



# MANZATE<sup>®</sup> MAX

## FUNGICIDE

A 37% Coordination Product of Manganese and Zinc and Ethylenebisdithiocarbamate

### ACTIVE INGREDIENT

Mancozeb: A coordination product of zinc and manganese ethylenebisdithiocarbamate .....	37.0%*
Manganese++ .....	7.4%
Zinc++ .....	0.9%
Ethylenebisdithiocarbamate ion (C <sub>4</sub> H <sub>6</sub> N <sub>2</sub> S <sub>4</sub> ) <sup>-</sup> .....	28.7%

<b>OTHER INGREDIENTS</b> .....	<u>63.0%</u>
<b>TOTAL</b> .....	<u>100.0%</u>

\*Equivalent to 4.0 lbs. active ingredient per gallon.

EPA Reg. No. 70506-194

### KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

#### FIRST AID

<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything to an unconscious person.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing the eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Contact Rocky Mountain Poison and Drug Safety at 1-866-673-6671 for emergency medical treatment information.

**FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300.**



NET CONTENTS: \_\_\_\_\_ GALLONS



**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION**

Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray (dust, vapor or spray mist). Remove contaminated clothing and wash clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are natural rubber and polyethylene.

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes and socks
- Chemical-resistant gloves made of any waterproof material (except pilots, groundboom applicators, airblast applicators, and seed-treatment handlers who are bagging the treated seed or sewing bags containing treated seed)

For lettuce (head and leaf) and peppers - Aerial applicator on lettuce (head and leaf) and peppers requires that occupational handlers performing mixing/loading operations observe the additional mitigation measure of wearing a minimum of a NIOSH-approved particulate filtering facepiece respirator with any N, R, or P filter; OR a NIOSH-approved elastomeric particulate respirator with any N, R, or P filter; OR a NIOSH-approved powered air-purifying respirator with an HE filter.

For potato seedpiece treatment - When opening the container or loading/pouring the treated seed/seed pieces, wear long-sleeved shirt, long pants, shoes, socks, chemical-resistant gloves and a respirator with a minimum of a NIOSH-approved particulate filtering facepiece respirator with any N, R, or P filter; OR a NIOSH-approved elastomeric particulate respirator with any N, R, or P filter; OR a NIOSH-approved powered air-purifying respirator with an HE filter.

See Engineering Controls for additional requirements.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

**ENGINEERING CONTROLS STATEMENTS**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (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/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to aquatic organisms. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark, except as specified for the labeled use on cranberries. Do not contaminate water when cleaning equipment or disposing of equipment washwater or rinsate.

**DIRECTIONS FOR USE**

**SHAKE WELL BEFORE USING**

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.

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.

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
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

**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.

Do not enter or allow others to enter into treated areas until sprays have dried.

**PRODUCT USE INFORMATION**

MANZATE MAX is a broad-spectrum protectant fungicide labeled for outdoor crops. Optimum disease control is achieved when the fungicide is applied in a regularly scheduled preventive spray program. The addition of an agricultural surfactant will improve fungicide performance by providing a more uniform spray deposit, increased foliar redistribution, and improved fungicide retention during periods of wet weather.

## USE RATE DETERMINATION

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

Under low disease conditions, minimum label rates per application can be used while maximum label rates and the minimum retreatment interval should be used for severe or threatening disease conditions.

If only a portion of the container's contents are to be used, thoroughly shake the container prior to measuring. When small quantities of spray solution are being prepared for use in hand or power sprayers, the following conversion table should be followed (rates are based on dilute thorough coverage sprays):

Label Use Rate Per Acre or 100 Gals.*	Fluid Ounces MANZATE MAX Required for:			
	10 Gals.	5 Gals.	2 Gals.	1 Gal.
0.8 qt.	2.6	1.3	0.5	0.3
1.0 qts.	3.2	1.6	0.7	0.35
1.2 qts.	3.8	1.9	0.9	0.4
1.6 qts.	5.1	2.6	1.0	0.5
2.0 qts.	6.4	3.2	1.3	0.6
2.4 qts.	8.0	4.0	1.6	0.8
3.2 qts.	10.3	5.1	2.1	1.0
4.8 qts.	15.4	7.7	3.1	1.6

