

4581-394

09/28/2006

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ENVIRONMENTAL PROTECTION AGENCY

SEP 28 2006

Ms. K. Jayne Walz  
Manager, Product Registration  
Cerexagri, Inc.,  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406

Dear Ms. Walz:

SUBJECT: Penncozeb 4FL Flowable Fungicide  
EPA Registration Number 4581-394  
Your Label Amendment Submitted May 11, 2006

The amendment referred to above, submitted in connection with registration under section (3) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) is acceptable provided that you make the following changes:

**Page 2 – Personal Protective Equipment:**

Change "Protective eyewear when mixing or loading" to "Goggles or face-shield."

**Page 2 – Spray Adjuvants:**

Delete the sentence "Cerexagri makes no claim of compatibility or potential phytotoxicity when mixed with surfactants."

**Page 6 – Agricultural Use Requirements:**

Change "Protective eyewear" to "Goggles or face-shield".

**Page 8 – Restrictions:**

Change "Users shou'd carefully read, understand and follow . . ." to "Users must carefully read, understand and follow . . ."

**Page 16 and 17 – Seed Treatment:**

Change "This seed has been treated with Penncozeb FL Flowable Fungicide containing mancozeb. Must not be used for food, feed or oil purposes." to "Must not be used for food, feed or oil purposes."

Make sure this restriction language shows up on both pages.

**Page 38 – Warranty and Disclaimer:**

Change "In no case shall Cerexagri or Seller . . ." to "To the extent allowed by applicable law, in no case shall Cerexagri or Seller . . ."

Additionally, please format the tables so there are no boxes with missing lines and so that applicable restrictions appear on every page.

If you have any questions, please contact Lisa Jones of my staff by phone at (703) 308-9424 or by e-mail at [jones.lisa@epa.gov](mailto:jones.lisa@epa.gov).

Sincerely,



Mary L. Waller  
Product Manager (21)  
Fungicide Branch  
Registration Division (7505C)

Enclosure: Stamped label

CONCURRENCES							
SYMBOL <	7505C						
SURNAME <	Lisa Jones						
DATE <	Sep 27, 2006						

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

3/40

SEP 28 2006

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

4581-394

# PENNCOZEB® 4FL

## FLOWABLE FUNGICIDE

A 37% Coordination Product of Manganese and Zinc and  
Ethylenebisdithiocarbamate

### ACTIVE INGREDIENT

A coordination product of zinc and manganese ethylene bisdithiocarbamate.....		37.0%*
Manganese++ .....	7.4%	
Zinc++ .....	0.9%	
Ethylene bisdithiocarbamate ion (C <sub>4</sub> H <sub>6</sub> N <sub>2</sub> S <sub>4</sub> )-- .....	28.7%	
OTHER INGREDIENTS .....	63.0%	
TOTAL.....	100.0%	

\*Equivalent to 4 lbs. active ingredient per gallon.

EPA REG. NO. 4581-394

EPA Establishment No. 66196-CA-1

Cerexagri, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406

Net Contents:

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

#### If inhaled

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
- Call a poison control center or doctor for treatment advice.

#### If on skin or clothing

- 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.

**If in eyes**

- 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 the eye.
- Call a poison control center or doctor for treatment advice.

**If swallowed**

- 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

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

Causes moderate eye irritation. 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)**

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

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Mixers and Loaders must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear when mixing or loading
- Chemical-resistant apron

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

manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### **ENGINEERING 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 flaggers must be in enclosed cabs.

The enclosed cabs must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)]. The handler PPE requirements may be reduced or modified as specified in the WPS.

#### **USER SAFETY RECOMMENDATIONS:**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. For terrestrial uses, do not apply directly to water, 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 disposing of equipment washwaters or disposing of wastes. For Seed Treatment Products - cover or incorporate spilled treated seed.

#### **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.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

#### **NON-AGRICULTURAL USE REQUIREMENTS**

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

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

Keep unprotected persons out of treated area until sprays have dried.

#### **GENERAL USE INFORMATION**

Penncozeb® 4FL is a broad-spectrum protectant fungicide recommended 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 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):

Recommended Label Use Rate Per Acre or 100 Gals.*	Fluid Ounces Penncozeb 4FL Required for:			
	10 Gals.	5 Gals.	2 Gals.	1 Gal.
0.8 qts	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 Penncozeb 4FL 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 Penncozeb 4FL 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  $\frac{1}{3}$  to  $\frac{1}{2}$  the desired final water volume.

**COMPATIBILITY**

Penncozeb 4FL 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.

**SPRAY ADJUVANTS**

The addition of agricultural surfactants to Penncozeb 4FL sprays may improve initial spray deposits, fungicide redistribution and weatherability.

Place Penncozeb 4FL 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. Cerexagri makes no claim of compatibility or potential phytotoxicity when mixed with surfactants.

**APPLICATION**

**Ground** - Thorough coverage of the targeted crop generally results in optimum disease protection. To achieve good coverage, use proper spray pressure, gallonage 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.

**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 prechecked for droplet size, uniformity of spray pattern, swath width, and spray volume. During aerial application, human flaggers are prohibited unless in totally enclosed vehicles.

**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 optimum; orchards and vineyards can be handled with spray volume of 10 gallons per acre.

**CHEMIGATION USE DIRECTIONS**

**Sprinkler Irrigation**

Penncozeb 4FL must be applied on a regular protectant fungicide schedule, not an irrigation schedule. If irrigation cycles are less frequent than recommended Penncozeb 4FL application intervals, ground or aerial applications must supplement chemigation applications to achieve adequate disease control.

Apply Penncozeb 4FL 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 Penncozeb 4FL 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 a 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 Penncozeb 4FL required to treat area.
- Add the required amount of Penncozeb 4FL 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 Penncozeb 4FL 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 Penncozeb 4FL required to treat area.
- Add the required amount of Penncozeb 4FL 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 Penncozeb 4FL 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 Penncozeb 4FL solution has cleared the last sprinkler head.

**DISEASE MONITORING**

Penncozeb 4FL is a broad-spectrum, protectant fungicide. If not applied on a routine protectant spray schedule, crops should be scouted on a weekly basis. Fungicide application should be made, at the recommended label use rate and spray schedule, at the first sign of disease, report of disease in the area, or during environmental

conditions favorable for disease development.

## **RESTRICTIONS**

Users should carefully read, understand, and follow all use restrictions prior to using Penncozeb 4FL.

### **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.

## FRUIT CROPS

Not intended for use on fruit trees by homeowners.

For pome fruit, use either the "Pre-Bloom/Bloom Use" or "Extended Application" schedule. **DO NOT COMBINE OR INTEGRATE THE TWO TREATMENT SCHEDULES.** It is recommended that this product be used in an Integrated Pest Management program (IPM).

