium	Alternaria, Ascochyta, Bipolaris, Botrytis, Cercospora, Cyndrosporium, Helminthosporium, Puccinia, Ramularia, Rhizoctonia, Septoria, Uromyces, Venturia
Gladiolus*	Alternaria, Botrytis, Cladosporium, Curvularia, Rhizoctonia, Septoria, Stemphylium
Gold Dust Tree	Gloeosporium, Glomerella, Pestalotia, Phyllosticta
Gomphrena	Cercospora
Gypsophila	Botrytis, Rhizoctonia
Hawthorn	Cercospora, Cyndrosporium, Gloeosporium, Gymnosporangium, Monilinia, Mycosphaerella, Phyllosticta, Septoria, Venturia
Hemlock, Eastern (Tsuga)	Botrytis, Cyndrosporium, Melampsora, Rhizoctonia
Hibiscus	Alternaria, Cercospora, Colletotrichum, Fusarium, Phyllosticta
Hickory	Cercospora, Cladosporium, Elsinoe, Fusarium, Gnomonia, Mycosphaerella, Pestalotia, Phyllosticta, Septoria
Holly	Phyllosticta
Hollyhock	Alternaria, Ascochyta, Cercospora, Colletotrichum, Puccinia, Septoria
Horse Chesnut	See Buckeye
Hydrangea	Ascochyta, Botrytis, Cercospora, Colletotrichum, Phyllosticta, Rhizoctonia, Septoria
Impatiens	Cercospora, Phyllosticta, Rhizoctonia, Septoria
Indian Hawthorn	Entomosporium
Iris	Ascochyta, Botrytis, Cladosporium, Fusarium, Kabatiella, Phyllosticta, Puccinia, Rhizoctonia
Ivy	Colletotrichum, Glomerella, Phyllosticta, Ramularia, Sphaeropsis, Cladosporium, Rhizoctonia

Jade plant	Gloeosporium, Phomopsis
Juniper	Cercospora, Coryneum, Gymnosporangium, Lophodermium, Pestalotia, Phomopsis, Stigmata
Kalanchoe	Cercospora, Stemphylium
Larkspur	See Delphinium
Laurel, Cherry	Alternaria, Cercospora, Coccomyces, Monilinia, Phyllosticta, Septoria
Laurel, Mountain	Cercospora, Mycosphaerella, Pestalotia, Phomopsis, Rhytisma, Septoria
Lavender, Cotton	Septoria
Lilac	Botrytis, Cercospora, Cladosporium, Cyindrocladium, Gloeosporium
Lily	Botrytis, Cercospora, Cladosporium, Colletotrichum, Fusarium, Puccinia, Ramularia, Rhizoctonia
Lobelia	Botrytis, Cercospora, Puccinia, Rhizoctonia, Septoria
Loquat	Colletotrichum, Fusicladium, Pestalotia, Phyllosticta, Septoria
Magnolia	Alternaria, Cercospora, Cladosporium, Colletotrichum, Glomerella, Rhizoctonia
Mahonia	Cercospora, Cyindrocladium, Gloeosporium, Leptosphaeria, Phomopsis, Phyllosticta, Puccinia
Maple	Alternaria, Cercospora, Ciborinia, Fusarium, Marssonina, Monochaetia, Phomopsis, Phyllosticta, Rhizoctonia, Rhytisma, Septoria, Sphaeropsis, Taphrina, Venturia
Myrtle	Cercospora, Glomerella, Pestalotia
Nasturtium	Botrytis, Cercospora, Puccinia
Nannyberry	Botrytis, Cercospora, Cladosporium, Helminthosporium, Monochaetia, Phomopsis, Phyllosticta, Ramularia
Nephathytis	Cephalosporium
Nicotiana	Alternaria
Nierembergia	Botrytis
Oak	Cephalosporium, Cercospora, Cladosporium, Cronartium, Elsinoe, Fusarium, Gloeosporium, Gnomonia, Marssonina, Phyllosticta, Septoria, Taphrina, Venturia
Orchid	Cercospora, Fusicladium, Mycosphaerella, Phyllosticta, Puccinia, Septoria
Pachysandra	Cronartium, Gloeosporium, Phyllosticta, Septoria, Sphaeropsis, Volutella
Palm, Arenga	Cercospora, Colletotrichum, Cyindrocladium, Pestalotia, Phoma, Stigmata
Palm, Cabbage	Fusarium, Gloeosporium, Pestalotia, Stigmata
Palm, Coconut	Pestalotia
Palm, Date	Alternaria, Fusarium, Helminthosporium, Pestalotia
Palm, King*	Alternaria, Fusarium, Helminthosporium, Pestalotia, Phomopsis
Palm, Phoenix	Alternaria, Cercospora, Fusarium, Gloeosporium, Pestalotia, Phomopsis, Stigmata