1 cup = 8 fluid ounces or 237 milliliters

1 fluid ounce = 2 tablespoons or 30 milliliters

1 tablespoon = 3 teaspoons or 15 milliliters

\*Dilute thorough coverage sprays

## MIXING

Add MANZATE MAX slowly to water in the spray tank with agitation, or premix thoroughly in a nurse tank for concentrate or aircraft sprayers. Continuous agitation is required to keep the product in suspension. Add other fungicides, insecticides, growth regulators, micronutrients, and spray adjuvants after MANZATE MAX 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

MANZATE MAX is compatible with most commonly used agricultural fungicides, insecticides, and growth regulators. When preparing tank mixes, user should consult spray compatibility charts or State Cooperative Extension Service Specialists prior to actual use. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

## SPRAY ADJUVANTS

The addition of agricultural surfactants to MANZATE MAX sprays may improve initial spray deposits, fungicide redistribution and weatherability.

Place MANZATE MAX into suspension prior to adding an adjuvant to the spray mixture. Read and carefully observe the precautionary statements and all other information appearing on both product labels prior to spray preparation.

## SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g. wind direction, wind speed, temperature, relative humidity) and method of application (e.g. ground, aerial, airblast, and chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Do not apply at wind speeds greater than 15 mph.

If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions

exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

Applicators must follow all state and local pesticide drift requirements regarding application of mancozeb. Where states have more stringent regulations, they must be observed.

All aerial and ground application equipments must be properly maintained and calibrated using appropriate carriers and surrogates.

*Additional requirements for aerial applications:*

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

*Additional requirements for groundboom application:*

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

## CHEMIGATION USE DIRECTIONS

### Sprinkler Irrigation

MANZATE MAX must be applied on a regular protectant fungicide schedule, not an irrigation schedule. If irrigation cycles are less frequent than specified MANZATE MAX application intervals, ground or aerial applications must supplement chemigation applications to achieve adequate disease control.

Apply MANZATE MAX only through sprinkler irrigation systems including center-pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, or hand move irrigation systems. Do not apply product through any other type of irrigation system.

Lack of fungicidal 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.

Before applying MANZATE MAX through sprinkler irrigation equipment, the chemigation system must meet the following specifications:

- 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.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone (RPZ), backflow preventer 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.
- Systems not connected to a public water supply must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located in the irrigation pipeline to prevent water source contamination from back flow.

- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

**Center-pivot, Lateral Move, End Tow, and Traveler Irrigation Equipment: (Use only with electric or oil hydraulic drive systems which provide a uniform water distribution.)**

- Determine size of area to be treated.
- Determine the time required to apply no more than 1/4 inch water (6,750 gallons water per acre) over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer. Run system at 80 to 95% of manufacturer's rated capacity.
- Using only water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of MANZATE MAX required to treat area.
- Add the required amount of MANZATE MAX and sufficient water to meet the injection time requirements of the solution tank.
- Maintain constant solution tank agitation during the injection period.
- Stop injection equipment after treatment is completed. Continue to operate the system until MANZATE MAX solution has cleared the sprinkler head.

**Solid-set, Side (wheel) Roll, and Hand Move Irrigation Equipment:**

- Determine acreage covered by sprinkler.
- Fill injector solution tank with water and adjust flow rate to use contents over a 10- to 30-minute interval.
- Determine the amount of MANZATE MAX required to treat area.
- Add the required amount of MANZATE MAX into the same quantity of water used to calibrate the injection equipment.
- Maintain constant solution tank agitation during the injection period.
- Operate system at normal pressures recommended by the manufacturer of the injection equipment and used for the time interval established during calibration.
- Inject MANZATE MAX at the end of the irrigation cycle or as a separate application to maximize foliar fungicide retention.
- Stop injection equipment after treatment is completed. Continue to operate the system until MANZATE MAX solution has cleared the last sprinkler head.

## DISEASE MONITORING

MANZATE MAX 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 specified 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 must carefully read, understand, and follow all use restrictions prior to using MANZATE MAX.

### 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 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 that have registered seed treatment uses.