Crop	Diseases Controlled	Rate Penncozeb 4FL Per Application Qts./A.	Remarks (Also Refer to Directions For Use)	Restrictions
Apples Crab-apples Pears Quince	Fabraea Leaf Spot Scab Rusts- including Cedar Apple Rust Quince Rust Fly Speck Sooty Blotch	4.8*	Pre-Bloom/Bloom Use: Begin applications at ¼ to ½ inch green tip and continue on a 7- to 10-day schedule through bloom.	Do not apply more than 4.8 qts. (4.8 lbs. Active) per acre per application. Do not apply after bloom. Do not apply more than 19.2 qts. (19.2 lbs. Active) per acre per year.
		2.4*	Extended Application Schedule for Use in Tank Mixtures with Systemic Fungicides: 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 ½ inch green tip and continue applications on a 7- to 10-day schedule through the second cover spray.	Do not apply more than 2.4 qts. (2.4 lbs. active) per acre per application. Do not apply more than 16.8 qts. (16.8 lbs. active) per acre pr year.
		General	Do not apply within 77 days of harvest.	Apply in a minimum of 50 gallons of water per acre. Do not graze livestock in treated areas.
Bananas, including Plantains	Sigatoka	1.6 to 2.4	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) per acre per growing cycle. Applications can be made up on the day of harvest.
Cranberries	Fruit Rot	2.4 to 4.8	Start applications at early bloom and repeat at 7- to 10- day intervals as required.	Do not apply within 30 days of harvest. Do not apply more than 14.4 qts. (14.4 lbs. active) per acre per season.

Crop	Diseases Controlled	Rate Penncozeb 4FL Per Application Qts./A.	Remarks (Also Refer to Directions For Use)	Restrictions
Grapes	Black Rot Bunch Rot Phomopsis (Deadarm) Downy Mildew	1.2 to 2 West of the Rocky Mountains  1.2 to 3.2 East of the Rocky Mountains	Apply in sufficient water to provide thorough coverage starting when new shoots are 1/4 to 1 1/4 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.	In California, do not apply after bloom. In other areas, do not apply within 66 days of harvest. West of the Rocky Mountains, do not apply more than 6 qts. (6 lbs. active) per acre per season. East of the Rocky Mountains, do not apply more than 19.2 qts. (19.2 lbs. active) per acre per season.
Papayas	Anthrachnose Phytophthora Fruit Rot Black Spot Cercospora	1.2 to 2	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) per growing cycle. Applications may be made up to the day of harvest.
Pears	Please refer to Apples, above.			
Plantains	Please refer to Bananas, above.			

\* Maximum per acre use rate based on thorough coverage dilute sprays.

**VEGETABLES**

Crop	Diseases Controlled	Rate Penncozeb 4FL Per Application Qts./A.	Remarks (Also Refer to Directions For Use)	Restrictions
Asparagus	Cercospora Leaf Spot Rust	1.6	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) per acre per season.  Do not apply within 120 days of harvest in California and Arizona, or within 180 days in all other states.
Corn (sweet corn for fresh use or processing; popcorn; and sweet)	Common Rust Helminthosporium Leaf Blight Gray Leaf Spot	0.8 to 1.2	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.	Do not apply within 7 days of harvest.  East of the Mississippi River, Arkansas and Louisiana, do not apply more than 18 qts. (18 lbs. active) per acre per

Crop	Diseases Controlled	Rate Penncozeb 4FL Per Application Qts./A.	Remarks (Also Refer to Directions For Use)	Restrictions
corn for seed production, including hybrid seed)				<p>crop.</p> <p>West of the Mississippi River (except Arkansas and Louisiana), do not apply more than 6 qts. (6lbs. active) per acre per crop.</p> <p>Do not feed treated forage to livestock.</p>
Cucumbers	<p>Alternaria Anthracnose Cercospora Leaf Spot Downy Mildew Gummy Stem Blight Pythium Fruit Rot Scab</p>	1.2 to 2.4	<p>Start applications when plants are in the two-leaf stage and repeat at 7- to 10-day intervals. Use sufficient water and direct spray to provide thorough coverage of both upper and lower leaf surfaces.</p>	<p>Do not apply within 5 days of harvest.</p> <p>Do not apply more than 19.2 qts. (19.2 lbs. active) per acre per crop.</p>
Fennel	<p>Early Blight Late Blight</p>	1.6	<p>Start applications when disease first appears and repeat applications every 7 to 10 days.</p>	<p>Do not apply more than 12.8 qts. (12.8 lbs. active) per acre per crop.</p> <p>Do not apply within 14 days of harvest.</p>
<p>Melons Cantaloupe Casaba Crenshaw Honeydew Muskmelon  (Watermelon, see below)</p>	<p>Alternaria Leaf Spot Anthracnose Cercospora Leaf Spot Downy Mildew Gummy Stem Blight</p>	1.2 to 2.4	<p>Start applications when plants are in the two-leaf stage and repeat at 7 to 10-day intervals. Use sufficient water and direct spray to provide thorough coverage of both upper and lower leaf surfaces.</p> <p>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.</p>	<p>Do no apply within 5 days of harvest.</p> <p>Do not apply more than 19.2 qts. (19.2 lbs. active) per acre per crop.</p>
<p>Onions (dry bulb) Garlic Shallots</p>	<p>Botrytis Leaf Blight Downy Mildew Neck Rot Purple Blotch</p>	1.6 to 2.4	<p>Follow a protective spray schedule starting when diseases are first reported in the area and repeat at 7-day intervals throughout the season.</p> <p>A spreader sticker may be used for better coverage and weatherability.</p> <p>Do not allow spray or drift to contact bulbs after lifting from soil.</p>	<p>Do not apply within 7 days of harvest.</p> <p>Do not apply more than 24 qts. (24 lbs. active) per acre per crop.</p> <p>Do not apply to exposed bulbs.</p>

Onions (furrow drench)	Damping-off Seed Rots Seedling Blights Smut	2.4	Apply 2.4 qts. per acre 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) per acre (29,000 linear feet of furrow) with an 18-inch row spacing.  Not registered for this use in California.
Potatoes	Early Blight Late Blight	0.4 to 1.6	Begin applications when plants are 4 to 6 inches high by applying 0.4 to 0.8 qts./acre. As the vines increase in size, apply 1.2 to 1.6 qts./acre at 5- to 10-day intervals or 0.6 to 0.8 qts./acre at 3- to 5-day intervals. Do not apply more than 11.2 qts./acre per crop. 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) per acre per crop.  Do not apply within 3 days of harvest, in Connecticut, Delaware, Florida, Maine, Massachusetts, Michigan, New Hampshire, New York, Ohio, Pennsylvania, Rhode Island, Vermont and Wisconsin and at least 14 days elsewhere.
Potato Seedpiece (treatment)	Fusarium Decay Seedborne Common Scab		Dip whole or cut potato seedpieces in 1qt. Penncozeb 4FL per 50 gallons of water. Place treated seedpieces in a clean container following treatment and plant as soon as possible. Spread treated seedpieces in a cool place if held before planting.	Do not use treated seed potatoes for food or feed purposes.
Squash, summer (including edible gourds)	Anthracnose Downy Mildew	1.6 to 2.4	Start applications when plants are in the two-leaf stage and repeat at 7- to 10-day intervals. Use sufficient water and direct spray to provide thorough coverage of both upper and lower leaf surfaces.	Do not apply within 5 days of harvest. Do not apply more than 19.2 qts. (19.2 lbs. active) per acre per crop.

