

ManKocide®

FUNGICIDE/BACTERICIDE

Dry Flowable

Active Ingredients:

	By Weight
Mancozeb, a coordination product of zinc ion and manganese ethylenebisdithiocarbamate	15.0%
Manganese	3.0%
Zinc	0.4%
Ethylenebisdithiocarbamate ion (C ₄ H ₆ N ₂ S ₄)	11.6%
Copper Hydroxide (CAS No. 20427-59-2)	46.1%
(Metallic Copper Equivalent - 30%)	38.9%
Other Ingredients:	
TOTAL:	100.0%

KEEP OUT OF REACH OF CHILDREN DANGER PELIGRO

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.)

EPA Reg. No. 91411-7-70051

EPA Est. No. 65387-AR-2

A20161005

Kocide®

CERTIS

Manufactured For: Certis USA, L.L.C.
9145 Guilford Road, Suite 175
Columbia, MD 21046

FIRST AID	
IF IN EYES:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
IF INHALED:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.• Call a poison control center or doctor for further treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by the poison control center or doctor.• Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate use of gastric lavage.	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
For medical emergencies involving this product, call toll free 1-800-255-3924.	

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER PELIGRO

Corrosive. Causes irreversible eye damage. Harmful if swallowed or inhaled. Do not get in eyes or clothing. Avoid inhaling dust or spray mist. Prolonged or frequently repeated dermal contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders, applicators, and other handlers must wear:

- Long-sleeved shirt
- Long pants
- Shoes and socks
- Chemical resistant gloves made of any waterproof material (except pilots, ground boom applicators, aerial applicators, and handlers who are bagging treated seed or sowing the bags)
- Protective eyewear

Aerial application of MANKOCIDE® Fungicide/Bactericide on broccoli, cabbage, lettuce (leaf and head), and peppers requires that occupational handlers performing mixing/loading operations observe the additional mitigation measures of wearing a particulate respirator with an N, R or P filter, NIOSH approval prefix TC 84-A.

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

ENGINEERING CONTROL STATEMENTS:

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)].

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

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.

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 fish and aquatic invertebrates and may contaminate water through runoff. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

Drift and runoff may be hazardous to aquatic organisms in waters adjacent to treated areas. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash-waters or rinsate.

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 State or Tribal 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 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 intervals. 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 48 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
- Shoes and socks
- Chemical resistant gloves made of any waterproof material
- Protective eyewear

For Greenhouse Uses Only:

The 48 hour restricted entry interval (REI) may be reduced to 24 hour REI, provided that the following conditions are met:

For at least seven days following the application of copper-containing products in greenhouses:

- at least one container or station designed specifically for flushing eyes is available in operating condition with the WPS required decontamination supplies for workers entering the area treated with copper-containing products,
- workers are informed orally, in a manner they can understand:
- that residues in the treated area may be highly irritating to the eyes,
- that they should take precautions, such as refraining from rubbing their eyes, to keep the residues out of their eyes,
- that if they do get residues in their eyes, they should immediately flush their eyes with the eye flush container or eye flush station that is located with the decontamination supplies, and
- how to operate the eye flush container or eye flush station.

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. Application to golf courses, industrial (office park), and commercial (municipal) lawns and ornamentals are not within the scope of the Worker Protection Standard. Do not enter or allow others to enter until sprays have dried.

PRODUCT INSTRUCTIONS

GROUND or AERIAL APPLICATIONS: Apply MANKOCIDE® Fungicide/Bactericide at the rate shown; use sufficient water to provide thorough coverage, with available equipment in either dilute sprays or in concentrate ground or aerial sprays. Use at least 100 gallons per acre for traditional airblast sprayers, 25 to 50 gallons per acre for low volume airblast sprayers, and 3 to 10 gallons per acre for aerial application. Rates of product per acre must be the same for dilute and concentrated sprays. Add MANKOCIDE® Fungicide/Bactericide slowly to water in the spray tank with agitation, or premix thoroughly in separate holding tank for concentrate or aircraft sprayers. Maintain continuous agitation to keep the product in suspension. If needed, adjuvants of the spreader, sticker, or compatibility agent type that are approved for use on growing crops may be used.