## APPLICATION INSTRUCTIONS

**Ground** - Thorough coverage of the targeted crop generally results in optimum disease protection. To achieve good coverage, use proper spray pressure, gallons per acre, nozzles, nozzle spacing, and tractor speed. Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration. Use 20 to 100 gallons per acre for ground application equipment. Do not apply with a nozzle height greater than 4 feet above the crop canopy.

**Hand Sprayers** - Thoroughly spray plant foliage until runoff.

**Aerial** - A uniform spray deposit over the crop canopy generally results in optimum disease protection. Each aircraft should be pre-checked for droplet size, uniformity of spray pattern, swath width, and spray volume. During aerial application, human flaggers are prohibited.

**Spray Volume** - Aerial applications are to be made in a minimum of two (2) gallons of water per acre. On vegetable and field crops, 2 to 3 gallons of spray per acre are generally optimal; orchards and vineyards can be handled with spray volume of 10 gallons per acre. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter. Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. When applications are made with a crosswind, the swath must be displaced downwind, the applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

CROPS	DISEASES	RATE MANZATE MAX PER APPLICATION QTS./A	DIRECTIONS	RESTRICTIONS
Apples Crabapples Pears Quince	Fabraea Leaf Spot Fly Speck Rusts- including Cedar Apple Rust Quince Rust Scab Sooty Blotch	4.8 qts./A (4.8 lbs. a.i./A)	<b>Pre-Bloom/Bloom Use:</b> Begin applications at 1/4 to 1/2 inch green tip and continue on a 7- to 10-day schedule through bloom.	Do not apply more than 19.2 qts. (19.2 lbs. active ingredient) per acre per year. Do not apply after bloom. Do not graze livestock in treated areas. Maximum number of applications per year is 4. PHI: 77 days
	Fire Blight	2.4 qts./A (2.4 lbs. a.i./A)	<b>Extended Application Schedule for Use in Tank Mixtures with Systemic Fungicides:</b> 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. Apply in a minimum of 50 gallons of water per acre.	Do not apply more than 16.8 qts. (16.8 lbs. active ingredient) per acre per year. Do not graze livestock in treated areas. Maximum number of applications per year is 4. PHI: 77 days
			The addition of MANZATE MAX to copper fungicides will suppress the disease incidence in orchards where fire blight ( <i>Erwinia amylovora</i> ) has become resistant to streptomycin. Use the full label rate of copper and follow the application instructions on the copper fungicide label. Apply in a minimum of 50 gallons of water per acre.	
	FOR POME FRUITS Use either the "Pre-Bloom/Bloom Use" or "Extended Application" schedules DO NOT COMBINE OR INTEGRATE THE TWO TREATMENT SCHEDULES. It is recommended that this product be used in an Integrated Pest Management (IPM) program.			
Bananas (Plantain)	Sigatoka	1.6 to 2.4 qts./A (1.6 to 2.4 lbs. a.i./A)	Apply when leaves first appear and repeat every 14 to 21 days or as required. Use sufficient water to provide adequate coverage. A spreader sticker may be used for better coverage and weatherability.	Do not apply more than 24 qts. (24 lbs. active ingredient) per acre per growing cycle. Maximum number of applications per season is 10. PHI: 0 days
Cranberries	Fruit Rot	2.4 to 4.8 qts./A (2.4 to 4.8 lbs. a.i./A)	Start applications at early bloom and repeat at 7- to 10-day intervals as required.	Do not apply more than 14.4 qts. (14.4 lbs. active ingredient) per acre per season. Maximum number of applications per season is 3. PHI: 30 days

(continued)