**VEGETABLES (CONT'D)**

Crop	Diseases Controlled	Rate Penncozeb 4FL Per Application Qts./A.	Remarks (Also Refer to Directions For Use)	Restrictions
Tomatoes	Anthracnose Early Blight Gray Leaf Mold Gray Leaf Spot Late Blight Septoria Leaf Spot	<p>0.6 to 2.4 East of the Mississippi River</p> <p>0.6 to 1.6 West of the Mississippi River</p>	<p>East of the Mississippi Start applications when seedlings emerge or transplants are set. Repeat applications of 0.6- 1.2 lbs active ingredient per acre (0.6 - 1.2 qts product) at 3- to 7- day intervals, or at 1.2 - 2.4 lbs. active ingredient per acre (1.2 - 2.4 qts product) at 7- to 10- day intervals throughout the season.</p> <p>West of the Mississippi Start applications when seedlings emerge or transplants are set. Repeat applications of 0.6- 0.8 lbs active ingredient per acre (0.6- 0.8 qts product) at 3- to 7- day intervals, or at 1.2-1.6 lbs. active ingredient per acre (1.2-1.6 qts product) at 7- to 10- day intervals throughout the season.</p> <p>A spreader sticker may be used for better coverage and weatherability.</p>	<p>Do not apply within 5 days of harvest.</p> <p>East of the Mississippi River, do not apply more than 16.8 qts. (16.8 lbs. active) per acre per crop.</p> <p>West of the Mississippi River, do not apply more than 6.4 qts. (6.4 lbs. active) per acre per crop.</p>
	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 Penncozeb 4FL. Follow the application intervals recommended on the copper fungicide label.		
Water-melons	Alternaria Leaf Spot Anthracnose Cercospora Leaf Spot Downy Mildew Gummy Stem Blight Scab	1.6 to 2.4	Start applications when plants are in the two-leaf stage and repeat at 7- to 10-day intervals. Use sufficient water and direct spray to provide thorough coverage of both upper and lower leaf surfaces.	Do not apply within 5 days of harvest. Do not apply more than 19.2 qts. (19.2 lbs. active) per acre per crop.



**FIELD CROPS**

Crop	Diseases Controlled	Rate Penncozeb 4FL Per Application Qts./A.	Remarks (Also Refer to Directions For Use)	Restrictions
Barley	Please refer to Wheat, below.			
Corn, field and hybrid seed corn	Common Corn Rust Gray Leaf Spot Helminthosporium Leaf Blight	0.8 to 1.2	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) per acre per season.  Do not apply within 40 days of harvest.
Cotton	Alternaria Leaf Spot Rust	1.2 to 1.6	Start applications when disease appears and repeat at 10- to 14-day intervals until disease threat is past.	Do not apply more than 6.4 qts. (6.4 lbs. active) per season. Do not apply after bolls open. Do not apply within 45 days (60 days in California) of harvest. Do not graze livestock in treated areas or feed gin trash to livestock.
Oats	Please refer to Wheat, below.			
Peanuts	Cercospora Leaf Spot Rust	0.8 to 1.6	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 within 14 days of harvest. Do not use more than 12.8 qts. (12.8 lbs. active) per acre per crop. Do not feed treated vines to livestock.
Peanuts (tank-mix with Topsin M)	Ascochyta Web Blotch Cercospora Leaf Spot Limb Rot Rust	1.2 qt. Penncozeb 4FL plus 0.35 lbs. a.i. Topsin <sup>®</sup> M Fungicide	Begin applications when disease first appears and repeat at 7- to 14-day intervals, using shorter interval during humid weather.	Do not feed treated vines to livestock. Do not use more than 12.8 qts. Penncozeb 4FL (12.8 lbs. active) per acre per crop. Do not apply within 14 days of harvest.
Rye	Please refer to Wheat, below.			
Sugar Beets	Cercospora Leaf Spot Rust	1.2 to 1.6	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 within 14 days of harvest. Do not apply more than 11.2 qts. (11.2 lbs. active) per acre per crop per season. Do not feed treated tops to livestock.
Triticale	Please refer to Wheat, below.			

Crop	Diseases Controlled	Rate Penncozeb 4FL Per Application		Remarks (Also Refer to Directions For Use)	Restrictions
		Qts./A.			
Wheat, including Triticale, Barley, Oats, Rye	Helminthosporium Leaf Spot Leaf Rust Septoria Glume Blotch Septoria Leaf Spot Tan Spot Scab*	0.8 to 1.6		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 make more than three applications during the season. Do not apply after Feekes' growth stage 10.5 or heading, but not less than 26 days of harvest (46-day pre-harvest interval in California). Do not graze livestock in treated areas prior to harvest.

\* In California - scab control on wheat only

**SEED TREATMENT\*\***- Seeds to be treated should be cleaned and well-cured prior to treatment. Penncozeb 4FL 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. For commercial seed treatments, an EPA approved dye must be added to Penncozeb 4FL which will impart an unnatural color to the seed.

Crop	Diseases Controlled	Rate Penncozeb 4FL Per Application		Remarks (Also Refer to Directions For Use)	Restrictions
		Fl. Oz./Bu.	Fl. Oz./100 lbs.		
Corn (field)	Damping-off Seed Rots Seedling blights	2.4 to 4.8	4.3 to 8.6		Commercially treated seed must be labeled, "Must not be used for food, feed, or oil purposes."
Cotton (acid delinted) (reginned)	Damping-off Seedling Blights		4.8		
	Damping-off Seedling Blight		9.6		
Flax	Damping-off Seed Rots Seedling Blights	3.2 to 6.4	5.7 to 11.3		
Peanuts (shelled)	Damping-off Seed Rots Seedling Blights	3.2 to 6.4	12.8 to 25.6		
Rice	Damping-off Seed Rots Seedling Blights		3.2 to 6.4	Apply before, during or after soaking in water.	
Safflower	Seedborne Rust (Puccinia carthami)		3.2		

Crop	Diseases Controlled	Rate Penncozeb 4FL Per Application		Remarks (Also Refer to Directions For Use)	Restrictions
		Fl. Oz./Bu.	Fl. Oz./100 lbs.		
Sorghum	Covered Kernel Smut Damping-off Seed Rots Seedling Blights	2.4 to 4.0	4.3 to 7.2		
Tomatoes	Damping-off Seed Rots Seedling Blights		12.8		

\*\* Not registered for this use in California.

**MISCELLANEOUS**

Crop	Diseases Controlled	Rate Penncozeb 4FL 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 a burlap bag and soak, with gentle agitation, in the fungicide solution for 5 minutes. Remove bag, drain well, and plant crowns as soon as possible.  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. per acre	Begin application in spring or early summer before infection occurs. Repeat after heavy rains and at two-week intervals as long as needed.

Crop	Diseases Controlled	Rate Penncozeb 4FL Per Application Qts./A.	Remarks (Also Refer to Directions For Use)
Douglas Fir	Swiss Needle Cast		
Pine-apple	Phytophthora Heart Rot	2.6 qts. per 10 gals.	Dip planting material in fungicide solution prior to planting. Stir solution frequently to prevent settling out.  A new solution should be prepared when at least two-thirds of the volume has been used or sooner if soil from plant material has noticeably discolored the solution. Depending on the cleanliness and size of planting stock, up to 100 gallons of fungicide solution should be used to treat the propagative materials used to plant one acre.  Not registered for this use in California.

