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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 28 1994

GLEND A HAAGE
RIVERSIDE/TERRA CORP.
600 FOURTH STREET
SIOUX CITY, IA 51101

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 07/27/93 In Response to PR Notice 93-7
EPA Reg. No. 9779-280
CHLOROTHALONIL 90 DF

IMPORTANT NOTICE: This Letter Requires You to Submit a Notification to the Office of Compliance Monitoring within 20 Days.

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments listed on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

SERIOUS ERROR(S) ON SUBMITTED LABELING:

EPA has determined that one or more of the errors on the labeling you submitted to the Agency is categorized as "serious" as defined in PR Notice 93-11. In general, serious errors are those that may create a potential for harm to workers, handlers, other persons, or the environment; or those that prevent the achievement of the basic goals of the Worker Protection Standard (WPS) or FIFRA.

YOU MUST NOT SELL OR DISTRIBUTE (INCLUDING RELEASE FOR SHIPMENT) ANY PRODUCT BEARING THE SUBMITTED LABELING. Sale or distribution of any product with the incorrect labeling is a violation of FIFRA that could result in initiation of an action for civil penalties and/or cancellation of your product. This matter has been referred to the Office of Compliance Monitoring (OCM) for further action.

YOU MUST SUBMIT A NOTIFICATION TO THE OFFICE OF COMPLIANCE MONITORING WITHIN 20 DAYS OF THE DATE OF THIS LETTER.



Recycled/Recyclable
Printed with Soy/Canola ink on paper that
contains at least 50% recycled fiber

Each notification must include the following information:

1. Registrant's name and address.
2. EPA Registration number of the product for which the labeling was submitted.
3. Whether any product already has been sold or distributed (this includes released for shipment) bearing the submitted labeling.

In addition, the notification must include the following information, IF you have already sold or distributed any product bearing the submitted labeling:

1. Quantity of the product that has been sold or distributed.
2. EPA Producing Establishment number.
3. Location of the product, if known.
4. Proposed plan for assuring that product with the incorrect labeling in your control, as well as that in the hands of dealers/distributors/users, will be corrected. The plan must include your proposal for assuring that the labeling is corrected as soon as possible.

Submit the notification to:

Michael Wood, Director
Compliance Division, (7203)
Worker Protection Notification
Office of Compliance Monitoring
U.S. Environmental Protection Agency
401 M Street SW
Washington, DC 20460

Failure to submit a notification also may result in initiation of an action under FIFRA for civil penalties, if you sold or distributed (this includes released for shipment) product bearing the incorrect labeling.

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IN ADDITION, YOU SHOULD CONTACT IMMEDIATELY THE PERSONS TO WHOM YOU SOLD OR DISTRIBUTED YOUR PRODUCT AND INFORM THEM NOT TO SELL OR DISTRIBUTE ANY PRODUCT WITH THE INCORRECT LABELING.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the WPS labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have neither been reviewed nor accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

Submit the required notification. Then by the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling as amended

AND

- WITHIN one year from date of this acceptance.

Submit the final printed labeling via the U.S. Postal Service to:

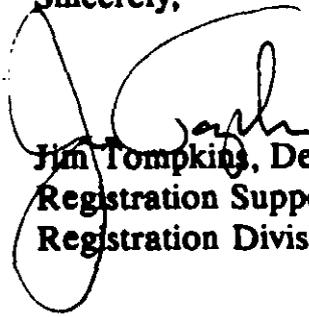
Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

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Hand or courier deliveries of final labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

cc: Office of Compliance Monitoring

R*

ACCEPTED
with COMMENTS
In EPA Letter Dated

Terranil 90DF
Agricultural Fungicide
(90% water dispersible granules)

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
9779-280

ACTIVE INGREDIENT	
Chlorothalonil (tetrachloroisophthalonitrile).....	90.0%
INERT INGREDIENTS.....	10.0%
Total	100.0%

~~STOP READ LABEL BEFORE USING.~~

KEEP OUT OF REACH OF CHILDREN

DANGER/PELIGRO

~~PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.~~

~~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.)~~

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Contact your local poison control center, hospital, or physician. If the patient is unconscious, maintain breathing and heartbeat (cardiopulmonary resuscitation).

IF INHALED: Remove victim to fresh air and apply respiration if indicated.

IF ON SKIN: ~~Remove contaminated clothing and~~ wash with soap and water.

IF IN EYES: Flush with plenty of water for 15 minutes. Get medical attention if irritation persists.