CROPS	DISEASES	RATE MANZATE MAX PER APPLICATION QTS./A	DIRECTIONS	RESTRICTIONS
Grapes	Black Rot Bunch Rot Phomopsis (Deadarm) Downy Mildew	1.2 to 2.0 qts./A (1.2 to 2.0 lbs. a.i./A) West of the Rocky Mountains	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 or 66 days before harvest. For late season control of black rot, deadarm and downy mildew, the use of other approved and recommended fungicides is suggested.	<b>In California</b> , do not apply after bloom. In other areas, do not apply within 66 days of harvest. <b>West of the Rocky Mountains</b> , do not apply more than 6 qts. (6 lbs. active ingredient) per acre per season. Maximum number of applications per season is 3.
		1.2 to 3.2 qts./A (1.2 to 3.2 lbs. a.i./A) East of the Rocky Mountains		<b>East of the Rocky Mountains</b> , do not apply more than 19.2 qts. (19.2 lbs. active ingredient) per acre per season. Maximum number of applications per season is 6. PHI: 66 days
Papayas	Anthracnose Phytophthora Fruit Rot Black Spot Cercospora	1.2 to 2.0 qts./A (1.2 to 2.0 lbs. a.i./A)	Use 20 to 100 gallons water per acre. Start applications at flowering and continue at 14- to 21-day intervals. Direct spray to crown and blossom area. A spreader sticker may be used for better coverage and weatherability.	Do not apply more than 28 qts. (28 lbs. active ingredient) per growing cycle. Maximum number of applications per season is 14. PHI: 14 days
Large Tropical Fruit: Canistel Mamey Sapote Mango Sapodilla Star Apple (Caimito) White Sapote	Anthracnose Black spot (Cercospora) Phytophthora Fruit Rot	1.6 to 2.0 qts./A (1.6 to 2.0 lbs. a.i./A)	Start applications at flowering and continue at 14- to 21-day intervals. Direct spray to crown and blossom area. Use 20 to 100 gallons water per acre.	Do not apply more than 28 qts. (28 lbs. active ingredient) per acre per year. Maximum number of applications per year is 14. PHI: 0 days
Small Tropical Fruit: Atemoya Cherimoya Custard Apple Sugar Apple Sweetsop	Anthracnose	1.6 to 1.8 qts./A (1.6 to 1.8 lbs. a.i./A)	Begin applications at flowering and continue at a 7-day retreatment interval. Applications made with aerial equipment must be made in a minimum spray volume of 10 gallons per acre.	Do not apply more than 25.2 qts. (25.2 lbs. active ingredient) per acre per year. Maximum number of applications per year is 14. PHI: 0 days
Asparagus	Cercospora Leaf Spot Rust	1.6 qts./A (1.6 lbs. a.i./A)	Start applications when disease 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 more than 6.4 qts. (6.4 lbs. active ingredient) per acre per season. PHI Arizona and California: 120 days PHI All Other States: 180 days Maximum number of applications per season is 4.
Corn (sweet corn for fresh use or processing; popcorn; and sweet corn for seed production, including hybrid seed)	Common Rust Gray Leaf Spot Helminthosporium Leaf Blight	0.8 to 1.2 qts./A (0.8 to 1.2 lbs. a.i./A)	Use sufficient water for thorough coverage. Start applications when disease first appears and repeat at 4- to 7-day intervals. A spreader sticker may be used for better coverage and weatherability.	<b>East of the Mississippi River, Arkansas and Louisiana</b> , do not apply more than 18 qts. (18 lbs. active ingredient) per acre per crop. <b>West of the Mississippi River</b> (except Arkansas and Louisiana), do not apply more than 6 qts. (6 lbs. active ingredient) per acre per crop. Do not feed treated forage to livestock. PHI: 7 days

(continued)