**TURF - COMMERCIAL SOD FARMS** - Not for use by homeowners. For golf courses, sodfarms, industrial or municipal turf areas and professional applications to residential lawns.  
Not registered for this use in California.

Start applications when grass greens-up in spring or when disease first appears, and repeat at 7- to 14-day intervals or until disease threat is past. When conditions are especially favorable for disease development, apply maximum fungicide use rate on a 7-day spray schedule. Apply in sufficient water to provide adequate coverage.

**TURF TOLERANCE** - Treated turfgrass should be maintained in a vigorous growing condition. Turfgrass under stress will not respond to fungicide treatments as well as well-maintained turfgrass. Turfgrass tolerance to this product has been found to be acceptable, however, this product and tank mixtures with other products have not been tested on all varieties of every turfgrass species or under all possible growing conditions. If user is unfamiliar with the performance of Penncozeb 4FL or tank mixtures, under user growing conditions, a limited area of turfgrass should be treated prior to initiating large-scale applications. The user should always exercise reasonable judgment and caution when using this product.

Crop	Diseases Controlled	Rate Penncozeb 4FL Per Application	Remarks (Also Refer to Directions For Use)	Restrictions
		Fl. Oz./1000 sq. ft.		
Assorted Grasses	Helmintho-sporium Melting-out Rust (Leaf, Stem Stripe)	6.4		Do not graze treated areas.  Do not use on grasses intended for grazing, such as range or pasture grasses.
	Copper Spot Fusarium Blight Red Thread Slime Mold	6.4 to 12.8		Do not feed clippings to livestock.  Do not use on grasses grown for seed.
	Algae	9.6		
	Dollar Spot	9.6 to 12.8		
	Rhizoctonia Brown Patch	6.4	Apply on a 7-day spray schedule.	

Crop	Diseases Controlled	Rate Penncozeb 4FL Per Application	Remarks (Also Refer to Directions For Use)	Restrictions
		Fl. Oz./1000 sq. ft.		
	Pythium Blight	12.8	Apply at 5-day intervals, or more frequently, if conditions are especially favorable for disease development.	
	Fusarium Snow Mold	9.6 to 12.8	Apply at 2- to 6-week intervals during winter.	

### GRASSES – TURF AND LAWN USE

Applications must be done by professional applicators. Not for homeowner use.

CROP	DISEASES CONTROLLED	Rate Penncozeb 4FL Per Application	Remarks	Restrictions
		Fl. Oz./1000 sq.ft.		
Lawn Grasses (Non-WPS uses): See Non- Agricultural Use Requirements Box  Examples include golf courses, professional applications to industrial (office park), municipal and residential lawns	Algae	10	Begin when algae begins to appear/ 7 days.	Do not use on grasses grown for seed.
	Copper Spot, Fusarium Blight (F. Roseum), Red Thread, Slime Molds	7-10	Begin when grass greens up in spring/ 7 to 14 days.	Do not use on grasses intended for grazing, such as range or pasture grasses.
		10-14	Use during favorable disease conditions/ 7 days.	
	Gray Leaf Spot (Pyricularia grisea)	9-14	Begin at first sign of disease; apply in 5 day intervals or more often during favorable disease conditions.	Do not graze treated areas or feed clippings to livestock.
	Dollar Spot (Sclerotinia)	10-14	Begin when grass greens up in spring/ 7 to 14 days.	
		14	Use during favorable disease conditions/ 7 days.	
	Pink (Fusarium) Snow Mold	10-14	During winter/ 14 to 42 days. Apply before first snowfall.	

	Leaf Spot (Helminthosporium spp.), Rhizoctonia Brown Patch	5-7	Begin when disease appears.
		10-14	Use during favorable disease conditions/ 3 to 5 days.
	Pythium Blight	14	Begin at first sign of disease/ 5 days or more often during favorable disease conditions.
	Leaf Rust, Stemp Rust, Stripe Rust	5-7	Begin when disease first appears/ 7 to 10 days.

### GENERAL INFORMATION FOR TURF & ORNAMENTAL USES

PENNZOZEB 4FL FLOWABLE FUNGICIDE is a flowable containing a coordination product of zinc ion and manganese ethylenebisdithiocarbamate and is recommended for use as a spray for the control of many important plant diseases. When used according to directions, it provides very high fungicidal activity and can be safely used on both turf grasses and certain ornamentals.

PENNZOZEB 4FL FLOWABLE FUNGICIDE is a broad-spectrum protectant fungicide which provides control of most common turf grass diseases and it is also effective in controlling many fungal diseases of certain ornamentals.

Diseases of turf grass and ornamentals can attack suddenly and unexpectedly causing severe damage and may even result in total loss of large areas of valuable turf grass and ornamental plants. The use of a regular protective spray program will minimize the risk of disease damage and can generally be accomplished with lower rates and less frequent fungicide applications. Once diseases have become established, higher rates of fungicide and more frequent applications are required to bring them under control. Follow a regular protective program for maximum product performance.

### INSTRUCTIONS FOR APPLICATION FOR TURF & ORNAMENTAL USES

The Directions for Use of this product given on this label reflect cumulative inputs from both field use experience and product testing programs. However, it is impossible to test this product on all ornamental plant species and cultivars. Eliminating all risks of usage associated with this product is not possible. Plant injury, non-performance, or other unanticipated results could occur due to use that is inconsistent with label directions or specific environmental conditions, as noted on the label. Abnormal environmental conditions such as excessive rain, storms or drought), use of other treatments, improper application techniques as well as many other factors that Cerexagri cannot control may result in lack of efficacy or compromise the performance of this product. All such risks are borne by the buyer.

Before treating any ornamental plant for prevention of infection from a listed pathogen, a preliminary trial is suggested on a small scale before a full treatment is applied. Wait 5-7 days after treatment to evaluate results.

To mix: Slowly add PENNCOZEB 4FL FLOWABLE FUNGICIDE into half-filled spray tank while the agitator is running to form a well-mixed suspension. If tank-mixing with other materials, add soluble materials (those that form a true solution) first. Then add emulsifiable concentrates (those that form an emulsion in water) in that order after the PENNCOZEB 4FL FLOWABLE FUNGICIDE. Wettable powder products may be mixed at the same time as PENNCOZEB 4FL FLOWABLE FUNGICIDE. PENNCOZEB 4FL FLOWABLE FUNGICIDE is compatible with most commonly used pesticides. Read and observe the most restrictive precautionary statements and other information appearing on product labels used in mixtures.

For air application: Use at rate indicated in sufficient water for thorough coverage or a minimum of 2 gallons per acre. Use a spreader-sticker at label-recommended rates for the desired use as needed. Add product slowly to water in the spray tank with agitation or premix thoroughly in separate holding tank for concentrate or aircraft sprayers. Follow similar mixing order instructions as stated above for best results. Continuous agitation is required to keep the product in suspension.