FIRST AID: Note to Physician: Persons having an allergic reaction respond to treatment with antihistamines or steroid creams and/or systemic steroids.

See additional PRECAUTIONARY STATEMENTS on back.

EPA Reg. No. 9779-280

EPA Est. No. 9779-AR-13

Manufactured For
Riverside/Terra Corporation
P. O. Box 6000, Sioux City, Iowa 51102-6000
Riverside Serves Agriculture. Agriculture Serves Everyone.

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LBS.

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

Corrosive, causes severe eye damage. May be a potential skin sensitizer. ~~Do not get in eyes; wear goggles or eye shield when handling this product.~~ Avoid contact with skin or clothing. Do not take internally. Avoid breathing dust or spray mist. NOTE TO USER: This product may produce temporary allergic side effects characterized by redness of the eyes, mild bronchial irritation and redness or rash on exposed skin areas. Persons having allergic reactions should contact a physician.

Applicators and other handlers must wear long-sleeved shirt and long pants, waterproof gloves, shoes plus socks and protective eyewear.

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.

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.

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 product is toxic to fish, aquatic invertebrates, and marine/estuarine organisms. 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. Do not apply when weather conditions favor drift from treated areas. Apply only to areas specified on label. Do not contaminate water when disposing of equipment washwaters.

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DIRECTIONS FOR USE

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

labeling.

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

~~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), notification to workers, 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 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, waterproof gloves, shoes plus socks and protective eyewear.

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

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.

REENTRY STATEMENT

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~~Do not enter treated area to perform hand labor within 24 hours of application unless protective clothing is worn. NOTE TO USER: Wear long sleeve shirt, long pants, and gloves, goggles or safety glasses while mixing, loading and applying this product. 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.

NOTICE TO CROP OWNERS

~~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, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Oral and written warnings must include the following information: "DANGER. Area treated with Chlorothalonil on (date of application). Do not enter without appropriate protective clothing within 24 hours of application. In case of accidental exposure, wash exposed area with plenty of water and get medical attention. For further information see PRECAUTIONARY STATEMENTS on the label."~~

STORAGE AND DISPOSAL

DO NOT CONTAMINATE WATER, FOOD, OR FEED BY STORAGE OR DISPOSAL

STORAGE

Store in a dry location away from children, animals, foods, feeds, seeds, or other agricultural chemicals. In the event of spillage, scrape up and dispose of in accordance with information given under DISPOSAL. Repackage and relabel useable product in a sound container. In case of fire or other emergency, report at once by toll-free telephone to 800-424-9300.

DISPOSAL

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

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

GENERAL INFORMATION

Terranil 90DF is an excellent fungicide when used according to label directions for control of a broad spectrum of plant diseases. Terranil 90DF can be used effectively in dilute or concentrate sprays. Thorough, uniform coverage is essential for disease control. Do not combine Terranil 90DF in the spray tank with pesticides, surfactants or fertilizers, unless prior use has shown the combination physically compatible, effective and noninjurious under conditions of use.

Dosage rates on this label indicate pounds of Terranil 90DF per acre unless otherwise stated. Under conditions favoring disease development, the high rate specified and shortest application interval should be used. Applications should be made in sufficient water to obtain adequate coverage of foliage. Gallonage to be used will vary with crop and amount of plant growth. Spray volume usually will range from 20 to 150 gallons per acre for dilute sprays and 5 to 10 gallons per acre for concentrate ground sprays and aircraft applications. Both ground and aircraft methods of application are recommended unless specific directions for ground application only are given for a crop. Application through sprinkler irrigation systems is recommended for some crops which are specified on the label below. Follow application and calibration instructions.

APPLICATION AND CALIBRATION TECHNIQUES FOR SPRINKLER IRRIGATION

Apply this product only through the following types of irrigation systems. 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 questions about calibration, you should contact State Experiment Station 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.

A. Center Pivot, Traveler, Big Gun, Motorized Lateral Move, End Tow, and Side (Wheel) Roll Irrigation Equipment: Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used. Fill tank of injection equipment with water. Operate system for one complete circle for center pivot or one complete run for the other recommended equipment, measuring time required, amount of water injected, and acreage contained in circle or run. Mix recommended amount of Terranil 90DF for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run, but continue to operate irrigation system until Terranil 90DF has been cleared from last sprinkler head. Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur.