CROPS	DISEASES	RATE MANZATE MAX PER APPLICATION QTS./A	DIRECTIONS	RESTRICTIONS
Cucurbit Crop Group: Chayote Chinese Waxgourd Citron Melon Cucumber Gherkin Gourd, edible <i>Momordica</i> spp. Muskmelon Pumpkin Squash, summer Squash, winter Watermelon	Alternaria Leaf Spot Anthracnose Cercospora Leaf Spot Downy Mildew Gummy Stem Blight Microdochium Blight† Scab	1.6 to 2.4 qts./A (1.6 to 2.4 lbs. a.i./A)	Start applications when the 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.  For aerial applications, the minimum spray volume is 2 gallons per acre.  Some cantaloupe varieties (i.e. Harvest Queen, Gold Star, Super Star, Sweet and Early, and Saticoy) are sensitive to MANZATE MAX fungicide. Consult State Cooperative Extension Service Specialist prior to use.	Do not apply more than 19.2 qts. (19.2 lbs. active ingredient) per acre per year. PHI: 5 days † Not approved for this pest in California. Maximum number of applications per year is 8.
Fennel	Early Blight Late Blight	1.6 qts./A (1.6 lbs. a.i./A)	Start applications when disease first appears and repeat applications every 7- to 10-days.	Do not apply more than 12.8 qts. (12.8 lbs. active ingredient) per acre per crop. PHI: 14 days
Ginseng	Alternaria Blight	1.5 qts./A (1.5 lbs. a.i./A)	Start applications when disease first threatens and repeat every 7- to 10-days as needed.  In Wisconsin, apply with ground equipment and a minimum of 80 gallons of water per acre.	Do not apply more than 18 qts. (18 lbs. active ingredient) per acre per year. PHI: 30 days Maximum number of applications per year is 12.
Lettuce (head and leaf)	Downy Mildew	1.2 to 1.6 qts./A (1.2 to 1.6 lbs. a.i./A)	Begin applications when disease appears and reapply on a 7- to 10-day treatment schedule.	<b>In California</b> , do not apply more than 6.4 qts (6.4 lbs. active ingredient) per acre per year. <b>In states other than California</b> , do not apply more than 9.6 qts (9.6 lbs. active ingredient) per acre per year. <b>For all states</b> , minimum retreatment interval is 7 days. Do not apply this product with a U-boom device. PHI in California: 14 days PHI in All Other States: 14 days for leaf lettuce; 10 days for head lettuce.
Melons: Cantaloupe Casaba Crenshaw Honeydew (Watermelon: refer to <b>Cucurbit Crop Group</b> )	Alternaria Leaf Spot Anthracnose Cercospora Leaf Spot Downy Mildew Gummy Stem Blight	1.2 to 2.4 qts./A (1.2 to 2.4 lbs. a.i./A)	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 cantaloupe varieties (i.e., Harvest Queen, Gold Star, Super Star, Sweet and Early, and Saticoy) are sensitive to mancozeb. Consult State Cooperative Extension Service Specialist prior to use.	Do not apply more than 19.2 qts. (19.2 lbs. active ingredient) per acre per crop. PHI: 5 days
Onions (dry bulb) Garlic Shallots	Botrytis Leaf Blight Downy Mildew Neck Rot Purple Blotch Rust	1.6 to 2.4 qts./A (1.6 to 2.4 lbs. a.i./A)	Follow a protective spray schedule starting when diseases are first reported in the area and repeat at 7-day intervals throughout the season.  A spreader sticker may be used for better coverage and weatherability.  Do not allow spray or drift to contact bulbs after lifting from soil.	Do not apply more than 24 qts. (24 lbs. active ingredient) per acre per crop. Do not apply to exposed bulbs. PHI: 7 days

(continued)

