

4581-358
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Mr. Gary R. Sandberg
Atochem North America
#3 Parkway, Room 619
Philadelphia, PA 19102

341306/325
18

MAR 17 1992

Subject: Amended Labeling - Reinstatement of Previously Deleted
Uses
Penncozeb Fungicide
EPA Reg. No. 4581-358
Your Submission Dated February 26, 1992

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

a. Under asparagus, delete the reference to California since the label states "Not for use in California".

b. For potatoes, add Connecticut to the list of states with 3 day PHI's.

c. For grapes, delete the reference to California.

2. Submit one (1) copy of your final printed labeling before you release the product for shipment.

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

Sincerely yours,

SL

Susan T. Lewis
Product Manager (21)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosure

H7505C:J.Fairfax:4581-358:3/17/92

CONCURRENCES							
SYMBOL							
SURNAME							
DATE							

EPA Form 1326-1 (12-79)

OFFICIAL FILE COPY

elf a. ochem

ATO

NOT FOR USE IN CALIFORNIA

Unit
Fung
and
regis

4581-358

PENNCOZEB

Fungicide

An 80% Coordination Product of Manganese and Zinc and Ethylenebisdithiocarbamate

ACTIVE INGREDIENT

A coordination product of zinc ion and manganese ethylene
bisdithiocarbamate

Manganese	16%	80%
Zinc	2%	
Ethylenebisdithiocarbamate ion (C ₂ H ₂ N ₂ S ₂)	62%	

INERT INGREDIENTS

TOTAL

20%
100%

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED, Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF ON SKIN, Wash with plenty of soap and water. Get medical attention.

IF IN EYES, Flush eyes with plenty of water. Call a physician if irritation persists.

See Inside Panel for Additional Precautionary Statements

EPA Registration No. 4581-358

EPA Establishment No. 33910-HL-01

NET CONTENTS: 50 Lbs./22.6 Kg

Sold by:

ELF ATOCHEM NORTH AMERICA, INC.—AGCHEM DIVISION
Philadelphia, PA

BEST AVAILABLE COPY

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

CAUTION

May cause irritation of eyes. Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark, except as specified for the labeled use on cranberries. Do not contaminate water when disposing of equipment washwaters.

CHEMICAL HAZARDS

Do not allow to become wet during storage. This may lead to certain chemical changes which will reduce the effectiveness of the product as a fungicide and create vapors which may be flammable. Keep container closed when not in use.

GENERAL INFORMATION

PENNCOZEB is a wettable powder 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.

DIRECTIONS FOR USE

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

WORKER SAFETY RULES

Keep all unprotected persons, children, livestock, and pets away from treated area or where there is danger of drift. Do not rub eyes or mouth with hands. See Statement of Practical Treatment.

PERSONAL PROTECTIVE EQUIPMENT

HANDLERS (MIXERS, LOADERS, AND APPLICATORS) AND EARLY REENTRY WORKERS MUST WEAR THE FOLLOWING PROTECTIVE CLOTHING AND EQUIPMENT: coveralls over long-sleeved shirt and long pants, shoes, socks, and chemical-resistant gloves. During mixing and loading, a chemical-resistant apron and goggles or a face shield must also be worn. For agricultural workers, where completely enclosed cabs with positive pressure filtration or an enclosed cockpit for aerial application are used, a long-sleeved shirt and long pants may be worn in place of the protective clothing described above. Chemical-resistant gloves must be available in the cab or cockpit and worn upon exiting. The gloves must be kept in an enclosed container in the cab or cockpit to prevent contamination of the inside of the cab or cockpit.

IMPORTANT: Before removing gloves, wash them with soap and water. Always wash hands, face, and arms with soap and water before eating, smoking, or drinking. Always wash hands and arms with soap and water before using the toilet.