B. Solid Set and Hand Move Irrigation Equipment: Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over a thirty to forty-five minute period. Mix desired amount of Terranil 90DF for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. Provide constant mechanical agitation in the mix tank to insure that Terranil 90DF will remain in suspension during the injection cycle. Terranil 90DF can be injected at the beginning or end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is completed and continue to operate irrigation system until Terranil 90DF is cleared from last sprinkler head.

SAFETY DEVICES

(1) The systems designated above 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. (2) All Pesticide injection pipelines must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. (3) 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. (4) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. (5) 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. (6) 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. (7) Do not apply when wind speed favors drift beyond the area intended for treatment.

SYSTEMS CONNECTED TO PUBLIC WATER SOURCES

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of fill pipe. 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.

For additional instructions on safety precautions, refer to statements (2), (3), (4), (6), and (7) in the section on SAFETY DEVICES.

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POSTING INSTRUCTIONS

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

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

All words shall consist of letters at least 2½ inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol

at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

MIXING PROCEDURES: Be sure sprayer is clean and not contaminated with any other materials, or crop injury or sprayer clogging may result. Fill tank ¼ full with clean water; start agitation. Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. Pour product directly from container into tank. Let it wet and settle into water. Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action. Finish filling tank. Maintain agitation during operation. Clean sprayer thoroughly immediately after use by flushing system with water containing a detergent. Do not use on greenhouse grown crops except as directed in the Turf and Ornamental section of this label.

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Beans (Snap)	Rust	1.2-2.4 pounds	Use in sufficient water to obtain adequate coverage. Begin applications during early bloom stage or when disease first threatens and repeat at weekly intervals as necessary to maintain control. Do not apply within 7 days of harvest. Do not graze treated areas or feed treated plant parts to livestock.
	Botrytis Blight (gray mold)	2.4 pounds	
Beans (Dry) Navy, Pinto, Kidney, Lima, Blackeye	Rust, Anthracnose, Downy mildew, Cercospora leaf spot (blackeye only)	1.2-1.7 pounds	Use in sufficient water to obtain adequate coverage. Begin applications during early bloom stage and repeat at 7 to 10 day intervals. For use only on beans harvested dry with pods removed. Do not apply within 6 weeks before harvest. Do not allow livestock to graze in treated areas or feed treated plant parts to livestock.
Cabbage, Cauliflower, Broccoli, Brussels sprouts	Alternaria leaf spot, Downy mildew	1.3 pounds	Use in sufficient water to obtain adequate coverage. Begin applications after transplants are set in field, or shortly after emergence of field-seeded crop, or when conditions favor disease development. Repeat at 7 to 10 day intervals or as necessary to maintain control.
	Ring spot (California only)	1.5 pounds	For field seeded Brussels sprouts, begin applications at time of early sprout development or when conditions favor disease development. Repeat at 7 to 10 day intervals or as necessary to maintain control.

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Carrot	Cercospora (Early) blight, Alternaria (Late) blight	1.3-1.5 pounds	Use in sufficient water to obtain adequate coverage. Start applications when disease threatens and repeat at 7 to 10 day intervals or as necessary to maintain control. Terranil 90DF may be applied through sprinkler irrigation equipment. See calibration directions preceding this section.
Celery	Cercospora (Early) blight, Septoria (Late) blight	.8-1.2 pounds	Use .8-1.2 pounds per acre on a 3 to 5 day spray schedule or 1.7-2.4 pounds per acre on a 7 day schedule. Start applications when transplants are set in the field. Apply in sufficient water to obtain adequate coverage. Do not apply within 7 days of harvest. Terranil 90DF may be applied through sprinkler irrigation equipment as directed above.
	Basal stalk rot (Rhizoctonia solani)	1.7-2.4 pounds	
	Pink rot (Suppression)	2.4 pounds	
	Early blight Late blight	1.3-1.6 pounds per 100 gal.	For celery seedbeds, apply 125 gallons per acre twice weekly or as needed to maintain control. Start applications shortly after crop emergence. Use the higher rate under severe disease conditions.
Corn (Sweet), Corn grown for seed	Helminthosporium leaf blights, Rust	.65-1.6 pounds	Use in sufficient water to obtain adequate coverage. Begin applications when conditions favor disease development and repeat at 4 to 7 day intervals or as required to maintain control. Under severe disease conditions, use 1.3-1.6 pounds per acre. Do not apply within 14 days of harvest. Do not apply to sweet corn to be processed. Do not allow livestock to graze in treated fields. Do not ensile treated corn or use as livestock forage.