Palm, Queen	Glomerella, Septoria
Palm, Royal	Alternaria, Cercospora, Colletotrichum, Helminthosporium
Palm, Washington	Cercospora, Colletotrichum, Cylindrocladium, Pestalotia, Phoma, Stigmata
Pansy	Alternaria, Botrytis, Cercospora, Colletotrichum, Peronospora, Phyllosticta, Ramularia, Rhizoctonia
Peach	Cercospora, Cladosporium, Coryneum, Fusarium, Glomerella, Monilinia, Mycosphaerella, Phomopsis, Phyllosticta, Taphrina
Pear	Alternaria, Botrytis, Cercospora, Cladosporium, Coryneum, Elsinoe, Fusarium, Glomerella, Gymnosporangium, Helminthosporium, Monilinia, Mycosphaerella, Phomopsis, Phyllosticta, Venturia
Peony	Alternaria, Botrytis, Cercospora, Cladosporium, Gloeosporium, Phyllosticta, Septoria
Peperomia	Colletotrichum, Gloeosporium, Rhizoctonia
Periwinkle	Alternaria, Botrytis, Cladosporium, Colletotrichum, Phomopsis, Phyllosticta, Puccinia, Rhizoctonia, Septoria
Petunia	Cercospora, Puccinia, Rhizoctonia, Stemphylium
Philodendron	Gloeosporium, Colletotrichum
Phlox	Botrytis, Colletotrichum, Ascochyta, Cercospora, Phyllosticta, Puccinia, Septoria, Ramularia, Stemphylium, Volutella
Photinia	Cercospora, Gloeosporium, Gymnosporangium, Lophodermium, Pestalotia, Phyllosticta, Septoria
Pieris	Alternaria, Pestalotia, Phyllosticta, Rhytisma
Pine, Norfolk Island	Botrytis, Colletotrichum, Cronartium, Cylindrocladium, Fusarium, Lophodermium, Pestalotia, Rhizoctonia, Septoria, Sirococcus
Pine	Alternaria, Botrytis, Cronartium, Fusarium, Lophodermium, Monochaetia, Rhizoctonia, Septoria, Sirococcus
Pittosporium	Alternaria, Cercospora, Gnomonia, Mycosphaerella, Phyllosticta, Rhizoctonia, Septoria
Plane tree	Cercospora, Gnomonia, Phyllosticta, Septoria
Plum, ornamental	Botrytis, Cercospora, Cladosporium, Coccomyces, Coryneum, Monilinia, Phyllosticta, Taphrina
Poinsettia**	Botrytis, Cercospora, Fusarium, Uromyces
Poplar	Cercospora, Ciborinia, Colletotrichum, Cylindrocladium, Fusarium, Marssonina, Melampsora, Mycosphaerella, Phyllosticta, Septoria, Stigmata, Taphrina, Venturia
Portulaca	Rhizoctonia
Pothos	Rhizoctonia
Primrose	Alternaria, Botrytis, Colletotrichum, Mycosphaerella, Puccinia, Ramularia, Uromyces
Privet	Cercospora, Glomerella, Phomopsis, Phyllosticta, Ramularia
Red cedar, western (Thuja)	Keithia (or Didymascella)