RESTRICTIONS

- Aerial application of MANKOCIDE® Fungicide/Bactericide on broccoli, cabbage, lettuce (leaf and head), and peppers requires that occupational handlers performing mixing/loading operations observe the additional mitigation measures of wearing a particulate respirator with an N, R or P filter, NIOSH approval prefix TC 84-A.
- Apply this product only through one or more of the following types of systems: sprinkler including center pivot, lateral move, traveler, big gun, and plastic pipe solid set system(s). Do not apply this product through any other type of irrigation system. In California, do not apply in systems which contain aluminum parts or components.
- MANKOCIDE® Fungicide/Bactericide must be used only in accordance with directions on this label.
- Do not mix this product with products containing diazinon, fosetyl-al or other aluminum-containing products, or thiophanate-methyl because of physical incompatibility.

SPECIAL PRECAUTIONS

- If MANKOCIDE® Fungicide/Bactericide is applied in a spray solution having a pH of less than 6.5, phytotoxicity may occur.
- This product may be reactive on masonry and metal surfaces such as galvanized roofing. Avoid contact with metal surfaces. Do not spray on cars, houses, lawn furniture, etc.
- Environmental conditions such as extended periods of wet weather, acid rain, etc. which alter the pH of the leaf surface may affect the performance of MANKOCIDE® Fungicide/Bactericide resulting in possible phytotoxicity or loss of effectiveness.
- Pesticides may perform in an unpredictable manner when tank mixed, especially where several products are involved. Reduced effect on pests or crop injury may occur. Unless specified by a state/local expert, or the user has small scale direct experience, do not tank mix. Follow more restrictive labeling of any tank mix partners. Do not tank mix with any product that contains a prohibition on tank mixing.
- It must be determined in the selection process if proper application equipment is available and if the waste associated with its use can be properly handled. Materials used in the construction of application equipment is also an important factor as pesticides are often reactive with soft metals such as aluminum and even some synthetic materials such as plastics, rubbers, etc. Therefore it is necessary when working with equipment containing these materials that they are thoroughly flushed with clean water after each day use.

FROST INJURY PROTECTION

BACTERIAL ICE NUCLEATION INHIBITOR

When used at the appropriate rate and timing, to all crops listed on this label for disease control, MANKOCIDE® Fungicide/Bactericide may also afford control of ice-nucleating bacteria (*Pseudomonas syringae*, *Erwinia herbicola*, and *Pseudomonas fluorescens*). If the applications occur at least 24 hours prior to anticipated frost conditions, some protection against light frost may be provided.

No reduction in frost damage should be expected in those geographic areas where weather conditions favor severe frost.

APPLICATION INSTRUCTIONS

FOLIAR TREATMENT

Where EBDC products used allow the same maximum poundage of active ingredient per acre per year:

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

Where EBDC products used allow different maximum poundage of active ingredient per acre per year:

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

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

CROP	DISEASES	PRODUCT RATE (Lb. /Acre/ Application)	MAXIMUM PRODUCT RATE (Lb. Product/ Acre/Year)	USE INSTRUCTIONS
Almond	Bacterial Blast (<i>Pseudomonas</i>), Bacterial Canker, Coryneum Blight (Shot Hole), Scab	6 - 12 lb.	60 lb.	Make first application before fall rains and a second at late dormant. Use the higher rates when conditions favor disease. Minimum retreatment interval is 7 days. NOTE: Foliar injury may occur from post-bloom sprays on almonds, especially on NePlus varieties.
	Bacterial Spot (<i>Xanthomonas arboricola</i> <i>pv. Pruni</i>)	6 - 12 lb.		Dormant: Make first application at late dormant. Use the higher rates when conditions favor disease.
		0.75 - 4 lb.		Pink through full bloom: Use 3.5 to 4 pounds. Maximum use rate is 4.0 pounds. Petal Fall: Use 1.5 to 2 pounds. Maximum use rate is 2.0 pounds. Post Petal Fall: Use 0.75 to 1 pound. Maximum use rate is 0.75 pounds. Time sprays around rain events and temperature. Make a minimum of one application to prevent new infections. NOTE: Copper applied after bloom can be potentially phytotoxic. Leaf spotting and premature leaf fall can occur if rates are extended.
	Anthraxnose, Blossom Blight/ Brown Rot, Coryneum Blight (Shot Hole), Scab	4 - 5 lb.		Apply during early bloom. Do not apply after full bloom or injury may occur. Use the higher rates when rainfall is heavy and disease pressure is high. Restrictions: • Minimum retreatment interval is 7 days. • Do not make last application later than 5 weeks after petal fall. • Do not apply this product with a U-boom device. • Do not graze livestock in treated area.
Apple	Anthraxnose European Canker <i>Pseudomonas</i>	12 - 16 lb.	53.3 lb.	Fall, late dormant: Apply before fall rains. Use higher specified rates under severe disease conditions. Restrictions: • Only one application is permitted during the fall, late dormant season. • Apply only after harvest. • Use on yellow varieties may cause discoloration, therefore, pick before spraying. • Do not graze livestock.
	Fire Blight (Suppression)	8 - 16 lb.		Between silver tip and green tip: Make one application between silver tip and green tip as a full cover spray. Restrictions: • Crop injury may occur from late application; discontinue use when green tip reaches 1/2 inch. • Minimum preharvest interval is 77 days. • Do not graze livestock in treated areas.
	Crown Rot Collar Rot	4 lb.		In bloom and growing: Mix in 100 gallons of water. Apply 4 gallons of suspension as a drench on the lower trunk area of each tree. Apply either in early spring or in late fall after harvest. Use this product in an Integrated Pest Management Program for all apple uses. Restrictions: • Minimum retreatment interval is 5 days. • For early spring use, minimum preharvest interval is 77 days. • Do not use if soil pH is below 5.5 since copper toxicity may result. • Do not graze livestock in treated areas.
Banana	Sigatoka	2.5 lb.	63 lb.	Apply when leaves first appear and repeat every 14 to 21 days if needed. Use sufficient water to provide adequate coverage. The addition of a surfactant to spray solutions will improve performance. May be applied by air in 3 gallons of water combined with 0.5 gallon of agricultural spray oil. Restrictions: • Minimum retreatment interval is 7 days. • Minimum preharvest interval is 0 days.
Barley, Oat, Wheat	Helminthosporium Leaf Spot, Septoria Leaf Spot, and Glume Blotch	1.7 lb.	3.5 lb.	Make first application at early heading and follow with second spray 10 days later. Use higher specified rates when conditions favor disease. Restrictions: • Minimum retreatment interval is 10 days. • Do not apply within 26 days of harvest. • PHI for barley and wheat is Feekes Growth Stage 10.5 (typically 35 to 45 days), but no less than 26 days. • Do not graze livestock in treated areas prior to harvest.
Broccoli*§	Alternaria Black Rot (<i>Xanthomonas</i> spp.) Downey Mildew	1 - 1.75 lb.	8.8 lb.	Begin applications prior to disease development and when conditions are favorable for disease development. Apply at 7 to 10 day intervals, if needed. Use higher specified rates when conditions favor disease. Restrictions: • Minimum retreatment interval is 7 days. • Do not apply this product with a U-boom device. • Minimum preharvest interval is 7 days.
Cabbage*§	Alternaria Black Rot (<i>Xanthomonas</i> spp.) Downey Mildew	1 - 1.75 lb.	8.8 lb.	Begin applications prior to disease development and when conditions are favorable for disease development. Apply at 7 to 10 day intervals, if needed. Use higher specified rates when conditions favor disease. Restrictions: • Minimum retreatment interval is 7 days. • Do not apply this product with a U-boom device. • Minimum preharvest interval is 7 days.
Cranberry	Fruit Rot	7 lb.	42 lb.	Start applications at mid-bloom and repeat at 7 to 10 day intervals, if needed. Restriction: • Minimum retreatment interval is 7 days. • Do not apply within 30 days of harvest.
Cucurbit Crop Group Chayote; Chinese wax gourd (Chinese preserving melon); Citron melon; Cucumber; Gherkin; Gourd, edible (hyotan, cucuzza, hechima, Chinese okra); <i>Momordica</i> spp. (balsam apple, balsam pear, bittermelon, Chinese cucumber); Muskmelon (true cantaloupe, cantaloupe, casaba, Santa Claus melon, crenshaw melon, honeydew melon, honey balls, Persian melon, golden pershaw melon, mango melon, pineapple melon, snake melon); Pumpkin; Squash, summer; Squash, winter (butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash); Watermelon	Alternaria Leaf Spot Angular Leaf Spot Anthraxnose Bacterial Fruit Blotch Cercospora Leaf Spot Downy Mildew Gummy Stem Blight Powdery Mildew Scab* Watermelon Fruit Blotch	2 - 3 lb.	17.5 lb.	Start applications when plants are in the two-leaf stage and repeat at 7 to 10 day intervals. Use higher specified rates and apply every 5 to 7 days with moderate to severe disease pressure and when conditions favor disease. Use sufficient water and direct spray to provide thorough coverage of both upper and lower leaf surfaces. The minimum aerial spray volume for cucurbits is 2 gallons. Some cantaloupe varieties (i.e., Harvest Queen, Gold Star, Super Star, Sweet and Early, and Saticoy) are sensitive to MANKOCIDE® Fungicide/Bactericide. Consult State Cooperative Extension Service Specialist prior to use. NOTE: MANKOCIDE® Fungicide/Bactericide helps suppress the incidence of watermelon fruit blotch. Restrictions: • Minimal retreatment interval is 5 days. • Do not make more than 5 applications per year at maximum application rate. • Do not apply within 5 days of harvest.
Ginseng*	Alternaria Blight	2 lb.	17.5 lb.	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. Restrictions: • Minimum retreatment interval is 7 days. • Do not make more than 8 applications per year at maximum application rate. • Do not apply within 30 days of harvest.