CROPS	DISEASES	RATE MANZATE MAX PER APPLICATION QTS./A	DIRECTIONS	RESTRICTIONS
Onions (furrow drench)	Damping-off Seed Rots Seedling Blights Smut	2.4 qts./A (2.4 lbs. a.i./A)	Apply as a furrow drench at time of planting onion seeds. Use 75 to 125 gallons of water per acre.	Do not use more than 2.4 qts. (2.4 lbs. active ingredient) per acre (29,000 linear feet of furrow) with an 18-inch row spacing. Not for use in CA.
Peppers	Anthracnose Early Blight Phomopsis Blight or Fruit Rot	<b>East of the Mississippi River</b> 1.2 to 2.4 qts./A (1.2 to 2.4 lbs. a.i./A)	Begin application when disease appears and reapply on a 7 to 10-day spray schedule.	<b>West of the Mississippi River</b> , do not apply more than 9.6 qts. (9.6 lbs. active ingredient) per acre per year. Minimum retreatment interval is 7 days. Do not apply this product with a U-boom device PHI: 7 days
		<b>West of the Mississippi River</b> 1.2 to 1.6 qts./A (1.2 to 1.6 lbs. a.i./A)		<b>East of the Mississippi River</b> , do not apply more than 14.4 qts. (14.4 lbs. active ingredient) per acre per year. Minimum retreatment interval is 7 days. Do not apply this product with a U-boom device PHI: 7 days
Potatoes	Early Blight Late Blight	0.4 to 1.6 qts./A (0.4 to 1.6 lbs. a.i./A)	Begin applications when plants are 4 to 6 inches high by applying 0.4 to 0.8 qts./A. As the vines increase in size, apply 0.6 to 0.8 qts./A at 3 to 5 day intervals; or apply 1.2 to 1.6 qts./A at 5- to 10-day intervals. A spreader sticker may be used for better coverage and weatherability. It is recommended that this product be used within an Integrated Pest Management Program. Also, vine kill should occur 14 days before harvest.	Do not apply more than 11.2 qts. (11.2 lbs. active ingredient) per acre per crop. PHI in Connecticut, Delaware, Florida, Maine, Massachusetts, Michigan, New Hampshire, New York, Ohio, Pennsylvania, Rhode Island, Vermont and Wisconsin: 3 days PHI All Other States: 14 days
Tomatoes	Anthracnose Early Blight Gray Leaf Mold Gray Leaf Spot Late Blight Septoria Leaf Spot	<b>East of the Mississippi River</b> 0.6 to 2.4 qts./A (0.6 to 2.4 lbs. a.i./A)	<b>East of the Mississippi River</b> Start applications when seedlings emerge or transplants are set. Repeat applications of 0.6 to 1.2 qts./A at 3- to 7- day intervals, or at 1.2 to 2.4 qts./A at 7- to 10- day intervals throughout the season. A spreader sticker may be used for better coverage and weatherability.	<b>East of the Mississippi River</b> , do not apply more than 16.8 qts. (16.8 lbs. active ingredient) per acre per crop. PHI: 5 days
		<b>West of the Mississippi River</b> 0.6 to 1.6 qts./A (0.6 to 1.6 lbs. a.i./A)	<b>West of the Mississippi River</b> Start applications when seedlings emerge or transplants are set. Repeat applications of 0.6 to 0.8 qts./A at 3- to 7- day intervals, or at 1.2 to 1.6 qts./A at 7- to 10- day intervals throughout the season. A spreader sticker may be used for better coverage and weatherability.	<b>West of the Mississippi River</b> , do not apply more than 6.4 qts. (6.4 lbs. active ingredient) per acre per crop. PHI: 5 days
	Bacterial Speck and Spot		Use of a full rate of a fixed copper fungicide in tank mix combination with a half to full rate of MANZATE MAX. Follow the application intervals specified on the copper fungicide label.	

(continued)



<b>CROPS</b>	<b>DISEASES</b>	<b>RATE MANZATE MAX PER APPLICATION QTS./A</b>	<b>DIRECTIONS</b>	<b>RESTRICTIONS</b>
Walnuts	Walnut Blight ( <i>Xanthomonas campestris</i> pv. <i>Juglandis</i> )	1.8 qts./A (1.8 lbs. a.i./A)	Apply by ground in a minimum of 100 gallons water per acre, or by air in a minimum of 10 gallons water per acre. Begin applications at early pre-bloom prior to or when catkins are partially expanded. Make additional applications during bloom and early nutlet stage, or as needed if frequent rainfall occurs.	Do not apply through any irrigation system. The reapplication interval is 7-10 days. Do not apply more than 18 quarts (18 lbs. active ingredient) per acre per use season. This product must be tank mixed with a fixed copper product (such as Cuprofix Ultra 40 Disperss, EPA Reg. No. 70506-201) which is registered for use on walnuts. PHI: 75 days Maximum number of applications per season is 10.
Broccoli	Alternaria Leaf Spot Downy Mildew	1.2 to 1.6 qts./A (1.2 to 1.6 lbs. a.i./A)	In plant beds or direct-seeded fields, apply 7 to 10 days after planting or earlier if disease is present. If field applications, apply as soon as disease is present and repeat applications at 7- to 10-day intervals.	Do not apply more than 9.6 qts. (9.6 lbs. active ingredient) per acre per crop. Do not apply this product with a U-boom device. Minimum retreatment interval is 7 days. PHI: 7 days
Corn, field and hybrid seed corn	Common Corn Rust Gray Leaf Spot Helminthosporium Leaf Blight	0.8 to 1.2 qts./A (0.8 to 1.2 lbs. a.i./A)	Start applications when disease symptoms first appear and, depending on severity of infection, continue on a 4- to 14-day schedule. A spreader sticker may be used for better coverage and weatherability.	Do not apply more than 12 qts. (12 lbs. active ingredient) per acre per season. PHI: 40 days
Peanuts	Cercospora Leaf Spot Rust	0.8 to 1.6 qts./A (0.8 to 1.6 lbs. a.i./A)	Start applications when disease first appears or is reported in area. Repeat sprays at 7- to 14-day intervals, using shorter interval during humid weather.	Do not apply more than 12.8 qts. (12.8 lbs. active ingredient) per acre per crop. Do not feed treated vines to livestock. PHI: 14 days
Peanuts (tank-mix with Thiophanate-methyl fungicide)	Ascochyta Web Blotch Cercospora Leaf Spot Limb Rot Rust	1.2 qts./A (1.2 lbs. a.i./A) MANZATE MAX plus Thiophanate-methyl fungicide	Begin applications when disease first appears and repeat at 7- to 14-day intervals, using shorter interval during humid weather.	Do not apply more than 12.8 qts. (12.8 lbs. active ingredient ) per acre per crop. Do not feed treated vines to livestock. PHI: 14 days
Sugar Beets	Cercospora Leaf Spot Rust	1.2 to 1.6 qts./A (1.2 to 1.6 lbs. a.i./A)	Start applications when disease first threatens and repeat every 7 to 10 days as needed. A spreader sticker may be used for better coverage and weatherability.	Do not apply more than 11.2 qts. (11.2 lbs. active ingredient) per acre per crop per season. Do not feed treated tops to livestock. PHI: 14 days