## **HORTICULTURAL APPLICATIONS**

**FIELD, NURSERY, GREENHOUSE and LANDSCAPE**

**Not for this use in California**

**Not intended for use on fruit trees by homeowners.**

**General Use:** PENNCOZEB 4FL FLOWABLE FUNGICIDE provides excellent protective activity and is most effective when applied prior to infection periods.

CROP	DISEASES	REMARKS
ORNAMENTALS COMMERCIAL AND HOMEGARDEN USE		Refer to General Use Instructions except when more specific directions are given for individual crops and diseases.
GENERAL USE INSTRUCTIONS		Apply 1½ qts. PENNCOZEB 4FL FLOWABLE FUNGICIDE per 100 gallons of water in full coverage sprays. To improve performance an effective nonionic spray adjuvant can be added to spray solutions. Begin spraying when plants are growing, well leafed out or at first sign of disease. Apply at 7-10 day intervals throughout the season as disease development conditions persist and as the plants grow, or follow State Extension Service recommendations for specific disease control practices. <b>Do not use edible portions of any listed plant for food or feed purposes.</b>
Abutilon	Alternaria, Cercospora, Cladosporium, Colletotrichum, Puccinia	
African Violet	Alternaria, Botrytis Blight	
Ageratum	Alternaria, Sclerotium, Rhizoctonia, Puccinia, Botrytis Blight Rust	
Aglaonema	Alternaria	
Almond (ornamental)	Botrytis, Cladosporium, Coryneum, Gloeosporium, Monilinia, Leaf Spot	
Alyssum	Leaf Spot, Microsphaera alni	
Andromeda	Exobasidium, Rhytisma, Venturia	
Anthurium	Anthracnose, Spadix Rot, Colletotrichum, Gloeosporium	
Apple (ornamental) – <i>Malus sp</i>	Fabrea Leaf Spot, Rust, Scab, Alternaria, Cephalosporium, Colletotrichum, Coryneum, Elsinoe, Fusarium, Gloeosporium, Gymnosporangium, Helminthosporium, Leptosphaeria, Monilinia, Monochaetia, Mycosphaerella, Pestalotia, Venturia	



Arborvitae	Cercospora Blight, Alternaria, Botrytis, Coryneum, Lophodermium, Mycosphaerella, Pestalotia	
Areca Palm	Leaf Spot	
Ash	Cercospora, Cylindrosporium, Gloeosporium, Puccinia, Rhizoctonia, Sphaeropsis	
Ash, white	Anthracnose Cylindrosporium Leaf Spot	
Ash, mountain	Entomosporium Leaf Spot Guignardia Leaf Blotch Gymnosporangium	
Aster	Leaf Spot, Alternaria, Ascochyta, Botrytis, Colletotrichum, Fusarium, Phomopsis, Phyllosticta, Puccinia, Ramularia, Rhizoctonia, Septoria, Uromyces	
Aster, perennial	Puccinia Rusts	
Aucuba, japonica	Alternaria Leaf Spot Anthracnose, Cercospora, Gloeosporium, Phomopsis, Phyllosticta	
Azalea*	Cylindrocladium Rot Petal Blight Phytophthora Twig and Bud Blight Alternaria, Botrytis, Cladosporium, Colletotrichum, Cylindrocladium, Ovulinia	Apply in full coverage spray 2 to 3 times a week, while flowers are opening. Direct spray into flowers and thoroughly spray ground under bushes. Petal Blight: Spray 2-3 times a week while flowers are opening. Direct spray into flowers and spray ground under plants thoroughly.
Baby's Breath	Botrytis, Rhizoctonia	
Basswood	Cercospora, Phyllosticta	
Begonia	Botrytis Blight, Gloeosporium, Cercospora, Rhizoctonia	
Birch	Cylindrosporium, Gloeosporium, Glomerella, Melampsorium, Taphrina	
Bougainvillea	Leaf Spot, Colletotrichum	

Boxwood	Leaf Spot, Fusarium, Volutella	
Buckeye	Cercospora, Glomerella, Guignardia, Monochaetia, Phyllosticta, Septoria, Taphrina	
Buffaloberry or Buffalo Berry?	Cylindrosporium Leaf Spot, Puccinia, Rhizoctonia, Septoria	
Camellia*	Petal Blight, Botrytis, Cercospora, Elsinoe, Exobasidium, Glomerella, Pestalotia, Phomopsis, Phyllosticta	Petal Blight: Spray 2-3 times a week while flowers are opening. Direct spray into flowers and spray ground under plants thoroughly.
Carnation	Rust Septoria Leaf Spot, Alternaria, Botrytis, Cladosporium, Colletotrichum, Fusarium, Helminthosporium, Stemphylium, Uromyces	
Catalpa	Alternaria, Cercospora, Gloeosporium, Phomopsis, Rhizoctonia	
Cedar, Red	Cercospora Blight Phomopsis Blight, Lophodermium, Gymnosporangium	
Cherry, ornamental	Alternaria, Cercospora, Cladosporium, Coccoomyces, Coryneum, Fusicladium, Monilinia, Phomopsis, Phyllosticta, Taphrina	
Chinese Evergreen	Colletotrichum, Gloeosporium	
Christmas Cactus	Alternaria, Cercospora, Colletotrichum, Fusarium, Phomopsis	
Chrysanthemum*	Ascochyta Blight Botrytis Petal Spot Rust, Alternaria, Bipolaris, Cercospora, Cylindrosporium, Helminthosporium, Phyllosticta, Septoria, Stemphylium	Apply at 1 to 2 qts. per 100 gallons in full coverage spray. Apply twice weekly during the blooming season. Botrytis Petal Spot: Apply in full coverage spray twice weekly during the blooming season.
Cockscomb (Celosia)	Alternaria Leaf Spot, Cercospora	
Coleus	Alternaria, Cercospora	

Columbine	Ascochyta, Botrytis, Cercospora, Puccinia, Rhizoctonia, Septoria	
Conifers (Christmas Trees)	Lophodermium Needle Cast Pine Gall Rust Scirrhia Brown Spot	Begin application in spring or early summer before infection occurs. Repeat after heavy rains and at two-week intervals as long as needed.
Cordyline	Cercospora Leaf Spot	
Cotoneaster	Cercospora, Phyllosticta, Venturia	
Crabapple (ornamental)	Cedar Apple Rust Scab Sphaeropsis Leaf Spot, Gymnosporangium, Marssonina, Phyllosticta, Septoria, Venturia	
Crepe Myrtle	Cercospora, Phomopsis, Phyllosticta	
Croton	Gloeosporium	
Cuphea (Mexican heather)	Cloeosporium, Rhizoctonia	
Cyclamen	Botrytis, Cladosporium, Fusarium, Glomerella, Phyllosticta, Ramularia	
Cypress, Arizona	Cercospora Blight Monochaetia Canker, Coryneum, Fusarium, Gymnosporangium, Lophodermium, Pestalotia, Phomopsis	
Dahlia	Botrytis Blight, Alternaria, Fusarium, Rhizoctonia	
Daisy	Botrytis, Cercospora, Whetzelia	
Daisy, Shasta	Cylindrosporium, Fusarium, Septoria	
Daisy, Transvall	Alternaria, Botrytis, Gloeosporium	
Daylily	Alternaria, Botrytis, Cercospora, Colletotrichum, Elsinoe, Phyllosticta, Septoria	
Delphinium	Botrytis Blight, Ascochyta, Cercospora, Diaporthe, Fusarium, Phyllosticta, Puccinia, Ramularia, Septoria, Volutella	