*Not registered for use in California.

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(continued)

CROP	DISEASES	PRODUCT RATE (Lb. /Acre/ Application)	MAXIMUM PRODUCT RATE (Lb. Product/ Acre/Year)	USE INSTRUCTIONS
Grape	Black Rot Downy Mildew Powdery Mildew Phomopsis	2.5 lb.	66.7 lb. East of the Rocky Mountains 40 lb. West of the Rocky Mountains	Apply in sufficient water to provide thorough coverage starting at late dormant or bud break. Apply every 7 to 10 days with moderate to severe disease pressure and when conditions favor disease. For late season control of black rot, powdery mildew, and downy mildew, the use of another approved fungicide is suggested. NOTE: Foliage injury may occur on copper sensitive varieties such as Concord, Delaware, Niagara, and Rosette. Either test for sensitivity or add 1 to 3 pounds of hydrated lime per pound of MANKOCIDE® Fungicide/Bactericide. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 3 days. • Do not apply within 66 days of harvest. • California: Do not apply after bloom.
Lettuce†§	Anthracnose Downy Mildew	1 - 2 lb.	26 lb.	Begin applications prior to disease development and when conditions are favorable for disease development. Apply at 7 to 10 day intervals, if needed. Use higher specified rates when conditions favor disease. NOTE: Determine if there is varietal sensitivity prior to use. Injury may occur to sensitive lettuce varieties and under adverse weather conditions. Discontinue use if injury occurs. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 5 days. • Minimum preharvest interval is 10 days. • Do not apply this product with a U-boom device.
Onion (Dry Bulb)	Botrytis Leaf Blight Downy Mildew Purple Blotch	2.5 lb.	20 lb.	Follow a protective spray schedule. Start when diseases are first reported in the area and repeat at 7 day intervals throughout the season. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 7 days. • Do not apply to exposed bulbs. • Do not apply within 7 days of harvest.
	Bacterial Blight	1.5 - 2.25 lb.		
Papaya*	Anthracnose	5.5 - 8.7 lb.	70.6 lb.	Apply in a minimum of 50 gallons of spray solution per acre. Apply before disease appears. Apply at 14 day intervals if retreatment is needed. The addition of an approved spreader is desirable. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 7 days. • Do not make more than 8 applications per year at the maximum application rate. • Minimum preharvest interval is 0 days.
Peanut	Cercospora Leaf Spot	2 - 2.6 lb.	15.8 lb.	Start applications when disease first appears or is reported in the area. Repeat sprays at 7 to 14 day intervals. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 7 days. • Do not apply within 14 days of harvest. • Do not feed treated vines to livestock.
Pear	Fire Blight	1.5 lb.	53.3 lb.	In bloom, growing: Apply at 5 day intervals throughout the bloom period. Use this product in an Integrated Pest Management Program. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 5 days. • Do not apply after bloom. • Do not graze livestock in treated areas.
	Pseudomonas Blight	12 - 16 lb.		Fall, late dormant: Apply before fall rains and again during dormancy before spring growth starts. Use the higher specified rate when disease pressure is high or when conditions favor disease development. NOTE: Russetting may occur in copper sensitive varieties. Excessive dosages may cause fruit russet. Restrictions: <ul style="list-style-type: none"> • Only one application is permitted during the fall, late dormant season. • Apply only after harvest.
Pepper*§	Anthracnose Bacterial Spot Cercospora Leaf Spot Phytophthora Blight (Suppression) Ripe Rot	2 - 2.6 lb.	39 lb.	Begin applications prior to disease development and when conditions are favorable for disease development. Apply at 7 to 10 day intervals, if needed. Use higher specified rates when conditions favor disease. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 3 days. • Do not apply this product with a U-boom device. • Minimum preharvest interval is 7 days.
Potato	Early Blight Late Blight	1.5 - 5 lb.	74.66 lb.	Apply 1.5 to 2.0 pounds per acre at 5 to 10 day intervals starting when plants are 6 inches high in locations where disease is light and up to 4.0 to 5.0 pounds per acre as vine size increases and where disease is more severe. Use higher specified rates and apply every 5 days with moderate to severe disease pressure and when conditions favor disease. Use this product in an Integrated Pest Management Program. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 5 days. • Vine-kill should occur 14 days before harvest. • Do not use within 3 days of harvest in CT, DE, FL, MA, ME, MI, NH, NY, OH, PA, RI, VT, and WI. • Do not use within 14 days of harvest elsewhere.