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CROPS	DISEASES	RATE MANZATE MAX PER APPLICATION QTS./A	DIRECTIONS	RESTRICTIONS
Cereals Wheat, Triticale, Barley, Oats, Rye	Helminthosporium Leaf Spot Leaf Rust Septoria Glume Blotch Septoria Leaf Spot Tan Spot Scab*	0.8 to 1.6 qts./A (0.8 to 1.6 lbs. a.i./A)	Start applications at onset of disease or when plants are in the tillering to jointing stage and repeat at 7- to 10-day intervals. A spreader sticker may be used for better coverage and weatherability.	Do not apply more than 4.8 qts. (4.8 lbs. active ingredient) per acre per crop per season. Maximum number of applications per season is 3. Do not apply after Feekes' growth stage 10.5 or heading and within PHI. Do not graze livestock in treated areas prior to harvest. PHI in California: 46 days. PHI All Other States: 26 days *Scab control on wheat only in California.

### SEED TREATMENT

Seeds to be treated should be cleaned and well-cured prior to treatment. MANZATE MAX may be applied to dry seed with conventional slurry or mist seed treating equipment or as a planter-box application. For best results, the seed must be completely and uniformly covered with fungicide. **USE RESTRICTION:** When using formulations that do not contain dye, to comply with 40 CFR 153.155, all seed treated with an economic poison must be colored to distinguish and prevent subsequent inadvertent use as a food for man or feed for animals.

#### Seed Bag Label Requirements

The Federal Seed Act requires that containers containing treated seeds shall be labeled with the following statements: This seed has been treated with mancozeb fungicide.

Do not use treated seed for feed, food or oil purposes.

The US Environmental Protection Agency requires the following statements on containers containing seed treated with mancozeb:

- When opening this bag or loading/pouring the treated seed/seed pieces, wear long-sleeved shirt, long pants, shoes, socks, chemical- resistant gloves, and a NIOSH-approved particulate filtering facepiece respirator with any N, R, or P filter; OR a NIOSH-approved elastomeric particulate respirator with any N, R, or P filter; OR a NIOSH-approved powered air-purifying respirator with an HE filter. After the seeds/seedpieces have been planted, do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours. Exception: Once the seeds are planted in soil or other planting media, the Worker Protection Standard allows workers to enter the treated area without restriction if there will be no worker contact with the soil media subsurface.
- Treated seeds exposed on soil surface may be hazardous to wildlife. Cover or collect treated seeds spilled during loading and planting.
  - Store treated seed away from food and feedstuffs.
  - Dispose of all excess treated seed by burying seed away from bodies of water.
  - Dispose of seed packaging or containers in accordance with local requirements.
  - Excess treated seed may be used for ethanol production only if (1) by-products are not used for livestock feed and (2) no measurable residues of pesticide remain in ethanol by-products that are used in agronomic practice. Do not allow children, pets or livestock to have access to treated seeds.