Red tip	See Photinia
Redwood, Sequoia	Botrytis, Cercospora, Mycosphaerella, Pestalotia, Phomopsis
Rhododendron	Alternaria, Cercospora, Coryneum, Gloeosporium, Glomerella, Guignardia, Lophodermium, Mycosphaerella, Pestalotia, Phomopsis, Rhizoctonia, Septoria, Venturia
Rose	Alternaria, Bipolaris, Botryosphaeria, Botrytis, Cercospora, Cladosporium, Cylindrocladium, Diplocarpon, Elsinoe, Gloeosporium, Helminthosporium, Leptosphaeria, Monochaetia, Mycosphaerella, Peronospora, Phyllosticta, Septoria
Russian olive	Cercospora, Colletotrichum
Sage	Cercospora, Peronospora, Puccinia, Ramularia, Rhizoctonia
Salvia	Cercospora, Puccinia
Senecio	Cercospora, Gloeosporium, Phyllosticta, Puccinia, Ramularia, Septoria
Shefflera	Alternaria
Snakeplant	Fusarium, Gloeosporium
Snapdragon	Alternaria, Bipolaris, Botrytis, Cercospora, Colletotrichum, Drechslera, Fusarium, Helminthosporium, Peronospora, Phyllosticta, Puccinia, Rhizoctonia
Spathiphyllum	Alternaria
Spindletree	See Euonymus
Spirea	Cylindrosporium
Spruce	Ascochyta, Botrytis, Cladosporium, Lophodermium, Rhizoctonia
Spurge	Cercospora, Melampsora, Puccinia
Statice	Alternaria, Ascochyta, Botrytis, Cercospora, Colletotrichum, Rhizoctonia, Uromyces
Strawflower	Fusarium
Sumac	Cercospora, Cladosporium, Fusarium, Phyllosticta, Septoria, Taphrina
Sunflower, ornamental	Alternaria, Puccinia
Syngonium	Cephalosporium, Erwinia, Fusarium
Verbena	Alternaria, Ascochyta, Botrytis, Cercospora, Phyllosticta, Septoria, Puccinia, Rhizoctonia, Septoria, Stemphylium
Viburnum	Botrytis, Phomopsis, Cercospora, Helminthosporium, Monochaetia, Ramularia, Cladosporium
Walnut	Cercospora, Cladosporium, Cylindrocladium, Cylindrosporium, Gnomonia
Willow	Ascochyta, Cercospora, Ciborinia, Cylindrosporium, Fusicladium, Gloeosporium, Marssonina, Melampsora, Phomopsis, Phyllosticta, Ramularia, Rhytisma, Septoria, Taphrina, Venturia
Wisteria	Alternaria, Cercospora, Colletotrichum, Gloeosporium, Pestalotia
Yucca	Cercospora, Cylindrosporium, Gloeosporium, Puccinia
Zinnia	Alternaria, Botrytis, Cercospora, Rhizoctonia

*Do not exceed 0.75 lb per 100 gallons on flower spikes.

**Do not exceed 1.5 lb per 100 gallons.

This product is not recommended for the treatment of marigolds due to highly variable plant responses.

GRASSES: Sodfarms (Agricultural Crop Use)

Applications restricted to lawn grasses by professional applicators. Not for homeowner use. For sodfarm applications, follow provisions within the Agricultural Use Requirements box.

CROP	DISEASE/PEST	APPLICATION			COMMENTS
		RATE	TIMING INTERVAL	LIVESTOCK GRAZING/FEEDING	
Sod farm	Algae	6 oz. in 3 to 5 gal/1000 sq. ft. (16 lbs in 130-220 gals/acre).	Begin when algae begins to appear. Repeat at 7-day intervals as long as condition persists.	Do not graze treated areas of feed clippings to livestock.	Do not use on grasses grown for seed.
	Leaf Spot (Helminthosporium spp.) Rhizoctonia solani Brown Patch	3-4 ozs. in 3 to 5 gals./ 1000 sq. ft. (8-11 lbs in 130-220 gals/acre).	Begin when disease appears.	Do not graze treated areas of feed clippings to livestock.	Do not use on grasses intended for grazing, such as range or pasture grasses.
	Leaf Rust Stem Rust Stripe Rust	3-4 oz. in 3 to 5 gals/1000 sq. ft. (8-11 lbs in 130-220 gal/acre).	Begin when disease threatens. Repeat at 7 to 10-day intervals as long as disease persists.	Do not graze treated areas of feed clippings to livestock.	When conditions are unusually favorable for disease, use 6-8 ozs./1000 sq. ft. (16-22 lbs/acre) and reduce intervals to 3 to 5 days.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Commercial seed treatments and professional applications to lawn grasses, golf courses, industrial (office park), municipal and residential lawns are not within the scope of the Worker Protection Standard.

Do not enter treated areas until sprays have dried.

SEED TREATMENTS

Users making commercial seed applications must follow provisions within the Non-Agricultural Use Requirements Box. Users conducting seed treatments on agricultural establishments must follow provisions within the Agricultural Use Requirements Box.

Seed to be treated must be clean and well-cured prior to treatment. Prior to seed treatment, a dye must be added to the treating slurry so that an unnatural color will distinguish the seed as treated.

Manzate 200 DF may be applied to dry seed with conventional slurry or mist seed treating equipment, or as a plant-box application. For best results, seed must be covered uniformly with fungicide.