Sugar Beet	Cercospora Leaf Spot	2.5 - 4.3 lb.	26.2 lb.	Begin when disease first threatens. Repeat at 10 day intervals. Use higher specified rates when conditions favor disease. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 10 days. • Do not apply within 14 days of harvest. • Do not feed treated sugar beet tops to livestock.
Tomato	Anthracnose Early Blight Gray Leaf Spot Late Blight Leaf Mold Septoria Leaf Spot Bacterial Spot Bacterial Speck	Processing 1.7 lb.	Processing 58 lb. East of the Mississippi River 42.66 lb. West of the Mississippi River	Begin applications when disease first threatens and repeat at 7 to 10 day intervals if needed. Use higher specified rates and apply every 3 to 7 days with moderate to severe disease pressure and when conditions favor disease. MANKOCIDE® Fungicide/Bactericide is a specially formulated product to provide control of copper tolerant bacteria; therefore, tank mixing with products containing maneb or mancozeb is not necessary. If copper tolerant bacterial blight is not a concern, these products can be tank mixed if enhanced fungicidal activity is desired. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 3 days. • Do not apply within 5 days of harvest.
		Fresh Market 1 - 3 lb.	Fresh Market 26.7 lb.	
Atemoya Sugar Apple (Sweetsop)*	Anthracnose Phytophthora Fruit Rot Black Spot (Cercospora)	2 - 2.5 lb.	42 lb.	Begin applications at flowering and continue at 7 day intervals. Make applications in a minimum of 10 gallons per acre. Applications made with aerial equipment must be made in a minimum of 5 gallons per acre. Applications may be made up to the day of harvest. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 7 days. • Do not make more than 14 applications per year.
Cherimoya*	Anthracnose Phytophthora Fruit Rot Black Spot (Cercospora)	2 - 2.5 lb.	28 lb.	Begin applications at flowering and continue at 7 day intervals. Make applications in a minimum of 10 gallons per acre. Applications made with aerial equipment must be made in a minimum of 5 gallons per acre. Applications may be made up to the day of harvest. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 14 days. • Do not make more than 14 applications per year.
Custard Apple*	Anthracnose Phytophthora Fruit Rot Black Spot (Cercospora)	2 - 2.5 lb.	26.2 lb.	Begin applications at flowering and continue at 10 day intervals. Make applications in a minimum of 10 gallons per acre. Applications made with aerial equipment must be made in a minimum of 5 gallons per acre. Applications may be made up to the day of harvest. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 10 days. • Do not make more than 13 applications per year.
Mango*	Anthracnose Phytophthora Fruit Rot Black Spot (Cercospora)	2 - 2.5 lb.	160 lb.	Start applications at flowering and continue at 7 to 21 day intervals. Direct spray to crown and blossom area. Use 20 to 100 gallons of water per acre. Applications may be made up to the day of harvest. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 7 days.
Mamey Sapote* Star Apple* (caimito) Canistel* Sapodilla* White Sapote*	Anthracnose Phytophthora Fruit Rot Black Spot (Cercospora)	2 – 2.5 lb.	28 lb.	Start applications at flowering and continue at 14 to 21 day intervals. Direct spray to crown and blossom area. Use 20 to 100 gallons of water per acre. Applications may be made up to the day of harvest. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 14 days. • Do not make more than 14 applications per year.
Walnut§	Walnut Blight	6 - 10 lb.	100 lb.	Apply first spray at early pre-bloom prior to or when catkins are partially expanded. Make additional applications during bloom and early nutlet stage on a 7 to 10 day intervals if needed when frequent rainfall or extended periods of moisture occur. Thorough coverage of catkins, leaves and nutlets is essential for effective control. Restrictions: <ul style="list-style-type: none"> • Minimum retreatment interval is 7 days. • Do not make more than 10 applications per year. • Do not apply within 75 days of harvest. • Do not apply through any irrigation system. • Do not graze livestock in treated area.