Dieffenbachia	Leptosphaeria Brown Spot, Cephalosporium, Colletotrichum, Gloeosporium, Glomerella	
Dogwood, flowering*	Anthracnose Elsinoe Leaf Spot Septoria Leaf Spot, Ascochyta, Botrytis, Cercospora, Colletotrichum, Phyllosticta	Apply when buds begin to open, when bracts have fallen, 4 weeks later, and again in late summer after flower buds for next season have formed.  Anthracnose: Apply when buds begin to open, when bracts have fallen, 4 weeks later, and again in late summer after the flower buds for next season are formed.
Dracaena	Fusarium Leaf Spot, Alternaria, Cercospora, Colletotrichum, Phyllosticta	
Dusty Miller	Fusarium, Puccinia	
Elm	Black Leaf Spot, Botryosphaeria, Cephalosporium, Cercospora, Coryeum, Cylindrosporium, Fusarium, Gloeosporium, Monochaetia, Mycosphaerella, Phomopsis, Phyllosticta, Rhizoctonia, Sphaeropsis, Taphrina	
Euonymus	Anthracnose, Cercospora, Colletotrichum, Gloeosporium, Marssonina, Ramularia, Septoria, Whetzelinia	
Fatsia	Anthracnose, Alternaria, Cercospora, Colletotrichum, Phyllosticta	

Ferns*	<p>Rhizoctonia Blight</p> <p>Botrytis, Cercospora, Curvularia, Cylindrosporium, Glomerella, Phyllosticta, Taphrina</p> <p>Anthracnose</p>	<p>Begin spraying when plants are growing, well leafed out or at first sign of disease. Apply at 7-10 day intervals throughout the season as disease development conditions persist and as the plants grow, or follow State Extension Service recommendations for specific disease control practices.</p> <p>Apply 2-3 times weekly as needed through chemigation or air blast spray to thoroughly wet the entire plant canopy.</p> <p>Anthracnose: Apply 2-3 times weekly as needed through chemigation or air blast spray to thoroughly wet the entire plant canopy. PENNCOZEB 4FL FLOWABLE may be tank mixed with other systemic products as recommended by the local extension services for enhanced control.</p>
Ficus	<p>Cercospora Leaf Spot, Alternaria, Ascochyta, Cephalosporium, Cladosporium, Colletotrichum, Fusarium, Gloeosporium, Glomerella, Mycosphaerella, Phomopsis, Stemphylium</p>	
Fig (ornamental)	<p>Cylindrocladium Leaf Spot</p>	
Fir (Abies)	<p>Cephalosporium, Lophodermium, Melampsora, Phomopsis, Sphaeropsis</p>	
Fir, Douglas	<p>Swiss Needle Cast, Phaeocryptopus</p>	
Fir, Fraser	<p>Swiss Needle Cast, Phaeocryptopus</p>	
Firethorn	<p>Fusicladium Scab, Fusarium, Rhizoctonia</p>	
Fittonia	<p>Rhizoctonia</p>	
Four-O'clock	<p>Cercospora, Thizoctonia</p>	
Fuchsia	<p>Botrytis Blight Rust, Phomopsis, Septoria</p>	
Garden Balsam	<p>Alternaria, Botrytis, Cercospora</p>	
Gardenia	<p>Alternaria, Botrytis, Diaporthe, Mycosphaerella, Pestalotia, Phomopsis, Phyllosticta, Rhizoctonia</p>	

Geranium	Rust, Alternaria, Ascochyta, Bipolaris, Botrytis, Cercospora, Cladosporium, Helminthosporium, Puccinia, Ramularia, Rhizoctonia, Septoria, Uromyces, Venturia	
Gladiolus	Curvularia Leaf Spot Botrytis Blossom Blight Alternaria, Cladosporium, Rhizoctonia, Septoria, Stemphylium	On flower spikes, use at 1½ pints per 100 gallons. Make weekly applications starting before diseases appear and increase to 2 or 3 applications per week during periods of heavy disease and during rainy weather. (*Do not exceed .6qts per 100 gal on flower spikes)
Gloxinia	Botrytis Blight, Colletotrichum	
Gold Dust Tree	Gloeosporium, Glomerella, Pestalotia, Phyllosticta	
Gomphrena	Cercospora	
Gypsophila	Botrytis Blight, Rhizoctonia	
Hawthorn	Cedar Apple Rust Fabraea Leaf Spot Frogeye Leaf Spot Hawthorn Rust Scab, Cercospora, Cladosporium, Gymnosporangium, Monilinia, Mycosphaerella, Phyllosticta, Septoria, Venturia	
Hemlock, Eastern (Tsuga)	Botrytis, Cladosporium, Melampsora, Rhizoctonia	
Hibiscus	Alternaria, Cercospora, Colletotrichum, Fusarium, Phyllosticta	
Hickory	Gnomonia Leaf Spot, Cercospora, Cladosporium, Elsinoe, Fusarium, Mycosphaerella, Pestalotia, Phyllosticta, Septoria	
Holly	Purple Spot, Phyllosticta	
Hollyhock	Anthracoise Cercospora Leaf Spot Puccinia Rust, Alternaria, Ascochyta, Colletotrichum, Septoria	

Honeysuckle	Herpobasidium Blight, Alternaria, Cercospora, Gloeosporium, Phyllosticta	
Horsechestnut	Alternaria Leaf Spot Guignardia Leaf Blotch, See Buckeye	
Hydrangea	Botrytis Blight Cercospora Leaf Spot, Ascochyta, Colletotrichum, Phyllosticta, Rhizoctonia, Septoria	
Impatiens	Botrytis Blight, Cercospora, Phyllosticta, Rhizoctonia, Septoria	
Indian Hawthorn	Entomosporium	
Iris	Didymellina Leaf Spot Mycosphaerella Leaf Spot Mystrosporium Ink Spot, Ascochyta, Botrytis, Cladosporium, Fusarium, Kabatiella, Phyllosticta, Puccinia, Rhizoctonia	
Ivy	Cladosporium, Colletotrichum, Glomerella, Phyllosticta, Ramularia, Rhizoctonia, Sphaeropsis	
Jade Plant	Gloeosporium, Phomopsis	
Juniper	Phomopsis Blight, Cercospora, Coryneum, Gymnosporangium, Lophodermium, Pestalotia, Stigmata	
Kalanchoe	Cercospora, Stemphylium	
Larkspur	Rust, See Delphinium	
Laurel, Cherry	Alternaria, Cercospora, Coccomyces, Monilinia, Phyllosticta, Septoria	
Laurel, Mountain	Cercospora Leaf Spot Petal Blight, Mycosphaerella, Pestalotia, Phomopsis, Rhytisma, Septoria	Refer to Azaleas
Lavender, Cotton	Septoria	
Ligustrum	Cercospora Leaf Spot	