After work take off all clothes and shoes. Shower using soap and water. Wear only clean clothes. Do not use contaminated clothing. Wash protective clothing and protective equipment with soap and water after each use. Personal clothing worn during use must be laundered separately from household articles. Clothing and protective equipment heavily contaminated or drenched with PENNCOZEB must be destroyed according to state and local regulations. **HEAVILY CONTAMINATED OR DRENCHED CLOTHING CANNOT BE ADEQUATELY DECONTAMINATED.**

During aerial application, human flaggers are prohibited unless in totally enclosed vehicles.

REENTRY STATEMENT

Do not enter treated area without protective clothing within 24 hours after application. Because certain areas may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

When entering a warning must be given to workers who are expected to enter a treated area or an area about to be treated with this product. When oral warnings are given, such warnings shall be given in a language customarily understood by the workers. Oral warnings must be given if there is reason to believe that written warnings will not be understood by the workers. Written warnings must be posted in accordance with SECTION 2 of the label. Do not enter without protective clothing within 24 hours of application.

After sprays have dried do not enter or allow entry into treated areas until the 24-hour reentry interval has expired unless wearing the personal protective equipment listed on this label.

INSTRUCTIONS FOR APPLICATION

FOR AIR APPLICATION use at the rate indicated in sufficient water for thorough coverage, a minimum of 2 gallons per acre for field crops and 10 gallons per acre for orchard crops.

Use a Sprayer-Shaker at rate of 4 fl. oz. per 100 gallons spray if needed. Add product slowly to water in the spray tank with agitation. Or premix thoroughly in separate mixing tank for concentrate or tank-mix sprays. Continuous agitation is required to keep the product in suspension.

When dosage ranges are given, use the higher rate and shorter intervals under severe disease pressure, but do not exceed the maximum rate or apply more frequently than the minimum interval given in the directions for that crop.

If this product is used on a crop, no other product containing a different EBDC active ingredient may be used on the same crop during the same growing season.

Penncozeb
FIELD CROPS

CROP	DISEASES	RATE LBS./ACRE	DIRECTIONS
Field Corn and Corn Grown for Seed	Common Rust Helminthosporium Leaf Blight	1.0 - 1.5	Start application at the onset of disease and repeat as needed. Do not apply more than 12 lbs. active ingredient per season (15 lbs. product). Do not apply within 40 days of harvest.
Cotton	Rust	1.5 - 2.0	Start applications at the onset of disease. Apply as needed. Do not apply more than 6.4 lbs. active ingredient per season (8.0 lbs. product). Do not apply within 60 days of harvest (or after initial boll opening).
Peanuts	Cercospora Leaf Spot Rust	1.0 - 2.0	Begin applications when disease first appears and repeat at 7- to 14-day intervals, using shorter intervals during humid weather. Do not feed treated vines to livestock. Do not use more than 12.8 lbs. active ingredient (16 lbs. product) per acre per season. Do not apply within 14 days of harvest.
Sugarbeets	Cercospora Leaf Spot Rust	1.5 - 2.0	Begin applications when disease first threatens and repeat at 7-10 day intervals. Do not apply more than 11.2 lbs. active ingredient (14 lbs. product) per acre per season. Do not apply within 14 days of harvest.
Wheat Barley Oats Rye	Helminthosporium Leaf Spot Septoria Leaf Spot Septoria Glume Blotch Leaf Rust Tan Spot	1.0- 2.0	Start application at onset of disease or when plants are in tillering to jointing stage and repeat at 7- to 10-day intervals. Do not make more than 3 applications in one season. Do not apply more than 4.8 lbs. active ingredient (6.0 lbs. product) per acre per crop. Do not apply within 26 days of harvest. Do not graze livestock in treated areas prior to harvest. Do not apply after heading (around 10.5 Feekes).