*Not registered for use in California.

†Not registered for use in Arizona and California.

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SEED TREATMENT

Seeds to be treated must be cleaned and well cured prior to treatment. MANKOCIDE® Fungicide/Bactericide may be applied to dry seed with conventional slurry or mist seed treating equipment. For best results, the seed must be completely and uniformly covered with fungicide. For seed treatment, a dye must be added to MANKOCIDE® Fungicide/Bactericide which will impart an unnatural color to the seed.

The Federal Seed Act requires that seed that have been treated with this product that are then packaged or bagged for future use shall be labeled with the following statements:

- This seed has been treated with MANKOCIDE® Fungicide/Bactericide, a fungicide containing mancozeb.
- Do not use treated seed for feed, food, or oil purposes.

The following statements are also required:

- Store treated seed away from food and feedstuffs.
- Do not allow children, pets or livestock to have access to treated seeds.
- When opening this bag or loading/pouring the treated seed, wear long-sleeved shirt, long pants, shoes, socks, chemical resistant gloves, and a particulate respirator with an N, R or P filter, NIOSH approval prefix TC 84-A
- Dispose of all excess treated seed by burying seed away from bodies of water.
- Do not contaminate bodies of water when disposing of planting equipment wash water.
- Dispose of seed packaging or containers in accordance with local requirements.
- After the seeds have been planted, do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours.
- **Exception:** Once the seeds are planted in the 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.

CROP	DISEASE	PRODUCT RATE	USE INSTRUCTIONS
Rice	<i>Achlya</i> spp. <i>Pythium</i> spp.	2 - 4 ounces per 100 pounds of seed	When using a seed treating machine dilute with an equal amount of water. Consult State Agricultural Experiment Station regarding specific recommendations.
Wheat, Barley	<i>Pseudomonas syringae</i> , <i>Xanthomonas translucens</i> , <i>Tilletia caries</i>	4 ounces per 100 pounds of seed	When using a seed treating machine dilute with an equal amount of water. Consult State Agricultural Experiment regarding specific recommendations.

TURF GRASS

For use on sod farms, golf courses, industrial (Office Parks) and commercial (Municipal) lawns and other similar non-residential areas which are not used as athletic fields. Not for residential use.

DIRECTIONS FOR USE:

Apply as a thorough coverage spray using 5.5 to 10 pounds MANKOCIDE per acre (2 to 3.6 ounces per 1000 square feet). Start applications when grass greens-up in spring or when conditions favor disease. Repeat at 10 to 14 day intervals if needed. Use the shorter interval and maximum rate when disease is severe or expected to be so. Apply in sufficient water to provide adequate coverage.

Due to the wide variation in climatic conditions, cultural practices and other factors, test tank mixtures on a small area before wide scale use. Under certain circumstances, this product or tank mixtures containing this product can cause discoloration to some turf grass species and varieties including Bluegrass and annual Bluegrass (Poa). If discoloration occurs, it is usually short term and can normally be mitigated by fertilizing and mowing.

RESTRICTIONS:

- Maximum single application rate is 10 pounds per acre or 3.6 ounces per 1000 square feet.
- Minimum retreatment interval is 10 days.
- Sod Farm Turf: Harvesting of treated turf is prohibited until 72 hours following application. Do not apply more than 4 applications per year.
- Golf Courses:
 - For cool season grasses on greens, tees, and aprons: Do not apply more than 5 applications per year.
 - For cool season grasses on fairways: Do not apply more than 4 applications per year.
 - For warm season grasses on greens, tees, and aprons: Do not apply more than 4 applications per year.
 - For warm season grasses on fairways: Do not apply more than 3 applications per year.
- All Other Turf: Do not apply more than 4 applications per year.
- Do not graze treated areas. Do not use on grasses intended for grazing, such as range or pasture grasses.
- Do not feed clippings to livestock.
- Do not use on grasses grown from seed.