Lilac	Botrytis, Cercospora, Cladosporium, Cylindrocladium, Gloeosporium	
Lily	Botrytis Blight, Cercospora, Cladosporium, Colletotrichum, Fusarium, Puccinia, Ramularia, Rhizoctonia	
Liriope	Alternaria, Cercospora, Colletotrichum, Leptothyrium	
Lobelia	Botrytis, Cercospora, Puccinia, Rhizoctonia, Septoria	
Loquat	Colletotrichum, Fusicladium, Pestalotia, Phyllosticta, Septoria	
Magnolia	Gloeosporium Leaf Spot, Alternaria, Cercospora, Cladosporium, Colletotrichum, Glomerella, Rhizoctonia	
Mahonia	Cercospora, Cylindrocladium, Gloeosporium, Leptosphaeria, Phomopsis, Phyllosticta, Puccinia	
Maple	Alternaria Leaf Spot, Phyllosticta Leaf Spot, Cercospora, Ciborinia, Fusarium, Marssonina, Monochaetia, Phopsis, Rhizoctonia, Rhytisma, Septoria, Sphaeropsis, Taphrina, Venturia	Do not use on Sugar maples intended for the production of maple syrup.
Myrtle	Cercospora, Glomerella, Pestalotia	
Nannyberry	Botrytis, Cercospora, Cladosporium, Helminthosporium, Monochaetia, Phomopsis, Phyllosticta, Ramularia	
Narcissus	Botrytis Blight (fire) Smoulder, Sclerotinia	
Nasturtium	Botrytis, Cercospora, Puccinia	
Nephtytis	Cephalosporium	
Nicotiana	Alternaria	
Nierembergia	Botrytis	



Oak	Actinopelte Leaf Spot Taphrina Leaf Blister, Cephalosporium, Cercospora, Cladosporium, Cronartium, Elsinoe, Fusarium, Gloeosporium, Gnomonia, Marssonina, Phyllosticta, Septoria, Venturia	
Orchids	Botrytis Blossom Blight, Cercospora, Fusicladium, Mycosphaerella, Phyllosticta, Puccinia, Septoria	
Osmanthus	Alternaria, Cercospora, Colletotrichum, Phyllosticta	
Oxalis	Rust	
Pachysandra*	Volutella Blight, Cronartium, Gloeosporium, Phyllosticta, Septoria, Sphaeropsis	Use a drenching spray of 2 qts. per 50 gallons of water per 5,000 sq. ft. of bed area. Start application at first sign of disease and make at least 5 applications at 10 to 14 day intervals.  Volutella Blight: Use a drenching spray of 3 – 4 qts. per 100 gallons of water applied to 10,000 sq. ft. of bed area. Start application at first sign of disease and make at least 5 applications at 10 – 14 day intervals.
Palm, Areca	Alternaria, Cercospora, Colletotrichum, Phomopsis, Phyllosticta, Septoria	
Palm, Arenga	Cercospora, Colletotrichum, Cylindrocladium, Pestalotia, Phoma, Stigmata	
Palm, Cabbage	Fusarium, Gloeosporium, Pestalotia, Stigmata	
Palm, Coconut	Pestalotia	
Palm, Date	Alternaria, Fusarium, Helminthosporium, Pestalotia	
Palm, King	Alternaria, Fusarium, Helminthosporium, Pestalotia, Phomopsis	
Palm, Phoenix	Alternaria, Cercospora, Fusarium, Gloeosporium, Pestalotia, Phomopsis, Stigmata	

Palm, Queen	Glomerella, Septoria	
Palm, Royal	Alternaria, Cercospora, Colletotrichum, Helminthosporium	
Palm, Washington	Cercospora, Colletotrichum, Cylindrocladium, Pestalotia, Phoma, Stigmata	
Pansy	Anthracoze, Alternaria, Botrytis, Cercospora, Colletotrichum, Peronospora, Phyllosticta, Ramularia, Rhizoctonia	
Peach	Cercospora, Cladosporium, Coryneum, Fusarium, Glomerella, Monilinia, Mycosphaerella, Phomopsis, Phyllosticta, Taphrina	
Pear (ornamental)	Fabraea Leaf Spot Rust Scab, Alternaria, Botrytis, Cercospora, Cladosporium, Coryneum, Elsinoe, Fusarium, Glomerella, Gymnosporangium, Helminthosporium, Monilinia, Mycosphaerella, Phomopsis, Phyllosticta, Venturia	
Peony*	Phytophthora Blight Botrytis Blight, Alternaria, Cercospora, Cladosporium, Gloeosporium, Phyllosticta, Septoria	Apply in early spring and early fall, drenching soil around plants as well as the foliage. Promptly destroy all infected plant parts.  Phytophthora Blight, Botrytis Blight: Apply in early spring and early fall, drenching soil around plants as well as foliage. Promptly destroy all infected plant parts.
Peperomia	Cercospora Leaf Spot, Colletotrichum, Gloeosporium, Rhizoctonia	
Petunia	Botrytis Blight, Cercospora, Puccinia, Rhizoctonia, Stemphylium	

Philodendron	Dactylaria Leaf Spot Phytophthora Leaf Spot, Colletotrichum, Gloeosporium	
Phlox	Leaf Spot, Ascochyta, Botrytis, Cercospora, Colletotrichum, Phyllosticta, Puccinia, Septoria, Ramularia, Stemphylium, Volutella	
Photinia (Red Tip)	Entomosporium Leaf Spot Cercospora, Gloeosporium, Gymnosporangium, Lophodermium, Pestalotia, Phyllosticta, Septoria	
Pieris	Alternaria, Pestalotia, Phyllosticta, Rhytisma	
Pilea	Alternaria, Botrytis, Cercospora, Colletotrichum, Helminthosporium, Phyllosticta	
Pine	Alternaria, Botrytis, Cronartium, Fusarium, Lophodermium, Monochaetia, Rhizoctonia, Septoria, Sirococcus	
Pine, Australia	Cyclaneusma Needle Cast	
Pine, Norfolk Island	Botrytis, Colletotrichum, Cronartium, Cylindrocladium, Fusarium, Lophodermium, Pestalotia, Rhizoctonia, Septoria, Sirococcus	
Pine Scotch	Cyclaneusma Needle Cast Gall Rust	
Pittosporium	Alternaria Leaf Spot, Cercospora, Gnomonia, Mycosphaerella, Phyllosticta, Rhizoctonia, Septoria	
Plane Tree	Cercospora, Gnomonia, Phyllosticta, Septoria	
Pleomele	Fusarium Leaf Spot	