CROPS	DISEASES	RATE MANZATE MAX PER APPLICATION		REMARKS
		FL. OZ./BU	FL. OZ./100 LBS.	
Corn (field)	Damping-off Seed Rots Seedling Blights	2.4 to 4.8 fl. oz./BU	4.3 to 8.6 fl. oz./100 lbs.	
Cotton (acid delinted) (reginned)	Damping-off Seedling Blights		4.8 fl. oz./100 lbs.	
	Damping-off Seedling Blights		9.6 fl. oz./100 lbs.	
Flax	Damping-off Seed Rots Seedling Blights	3.2 to 6.4 fl. oz./BU	5.7 to 11.3 fl. oz./100 lbs.	
Peanuts (shelled)	Damping-off Seed Rots Seedling Blights	3.2 to 6.4 fl. oz./BU	12.8 to 25.6 fl. oz./100 lbs.	

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CROPS	DISEASES	RATE MANZATE MAX PER APPLICATION		REMARKS
		FL. OZ./BU	FL. OZ./100 LBS.	
Potato Seedpiece Treatment	Fusarium Decay Late Blight Seedborne Common Scab Rhizoctonia Shoot Blight Silver Scurf		1.6 to 2.5 fl. oz./100 lbs.	Do not use treated seed potatoes for food or feed purposes.
Rice	Damping-off Seed Rots Seedling Blights		3.2 to 6.4 fl. oz./100 lbs.	Apply before, during or after soaking in water.
Safflower	Seedborne Rust (Puccinia carthami)		3.2 fl. oz./100 lbs.	
Sorghum	Covered Kernel Smut Damping-off Seed Rots Seedling Blights	2.4 to 4.0 fl. oz./BU	4.3 to 7.2 fl. oz./100 lbs.	
Tomatoes	Damping-off Seed Rots Seedling Blights		12.8 fl. oz./100 lbs.	

#### MISCELLANEOUS

CROPS	DISEASES	RATE MANZATE MAX PER APPLICATION QTS./A	REMARKS (Also Refer to DIRECTIONS FOR USE)
Asparagus crowns (planting stock)	Crown Rot	0.8 qts. per 100 gals.	Place loosely packed crowns into 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. 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. Dirty crowns should be pre-washed to remove excess soil. Not registered for this use in California.
Caprifig	Assorted Molds Endosepsis (Fusarium)	0.8 qts. per 25 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 fungicide suspension for a minimum of 15 minutes. The fungicide suspension should be stirred frequently to prevent settling out. Fresh dipping solution should be used after treating 4 or 5 batches of figs. After treatment, figs should be drained prior to placement in trees. Not registered for this use in California.
Christmas Trees (Conifer)	Lophodermium Needle Cast Pine Gall Rust Scirrhia Brown Spot	1.6 qts. to 3.2 qts.	Begin application in spring or early summer before infection occurs. Repeat after heavy rains and at two-week intervals as long as needed.
Douglas Fir	Swiss Needle Cast		

## STORAGE AND DISPOSAL

**Do not contaminate water, food or feed by storage or disposal.**

**PESTICIDE STORAGE:** Keep from freezing. Store in a cool, well-ventilated area, but not below 32° F. Do not allow to become overheated in storage. This may bring on chemical changes which will impair the fungicidal effectiveness of MANZATE MAX. Keep container closed when not in use.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

**CONTAINER HANDLING:** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying.

*[for containers less than 5 gallons]*

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of 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:**

Dike and contain the spill. Transfer liquid and solid diking material to separate containers for recovery or disposal. Flush contaminated area with a large amount of water to a chemical or sanitary sewer containing a settling pit. Remove contaminated clothing and wash affected skin areas with soap and water. Wash clothing before reuse. Keep the solids out of the municipal sewers and open bodies of water. Refer to **PRECAUTIONARY STATEMENTS**.

## IMPORTANT INFORMATION READ BEFORE USING PRODUCT

### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of UPL NA Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of UPL NA Inc. and Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold UPL NA Inc. and Seller harmless for any claims relating to such factors.

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