VEGETABLE CROPS

6

CROP	DISEASES	RATE LBS/ACRE	DIRECTIONS
Asparagus	Rust Cercospora Leaf Spot	2.0	Begin applications when rust first appears and repeat at 10 day intervals as needed. Use only on ferns after spears have been harvested. Do not apply more than 6.4 lbs. active ingredient (8 lbs. product) per acre per season. Do not apply within 180 days of harvest. (In California and Arizona, the PHI is 120 days).
<u>East of the Mississippi</u> (including Arkansas & Louisiana)			
Sweet Corn	Common Rust	1.0 - 1.5	Apply in sufficient water for thorough coverage. Start applications when disease first appears and repeat at 4-7 day intervals. Do not apply within 7 days of harvest. Do not feed treated forage (plant stalk and leaves) to livestock. Do not apply more than 18 lbs. active ingredient (22.5 lbs. product) per acre per crop.
Popcorn	Helminthosporium		
Sweet Corn used for seed production	Leaf Blight		
<u>West of the Mississippi</u> (except Arkansas & Louisiana)			
		1.0 - 1.5	Apply in sufficient water for thorough coverage. Start applications when disease first appears and repeat at 4-7 day intervals. Do not apply within 7 days of harvest. Do not feed treated forage (plant stalk and leaves) to livestock. Do not apply more than 6.0 lbs. active ingredient (7.5 lbs. product) per acre per crop.
Cucumbers	Alternaria (Macrosporium) Leaf Spot Angular Leaf Spot Anthracnose Downy Mildew Pythium Fruit Rot	1.5 - 3.0	Begin when disease threatens or plants begin to run. Spray on a 7-10 day interval using higher rate and/or shorter intervals under severe disease pressure. Do not apply more than 19.2 lbs. active ingredient (24 lbs. product) per acre per season. Do not apply within 5 days of harvest.

CROP	DISEASES	RATE	DIRECTIONS
Fennel	Early Blight Late Blight	1.5 - 2.0	Apply when disease threatens. Make applications as needed on a 7-10 day interval. Do not use more than 12.8 lbs. active ingredient per season (16 lbs. product). Do not apply within 14 days of harvest.
Melons including: cantaloupes, casabas, crenshaws, honeydews, watermelons	Alternaria Leaf Spot Anthracnose Cercospora Leaf Spot Downy Mildew Gummy Stem Blight	2.0 - 3.0	Apply as soon as plants begin to run or when disease threatens. Spray on a 7-10 interval as necessary using higher rate and/or shorter intervals under severe disease pressure. Do not apply more than 19.2 lbs. active ingredient (24 lbs. product) per acre per season. Do not apply within 5 days of harvest.

VEGETABLE CROPS

CROP	DISEASE	RATE LBS/ACRE	DIRECTIONS
Onions (Dry Bulb)	Botrytis Leaf Blight Downy Mildew Neck Rot Purple Blotch	2.0 - 3.0	Begin applications when diseases are first reported in the area. Repeat at 7 day intervals throughout the season. Do not apply within 7 days of harvest; do not apply to exposed bulbs. Do not apply more than 24.0 lbs. active ingredient (30 lbs. product) per acre per crop.
(Furrow Drench)	Smut	3.0	Apply as a furrow drench at time of planting onion seeds. Use 75 to 125 gallons of water per acre. Do not use more than 2.4 lbs. active ingredient (3.0 lbs. product) per 29,000 linear feet of row (18 inch spacing). Do not use in California.
Potatoes	Early Blight Late Blight	1.0 - 2.0	Begin applications when plants are 4-6 inches high, and repeat at 5-10 day intervals, (more frequently under severe disease conditions) throughout the season. Do not apply more than 11.2 lbs. active ingredient (14 lbs. product) per acre per crop. Do not apply within 14 days of harvest (except in Florida, Maine, Massachusetts, New Hampshire, New York, Pennsylvania, Vermont, Wisconsin, when a 3 day PHI is allowed). It is recommended that this product be used within a Integrated Pest Management Program. Vine kill should occur 14 days before harvest.
Potato Tuber Treatment	Fusarium Seed Piece Decay		Dip whole or cut seed pieces in mixture of 1 1/4 lbs. of product per 50 gallons of water, drain and plant immediately. If seed pieces are to be held before planting, spread out to dry in a cool place. Do not use treated seed pieces for food or feed purposes.