Plum, Ornamental	Botrytis, Cercospora, Cladosporium, Coccoomyces, Coryneum, Monilinia, Phyllosticta, Taphrina	
Poinsettia	Sphaceloma Scab, Botrytis, Cercospora, Fusarium, Uromyces	(*Do not exceed 1.2qts per 100 gallons)
Poplar	Rust, Cercospora, Ciborinia, Colletotrichum, Cylindrocladium, Fusarium, Marssonina, melampsora, Mycosphaerella, Phyllosticta, Septoria, Stigmina, Taphrina, Venturia	
Portulaca	Rhizoctonia	
Pothos	Rhizoctonia	
Prayer Plant	Alternaria, Drechslera, Glomerella, Puccinia	
Primrose	Botrytis Blight, Alternaria, Colletotrichum, Mycosphaerella, Puccinia, Ramularia, Uromyces	
Privet	Cercospora, Glomerella, Phomopsis, Phyllosticta, Ramularia	
Protea	Botrytis Blight	
Pyracantha	Botrytis, Cercospora, Diplodia, Phomopsis, Phyllosticta, Sphaeropsis	
Quince, Flowering	Cercospora, Fabraea, Gymnosporangium, Septobasidium	
Quince – ornamental	Fabraea Leaf Spot Rust Scab	
Red Cedar, Western (Thuja)	Keithia or Didymascella	
Red Tip	See Photinia	
Redwood, Sequoia	Botrytis, Cercospora, Mycosphaerella, Pestalotia, Phomopsis	

Rhododendron*	Cercospora Leaf Spot Discosia Leaf Spot Petal Blight, Alternaria, Coryneum, Gloeosporium, Glomerella, Guignardia, Lophodermium, Mycosphaerella, Pestalotia, Phomopsis, Rhizoctonia, Septoria, Venturia	Apply in full coverage spray 2 to 3 times a week, while flowers are opening. Direct spray into flowers and thoroughly spray ground under bushes. Petal Blight: Spray 2-3 times a week while flowers are opening. Direct spray into flowers and spray ground under plants thoroughly.
Rose	Black Spot Cercospora Leaf Spot Rust, Alternaria, Bipolaris, Botryosphaeria, Cladosporium, Cylindrocladium, Diplocarpon, Elsinoe, Gloeosporium, Helminthosporium, Leptosphaeria, Monochaetia, Mycosphaerella, Peronospora, Phyllosticta, Septoria	
Rosemary	Rhizoctonia Aerial Blight	
Russian Olive	Cercospora, Colletotrichum	
Sage	Cercospora, Peronospora, Puccinia, Ramularia, Rhizoctonia	
Salvia	Cercospora, Puccinia	
Santolina	Botrytis	
Senecio	Cercospora, Gloeosporium, Phyllosticta, Puccinia, Ramularia, Septoria	
Schefflera	Alternaria Blight	
Skunkbush, sumac	Cylindrosporium Leaf Spot	
Snakeplant	Fusarium, Gloeosporium	
Snapdragons	Rust, Alternaria, Bipolaris, Botrytis, Cercospora, Colletotrichum, Drechslera, Fusarium, Helminthosporium, Peronospora, Phyllosticta, Puccinia, Rhizoctonia	

Spathaphylum	Myrothecium Leaf Spot, Alternaria	
Spindletree	See Euonymus	
Spirea	Cylindrosporium	
Spruce	Ascochyta, Botrytis, Cladosporium, Lophodermium, Rhizoctonia	
Spurge	Cercospora, Melampsora, Puccinia	
Statice	Cercospora Frogeye, Alternaria, Ascochyta, Botrytis, Cercospora, Colletotrichum, Rhizoctonia, Uromyces	
Strawflower	Rust, Fusarium	
Sumac	Cercospora, Cladosporium, Fusarium, Phyllosticta, Septoria, Taphrina	
Sunflower, Ornamental	Alternaria, Puccinia	
Syngonium	Cephalosporium Leaf Spot, Erwinia, Fusarium	
Thorn Apple	Rust	
Tulip	Botrytis Blight (fire)	
Venus Flytrap	Anthrachnose, Colletotrichum	
Verbena	Alternaria, Ascochyta, Botrytis, Cercospora, Phyllosticta, Puccinia, Rhizoctonia, Septoria, Stemphylium	
Viburnum	Downy Mildew Ramularia Leaf Spot, Botrytis, Cercospora, Cladosporium, Helminthosporium, Monochaetia, Phomopsis	
Walnut	Anthrachnose, Cercospora, Cladosporium, Cylindrocladium, Cylindrosporium, Gnomonia	Do not use treated walnuts for food or feed purposes.

Willow	Ascochyta, Cercospora, Ciborinia, Cylindrosporium, Fusicladium, Gloeosporium, Marssonina, Melampsora, Phomopsis, Phyllosticta, Ramularia, Rhytisma, Septoria, Taphrina, Venturia	
Wisteria	Alternaria, Cercospora, Colletotrichum, Gloeosporium, Pestalotia	
Yucca	Cercospora, Cylindrosporium, Gloeosporium, Puccinia	
Zebra Plant	Alternaria, Cercospora, Colletotrichum	
Zinnia	Leaf Blight	

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

Note: The Directions for Use of this product given on this label reflect cumulative inputs from both field use experience and product testing programs. However, it is impossible to test this product on all ornamental plant species and cultivars. Eliminating all risks of usage associated with this product is not possible. Plant injury, non-performance, or other unanticipated results could occur due to use that is inconsistent with label directions or specific environmental conditions, as noted on the label. Abnormal environmental conditions such as excessive rain, storms or drought, use of other treatments, improper application techniques as well as many other factors that Cerexagri cannot control may result in lack of efficacy or compromise the performance of this product. All such risks are borne by the buyer.

Before treating any ornamental plant for prevention of infection from a listed pathogen, a preliminary trial is suggested on a small scale before a full treatment is applied. Wait 5-7 days after treatment to evaluate results.

**Limitation of Remedies**

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability or other legal theories), shall be limited to, at the sole discretion of Cerexagri Inc, either

- (1) Refund of the purchase price of this product or
- (2) Replacement of the amount of the product used.

Cerexagri does not recognize or assume any liability for losses or damages resulting from handling or usage of this product unless Cerexagri is promptly notified in writing of such damage or loss. Cerexagri will not be liable for incidental or consequential

damage or loss.

The terms of the Warranty, this section and the Note cannot be waived or altered by either written or verbal agreements. No employee or agent of Cerexagri or the seller is authorized to make changes or augment the terms of this section in any manner.

**Inherent Risks of Use**

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Cerexagri, Inc. or the seller. All such risks shall be assumed by buyer.

**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 Penncozeb 4FL. 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 DISPOSAL**

**Plastic Containers -** Triple rinse (or equivalent). Then puncture and dispose of in a sanitary landfill, by incineration, or, if allowed by State and local authorities by burning. If burned, stay out of smoke.

**Bulk Containers -** Drain thoroughly and return to specified destination for cleaning and reuse.

**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.

**WARRANTY AND DISCLAIMER**

Cerexagri, Inc. warrants that this material conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the risks referred to therein. CEREXAGRI MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL CEREXAGRI OR SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, BUSINESS REPUTATION, OR CUSTOMERS; LABOR COST; OR OTHER EXPENSES INCURRED IN PLANTING OR HARVESTING.

Cerexagri and seller offer this product and the buyer and user accept it subject to the foregoing conditions of sale and warranty which may be varied only by agreement in writing signed by a duly authorized representative of Cerexagri.

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