LABEL TREATED SEED: "Do not use for food, feed or oil purposes. This seed treated with Manzate 200 DF Fungicide."

CROP	DISEASES	SEED TREATMENT RATE- APPLY AS A SLURRY OZ./BU.	OZ./100 LBS.
Barley	Bunt, Covered Smut, Damping-Off, Fake Loose Smut, Seed Decay, Seedling Blights	1.3 to 2.0	2.7 to 4.2
Corn	Damping Off, Seed Rot, Seedling Blight	1.5 to 3.0	2.7 to 5.4
Cotton Acid Delinted	Damping-Off, Seedling Blights	--	3.0
Cotton Reginned	Damping-Off, Seedling Blights	--	6.0
Flax	Seed Decay, Seedling Blights, Damping-Off	2.0 to 4.0	3.6 to 7.1
Oat	Damping-Off, Seedling Blights, Seed Decay, Smuts	1.3 to 2.0	4.0 to 6.3
Peanuts (shelled)	Damping-Off, Seed Rots, Seedling Blights	2.0 to 4.0	8.0 to 16.0
Rice	Achyla, Other Soil and Seedborne Fungi Causing Seed Rot and Reduced Seedling Vigor	--	2.0 to 4.0 Apply before, during or after soaking in water
Rye	Bunt, Covered Smut, Damping-Off, Seed Decay, Seedling Blights	1.3 to 2.0	2.3 to 3.6
Safflower	Puccinia carthami (which causes Foot-and-rot disease and Foliage Rust disease)	--	2.0
Sorghum	Covered Kernal Smut, Damping-Off, Seedling Blights, Seed Rots	1.5 to 2.5	2.7 to 4.5
Tomato	Damping-Off, Seedling Blights, Seed Rots	--	8.0
Wheat (including Triticale)	Bunt, Covered Smut, Damping-Off, Seed Decay, Seedling Blights	1.3 to 2.0	2.2 to 3.3

GRASSES: Turf Uses (Non-Agricultural Uses)

Applications restricted to lawn grasses by professional applicators. Not for homeowner use. Follow provisions within the Non-Agricultural Use Requirements Box.

CROP	DISEASE/PEST	APPLICATION			COMMENTS
		RATE	TIMING INTERVAL	LIVESTOCK GRAZING/FEEDING	
Lawn grasses Golf courses, Professional Application to industrial (office park), municipal, and residential lawns	Algae	6 oz. in 3 to 5 gal/1000 sq. ft. (16 lbs in 130-220 gals/acre).	Begin when algae begins to appear. Repeat at 7-day intervals as long as condition persists.	Do not graze treated areas of feed clippings to livestock.	Do not use on grasses grown for seed.
	Leaf Spot (Helminthosporium spp.) Rhizoctonia solani Brown Patch	3-4 ozs. in 3 to 5 gals./1000 sq. ft. (8-11 lbs in 130-220 gals/acre).	Begin when disease appears.	Do not graze treated areas of feed clippings to livestock.	Do not use on grasses intended for grazing, such as range or pasture grasses.
	Leaf Rust Stem Rust Stripe Rust	3-4 oz. in 3 to 5 gals/1000 sq. ft. (8-11 lbs in 130-220 gal/acre).	Begin when disease threatens. Repeat at 7 to 10-day intervals as long as disease persists.	Do not graze treated areas of feed clippings to livestock.	When conditions are unusually favorable for disease, use 6-8 ozs./1000 sq. ft. (16-22 lbs/acre) and reduce intervals to 3 to 5 days.

STORAGE AND DISPOSAL

STORAGE: Important-Never allow Manzate 200 DF to become wet during storage. This may lead to certain chemical changes which will reduce the effectiveness of Manzate 200 DF as a fungicide and create vapors which may be flammable. Keep container 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 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.

This product contains mancozeb and ETU, chemicals known to the State of California to cause cancer in laboratory animals. ETU is also known to the State of California to cause birth defects or other reproductive harm in laboratory animals.

WARRANTY STATEMENT

GRIFFIN 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 directions under normal use conditions. It is impossible to eliminate all risks inherently associated with 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 GRIFFIN. In no case shall GRIFFIN 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. The exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling, or application of this product, whether in contract, warranty, tort, negligence, strict liability, or otherwise, shall not exceed the purchase price paid for this product or at GRIFFIN'S election, the replacement of this product. GRIFFIN 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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