VEGETABLE CROP USES

CROP	DISEASES	RATE LBS/ACRE	DIRECTIONS
Squash (Summer)	Anthrachnose Downy Mildew	2.0 - 3.0	Begin when plants start to run. Spray on a 7-10 day interval as needed using higher rate and/or shorter intervals under severe disease pressure. Do not apply more than 19.2 lbs. active ingredient (24 lbs. product) per acre per season. Do not apply within 5 days of harvest.
Tomatoes	Anthrachnose Early Blight Late Blight Gray Leaf Mold Gray Leaf Spot Septoria Leaf Spot	1.5 - 3.0	<u>East of the Mississippi</u> Begin applications when seedlings emerge or transplants are set and repeat at 7-10 day intervals throughout the season. Do not apply within 5 days of harvest. Do not apply more than 16.8 lbs. active ingredient (21 lbs. product) per acre per crop.
		1.5 - 2.0	<u>West of the Mississippi</u> Apply on a 7-10 day interval as needed. Do not apply more than 6.4 lbs. active ingredient (8 lbs. product) per acre per season. Do not apply within 5 days of harvest.

FRUIT CROPS

CROPS FOR POME FRUITS	DISEASES	RATE LBS/ACRE	DIRECTIONS
--------------------------	----------	------------------	------------

Use either the "Pre-Bloom" or "Extended Application" schedules.
DO NOT COMBINE OR INTEGRATE THE TWO TREATMENT SCHEDULES.

Apples,	Rusts	6.0	PRE-BLOOM: Begin applica- tions at 1/4 to 1/2 inch green tip and continue on a 7- to 10-day application schedule through bloom. Do not apply more than 19.2 lbs. active ingredient (24 lbs. product) per acre per year. Do not graze livestock in treated areas.
Crab-	(including	<i>or</i>	
apples,	Cedar apple	<i>(1.5 lbs</i>	
Pears	Fabrea Leaf	<i>per 100 gallons</i>	
Quince	Spot	<i>in a dilute</i>	
	Flyspeck	<i>spray).</i>	
	Scab		
	Sooty Blotch		

3.0
or
(0.75 lbs per
100 gallons
in a dilute
spray)

**EXTENDED APPLICATION OR TANK
MIX:** For implementation of IPM
programs, applications based on
tree-row volume or for use as a
resistance management tool: begin
applications at 1/4 to 1/2 inch
green tip and continue
applications on a 7- to
10-day schedule through the
second cover spray or to
within 77 days of harvest.
Do not apply within 77 days of
harvest. Do not apply more than
16.8 lbs. active ingredient (21
lbs. product) per acre per year.
Do not graze livestock in treated
areas.

It is recommended that this
product be used in an Integrated
Pest Management Program.

FRUIT CROPS	DISEASE	RATE LBS/ACRE	DIRECTIONS
Cranberries	Fruit Rot	3.0 - 6.0	Begin applications at mid-bloom and repeat at 7- to 10-day intervals. Do not apply within 30 days of harvest. Do not apply more than 14.4 lbs. active ingredient (18 lbs. product) per acre per season.
Grapes	Black Rot	1.5 - 4.0	<u>East of the Rocky Mountains</u> Apply when shoots are 1/2 to 1 1/2 inches long. Continue at 7-10 day intervals, do not apply within 66 days of harvest. Do not apply more than 19.2 lbs. active ingredient (24 lbs. product) per acre per season.
	Bunch Rot Deadarm Downy Mildew	<i>or</i> <i>(0.375 - 1.0</i> <i>lbs per 100</i> <i>gallons in</i> <i>a dilute</i> <i>spray)</i>	
Papayas	Anthracnose	1.5 - 2.5	<u>West of the Rocky Mountains</u> Apply when shoots are 1/2 to 1 1/2 inches long. Continue at 7-10 day intervals. Do not apply within 66 days of harvest. Do not apply more than 6.0 lbs. active ingredient (7.5 lbs. product).
	Phytophthora Fruit Rot Black Spot (Cercospora)	<i>or</i> <i>(0.375 - 0.625</i> <i>lbs per 100</i> <i>gallons in</i> <i>a dilute</i> <i>spray)</i>	
Capri figs	Endosepsis	1 lb. /	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 solutions should be used after treating 4 or 5 batches of figs. After treatment, figs should be drained prior to placement in trees.
	(Fusarium) Asst. Molds	25 gal.	

