

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

APR 1 1994

Gary R. Sandberg
Elf Atochem North America, Inc.
Three Parkway, Philadelphia, PA 19102

Dear Mr. Sandberg:

Subject: Label Amendment - PR Notice 93-3/93-8
Penncozeb DF Fungicide
EPA Registration Number 4581-370
Your Submission Dated August 18, 1993

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records. Please submit three (3) copies of final printed labeling for our records.

This acceptance of your label does not relieve you of any obligation to comply with the Worker Protection Standard (WPS). Under the WPS labeling regulations at 40 CFR part 156, subpart K, § 156.200(c)(3), you are prohibited from distributing or selling any product within the scope of the WPS requirements after April 21, 1994, without amended labeling accepted by the Agency.

Sincerely Yours,

Steve Robbins *SR*
Acting Product Manager (21)
Fungicide-Herbicide Branch
Registration Division (7505C)

Enclosure

CONCURRENCES

SYMBOL	7505C							
SURNAME	Robbins							
DATE	4/11/94							

elf atochem

ATO

PROPOSED LABEL

ACCEPTED
with COMMENTS
in EPA Letter Dated

APR 1

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

4581-370

PENNCOZEB DF

75% Dry Flowable Fungicide

A Coordination Product of Manganese and Zinc and Ethylenebisdithiocarbamate

ACTIVE INGREDIENT:

A coordination product of zinc ion and
manganese ethylenebisdithiocarbamate 75.0%

Manganese + + 15.0%

Zinc + + 1.9%

Ethylenebisdithiocarbamate ion 58.1%

($C_4H_6N_2S_4$)

INERT INGREDIENTS 25.0%

TOTAL 100.0%

BEST AVAILABLE

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.

For Directions For Use and Chemigation Instructions see Following Pages.

EPA Registration No. 4581-370

EPA Establishment No. 33910-HL-01

NET CONTENTS 50 LBS./22.68 KG.

Sold by:

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

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

CAUTION

Causes moderate eye injury. Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Except as specified for the labeled use on cranberries, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment 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 DF is a dry flowable fungicide containing a coordination product of zinc ion and manganese ethylenebis(dithiocarbamate), 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 DF 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 areas without protective clothing within 24 hours after application. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in 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 cannot be understood by the workers. Written warnings must include the following information: "CAUTION. Area treated with PENNCOZEB DF Fungicide on (date of application)." 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 Spreader Sticker 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 holding tank for concentrate or aircraft sprayers. 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 EBC active ingredient may be used on the same crop during the same growing season.

FIELD CROPS			
CROPS	DISEASE	RATE LBS/ACRE	DIRECTIONS
Field Corn and Cob Green Silk 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 (12 lbs. product). Do not apply within 30 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 (6.5 lbs. product). Do not apply within 60 days of harvest (or after 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 interval during humid weather. Do not feed treated vines to livestock. Do not use more than 12.0 lbs. active ingredient (12 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 (15 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 Blight Leaf Rust Tan Spot	1.0-2.0	Start application at onset of disease or when plants are in flowering to ripening stage and repeat at 7- to 14-day intervals. Do not make more than 3 applications in one season. Do not apply more than 4.0 lbs. active ingredient (5.0 lbs. product) per acre per crop. Do not apply within 20 days of harvest if it's not grain for seed (i.e. treated areas prior to harvest). Do not apply after heading (assume 10.5 bushels).

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VEGETABLE CROPS

CROPS	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 (6.5 lbs. product) per acre per season. Do not apply within 180 days of harvest. (In California and Arizona, the PHI is 120 days).
Sweet Corn Popcorn Sweet Corn used for seed production	Common Rust Helminthosporium Leaf Blight	1.0-1.5	East of the Mississippi (including Arkansas & Louisiana) 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 16 lbs. active ingredient (24 lbs. product) per acre per crop.
		1.0-1.5	West of the Mississippi (except Arkansas & Louisiana) 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 (6 lbs. product) per acre per crop.
Cucumbers	Alternaria (Mosaic/Yellowing) Leaf Spot Angular Leaf Spot Anthracnose Downy Mildew Fusarium Wilt Rust	1.5-3.0	Begin when disease pressure or plant injury to root. Spray on a 7-10 day interval using higher rate under shorter intervals under severe disease pressure. Do not apply more than 19.2 lbs. active ingredient (25.6 lbs. product) per acre per season. Do not apply within 5 days of harvest.
Fennel	Early Blight Late Blight	1.5-2.0	Apply when disease pressure. Make applications at 7-10 day intervals. Do not use more than 16.8 lbs. active ingredient per season (17 lbs. product). Do not apply within 14 days of harvest.
Medicinal herbs including cattails, celery, cranberry, dandelion, garlic, horseradish, jicama, kale, parsley, potatoes, rhubarb, spinach, strawberries, tomatoes, turnips, zucchini	Alternaria Leaf Spot Anthracnose Cercospora Leaf Spot Downy Mildew Fusarium Wilt Late Blight	2.0-3.0	Apply as soon as plants begin to show disease pressure. Spray on a 7-10 day interval as necessary using higher rate under shorter intervals under severe disease pressure. Do not apply more than 19.2 lbs. active ingredient (25.6 lbs. product) per acre per season. Do not apply within 5 days of harvest.
Onions (Dry Bulb)	Botrytis Leaf Blight Downy Mildew Rust 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 (32 lbs. product) per acre per crop.
(Furrow Drainage)	Smut	3.0	Apply as a furrow drizzle 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 (3.2 lbs. product) per 29,000 linear feet of row (16 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 (15.0 lbs. product) per acre per crop. Do not apply within 14 days of harvest (except in Connecticut, Delaware, Florida, Maine, Massachusetts, Michigan, New Hampshire, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Wisconsin, when a 3 day PHI is allowed). It is recommended that this product be used within an Integrated Pest Management Program. Vine kill should occur 14 days before harvest.
Potato Tuber Treatment	Fusarium Seed Piece Decay		Dip whole or cut seed piece in slurry 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.
Squash (Summer)	Anthracnose Downy Mildew	2.0-3.0	Begin when plants start to run. Spray on a 7-10 day interval as needed using higher rate under shorter intervals under severe disease pressure. Do not apply more than 19.2 lbs. active ingredient (25.6 lbs. product) per acre per season. Do not apply within 5 days of harvest.