NOTE: Phytotoxicity may occur depending upon varietal differences. Apply specified rate to small area and observe for 7 to 10 days for signs of injury. If phytotoxicity occurs, discontinue use. Do not apply in spray solutions with a pH of less than 6.5.

DISEASES/PESTS	PRODUCT RATE (Oz./1000 Sq. Ft./ Application)	REMARKS
Helminthosporium Melting-out Rusts (Leaf, Stem, Stripe)	2 - 3.6 oz.	
Copper Spot, Fusarium Blight, Powdery Mildew, Red Thread", Slime Mold	2 - 3.6 oz.	
Algae	2 - 3.6 oz.	
Dollar Spot	2 - 3.6 oz.	
Rhizoctonia Brown Patch	2 - 3.6 oz.	Apply on a 10 day schedule.
Pythium Blight	2 - 3.6 oz.	Apply at 10 day intervals if conditions are especially favorable for disease development.
Fusarium Snow Mold	2 - 3.6 oz.	Apply at 2 to 6 week intervals during winter.
Moss (Golf greens, tees, and fairways)	1 – 3.6 oz.	Established moss: Apply 3.6 ounces in 2 gallons of water. Sequential applications at 10 to 14 day intervals are required for maximum effectiveness. Five applications may be necessary for effective moss control. Preventative: Apply 1 to 2 ounces in 2 gallons of water. Apply at 10 to 14 day intervals beginning in the early spring or early fall. Use this product in an Integrated Pest Management Program with emphasis on cultural practices for preventing or minimizing moss establishment. Temporary discoloration may occur when applied to bentgrass or <i>Poa annua</i> during times of elevated stress, particularly heat stress. Restrictions: <ul style="list-style-type: none">• For use on golf greens, tees, and fairways only• Follow restrictions listed above for maximum number of applications allowed per year.

* Except California

CHEMIGATION INSTRUCTIONS

Apply MANKOCIDE® Fungicide/Bactericide only through sprinkler systems including center pivot, lateral move, traveler, big gun and plastic pipe solid set system(s). Do not apply MANKOCIDE® Fungicide/Bactericide through any other type of irrigation system. In California, do not apply in systems which contain aluminum parts or components.

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

If you have questions about calibration, contact State Extension Service Specialists, equipment manufacturers or other experts. Do not connect an irrigation system (in-cluding 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.

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2 1/2 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words **KEEP OUT**, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word **STOP**. Below the symbol shall be the words: **"PESTICIDES IN IRRIGATION WATER."**

This sign is in addition to any sign posted to comply with the Worker Protection Standard.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Public water systems 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 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 of the overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

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 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 injections 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.

When mixing, fill nurse tank half full with water. Add MANKOCIDE® Fungicide/Bactericide slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. DO NOT PRE-SLURRY MANKOCIDE® Fungicide/Bactericide. Add stickers, spreaders, insecticides, nutrients, etc. last. If compatibility is in question, use the Compatibility Jar Test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all cautions and limitations on the label of all products used in mixtures. Good agitation is required in the injection tank.

MANKOCIDE® Fungicide/Bactericide must be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems.

Stop injection equipment after treatment is completed and continue to operate irrigation equipment until all MANK OCIDE® Fungicide/Bactericide is flushed from the system.

SPRINKLER CHEMIGATION

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.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of liquid 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.

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.

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.

When mixing, fill nurse tank half full with water. Add MANKOCIDE® Fungicide/Bactericide slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. DO NOT PRE-SLURRY MANKOCIDE® FUNGICIDE/BACTERICIDE. Add stickers, spreaders, insecticides, nutrients, etc. last. If compatibility is in question, use the Compatibility Jar Test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all cautions and limitations on the label of all products used in mixtures. Good agitation is required in the injection tank.

MANKOCIDE® Fungicide/Bactericide must be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems.

Stop injection equipment after treatment is completed and continue to operate irrigation equipment until all MANK OCIDE® Fungicide/Bactericide is flushed from the system.

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, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Droplet Size

Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Wind Speed

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition (approximately 3 to 10 mph), and there are no sensitive areas within 250 feet downwind.

Temperature Inversions

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.

Other State and Local Requirements

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

Equipment

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

Additional requirements for aerial applications:

1. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
2. 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.
3. 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 ground boom application:

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

ATTENTION: 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.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry place.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact ChemTel at 1-800-255-3924, day or night.

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Certis USA LLC, 9145 Guilford Road, Suite 175, Columbia, MD 21046
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