Delete
Sally R. Sandberg

<u>CROPS</u>	<u>DISEASE</u>	<u>RATE OF PENNCOZEB 80W LBS/A</u>	<u>REMARKS</u>
Bananas	Sigatoka	2-3	Apply when leaves first appear and repeat as needed on a 14-21 day interval. Do not apply more than 24 lbs ai (30 lbs product) per acre per season. May be applied up to the day of harvest.

**CHEMIGATION
NOT FOR THIS USE IN CALIFORNIA
GENERAL INSTRUCTIONS**

Apply this product only through sprinker irrigation systems including center pivot, lateral move, and wheel line systems. Do not use this product in any other type of irrigation system.
Do not apply this product through any other type of irrigation system.
Do not apply this product through any other type of irrigation system.
If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
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.
Do not connect chemigation system to any public water system. Public water system means a system for the provision 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.

SYSTEM REQUIREMENTS

Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
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 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.
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.

INSTRUCTIONS FOR SPRINKLER (OVERHEAD) IRRIGATION:

Observe the requirements in the System Requirements section above.
Do not apply when wind speed favors drift beyond the area intended for treatment.
Apply PENNCOZEB only through systems containing anti-siphon and check valves designed to prevent water source contamination or overflow of the mix tank and containing interlocking controls between the metering device and the water pump to insure simultaneous shut off.
Maintain a gentle continuous agitation in mix tank during mixing and application to assure a uniform suspension.
Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute suspension per unit time.
Application of more than recommended quantities of irrigation water per acre may result in decreased product performance.
Do not apply when wind speed favors drift when system connections or fittings leak when nozzles do not provide uniform distribution or when lines containing the product cannot be flushed and must be dismantled and drained. In a center pivot system, block the valve set nearest the well pivot injection unit to prevent spray being applied to this area.
Where sprinkler distribution patterns do not overlap sufficiently, unacceptable disease control may result.
Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water.
PENNCOZEB may be applied in conjunction with chemically neutral liquid fertilizers. Application in conjunction with highly alkaline fertilizers, such as aqueous ammonia, may cause a degradation of the pesticide resulting in reduced performance and should be avoided.
Check local restrictions and requirements regarding center pivot irrigation applications, as they may vary from state to state.
MIXING PREPARATION
Remove all pesticide residue and other foreign matter from the chemical tank and entire injection system. Flush with clean water.
Prepare a suspension of PENNCOZEB in a mix tank. Fill the tank with water to the desired amount of water. Add material to the hydraulic agitation. Empty and add the required amount of PENNCOZEB and then the remaining volume of water.
APPLICATION INSTRUCTIONS
Set sprinkler system to deliver 0.5 to 1.0 inches of water per acre. A volume of water higher than this may reduce efficacy. Start the water and then uniformly inject the suspension of PENNCOZEB into the irrigation water line so as to deliver the desired rate per acre. The suspension of PENNCOZEB should be injected with a positive displacement pump into the main line ahead of a right angle turn in the main line to insure adequate mixing.
NOTE: When treatment with PENNCOZEB has been completed, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop.

STORAGE AND DISPOSAL

STORAGE INSTRUCTIONS: Store in the original container in a dry area. If allowed to become wet the product will deteriorate and represent a fire hazard. Keep away from sources of ignition (e.g., sparks and open flame). Close bag when not in use. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. If spilled during storage or handling sweep up spillage and dispose of in accordance with the Pesticide Disposal Instructions listed below.

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

CONTAINER DISPOSAL INSTRUCTIONS: Completely empty bag into application equipment. Then dispose of bag in a sanitary landfill, by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND DISCLAIMER

Elf Atochem North America 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. ELF ATOCHEM MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL ELF ATOCHEM 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.

Elf Atochem 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 Elf Atochem.

Made and Printed in Holland

BEST AVAILABLE COPY