VEGETABLE CROPS continued

CROPS	DISEASES	RATE LBS/ACRE	DIRECTIONS
Tomatoes	Anthracnose Early Blight Late Blight Gray Leaf Mold Gray Leaf Spot Septoria Leaf Spot	1.5-3.0	East of the Mississippi 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 (22.4 lbs. product) per acre per crop.
		1.5-2.0	West of the Mississippi Apply on a 7-10 day interval as needed. Do not apply more than 6.4 lbs. active ingredient (6.5 lbs. product) per acre per season. Do not apply within 5 days of harvest.

FRUIT CROPS

CROPS	DISEASES	RATE LBS/ACRE	DIRECTIONS
PEAR, POPE FRUITS Use either the "Pre-Bloom" or "Extended Application" schedules. DO NOT COMBINE OR INTEGRATE THE TWO TREATMENT SCHEDULES.			
Apples Crab- Apples Pears Quince	Rust (including Cedar Apple) Fruit Rot Spot Fruit Rot Scab Sooty Blotch	6.0 or (1.5 lbs. per 100 gal. in dilute spray)	PRE-BLOOM: Begin applications 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 (25.6 lbs. product) per acre per year. Do not graze livestock in treated areas.
		3.0 or (0.75 lbs. per 100 gal. in 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 (22.4 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.
Bananas	Sagittaria	2.0-3.0	Apply when leaves first appear and repeat as needed on a 14-21 day interval. Do not apply more than 24 lbs. active ingredient (32 lbs. product) per acre per season. May be applied up to the day of harvest.
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 (19.2 lbs. product) per acre per season.
Grapes	Black Rot Bunch Rot Downy Mildew	1.5-4.0 or (0.375- 1.0 lbs. per 100 gal. in a dilute spray)	East of the Rocky Mountains Apply when shoots are 1/4 to 1 1/4 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 (25.6 lbs. product) per acre per season.
		1.5-2.5 or (0.375- 0.625 lbs. per 100 gal. in a dilute spray)	West of the Rocky Mountains Apply when shoots are 1/4 to 1 1/4 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 (8 lbs. product) per acre per season. California - Do not apply after bloom.
Pacays	Anthracnose Phytophthora Fruit Rot Black Spot (Cercospora)	1.5-2.5 or (0.375- 0.625 lbs. per 100 gal. in a dilute spray)	Apply first when disease pressure threshold is reached and continue on a 14-21 day interval. Do not apply more than 26 lbs. active ingredient (37.3 lbs. product) per acre per season. Application can be made up to the day of harvest.

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

Apply this product only through sprinkler irrigation systems including center pivot, lateral move, and low, side (wheel) roll, traveler, big gun, solid set, or hand move. Do not apply this product through any other type of irrigation system.

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

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 DF 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 nozzle 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 DF 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 sprinkler irrigation applications, as they may vary from state to state.

SPRAY PREPARATION:

Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water.

Prepare a suspension of PENNCOZEB DF in a mix tank. Fill the tank with $\frac{1}{2}$ or $\frac{3}{4}$ the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of PENNCOZEB DF and then the remaining volume of water.

APPLICATION INSTRUCTIONS:

Set sprinkler system to deliver 0.1 to 1.25 inches of water per acre. Volumes of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the suspension of PENNCOZEB DF into the irrigation water line so as to deliver the desired rate per acre. The suspension of PENNCOZEB DF should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.

NOTE: When treatment with PENNCOZEB DF 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

El Attochem 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 rules outlined therein. EL ATOCHEM MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL EL 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.

El Attochem 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 El Attochem.

Made and Printed in Holland

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