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Cranberries	Fruit rots, Lophodermium leaf/twig blight	3½ to 5¼ pounds	<p>Apply at late bloom and repeat at 10 to 14 day intervals. Under severe conditions, use the 5¼ pounds/acre rate on a 10 day schedule. Do not apply more than 3 times per season, or within 50 days before harvest. Do not apply to bogs when flooded or allow release of irrigation water from bogs for at least 3 days following application.</p> <p>Terranil 90DF may be applied through sprinkler irrigation equipment. Use 300 gallons of water per acre through solid set systems only. See calibration directions preceding this section.</p>
Cucumber	Target spot, Anthracnose, Downy mildew	1.3-1.6 pounds	<p>Use in sufficient water to obtain adequate coverage. Begin applications when plants are in first leaf stage or when conditions are favorable for disease development. Repeat applications at 7 day intervals. Under severe disease conditions, shorten spray interval. Terranil 90DF may be applied through sprinkler irrigation equipment as directed above.</p>
	Powdery mildew (except south- western states), Gummy stem blight, Leaf blight, Scab	1.6-2.4 pounds	
	Fruit belly rot (<i>Rhizoctonia solani</i>)	6.9 pounds	<p>Use Terranil 90DF in sufficient water to obtain runoff to soil surface. Make a single application when vines begin to form. Terranil 90DF may be applied through sprinkler irrigation equipment as directed above.</p>

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Cantaloupe, Muskmelon, Honeydew melon, Watermelon, Squash, Pumpkin	Anthracnose Downy mildew	1.3-1.6 pounds	Use in sufficient water to obtain adequate coverage. Begin applications when plants are in first true leaf stage or when conditions are favorable for disease development. Repeat applications at 7 day intervals. Under severe disease conditions, shorten spray interval. Terranil 90DF may be applied through sprinkler irrigation equipment. See calibration directions preceding this section. PRECAUTION: Certain varieties of melons may be sensitive to sunburn following applications of chlorothalonil during periods of high solar intensity.
	Cercospora leaf spot, Gummy stem blight (black rot), Leaf blight, Scab, Powdery mildew (except southwestern states)	1.6-2.4 pounds	
Grasses grown for seed	Stem rust, Leaf rust, Stripe rust, Selenophoma (eyespot)	.8-1.2 pounds	Use in sufficient water to obtain adequate coverage. Begin applications during stem elongation when conditions favor disease development. Reapply at flag (top) leaf emergence and at head emergence. Under severe disease conditions, use the 1.2 pound per acre rate and repeat applications at 14 day intervals. Do not apply within 14 days of harvest. Do not allow livestock to graze in treated areas or feed treated plant parts to livestock.
Mint	Rust, Septoria leaf spot	1.2 pounds	Use in sufficient water to obtain adequate coverage, normally 20 to 150 gallons per acre for dilute sprays and 5 to 10 gallons per acre for concentrate ground and aircraft applications. Begin applications when emerging plants are 4-8 inches high. Repeat applications at 7 to 10 day intervals or as necessary to maintain control. Do not apply more than 3 times per season. Do not apply within 80 days of harvest. Do not feed fresh or extracted mint hay from treated fields to livestock. Based on available residue data, use of Terranil 90DF on mint is restricted to Indiana, Michigan and Wisconsin.

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Onion (dry bulb)	Botrytis leaf blight (blast), Purple blotch	1.2-1.7 pounds	Apply in sufficient water to obtain adequate coverage. Make the first application at first sign of disease or when dew or rain occurs. Repeat at 7 to 10 day intervals for as long as conditions favor disease. Use the high rate and a 7 day schedule of applications when heavy dew or rain persists. Do not apply within 7 days before harvest of dry bulb onions or garlic. Do not apply more than 3 times per season or within 14 days of harvest on green bunching onions, leeks, or shallots. If additional disease control is needed before harvest, use another registered fungicide.
Onion (green bunching), Garlic, Leek, Shallot, Onion grown for seed	Botrytis leaf blight (blast), Purple blotch, Downy mildew (Suppression)	1.2-2.4 pounds	
Papaya	Alternaria fruit spot, Anthracnose, Stem end rot	1.7-3.3 pounds	Apply with ground equipment only, in sufficient water to obtain adequate coverage of fruit and leaves. Begin treatments when conditions favor development of disease and continue treatments at 14 day intervals until weather conditions no longer favor disease development. Do not graze livestock in treated area or feed processing by-products to livestock.
Parsnip	Alternaria leaf spot, Downy mildew, Anthracnose, Botrytis blight (gray mold), Bottom rot (Rhizoctonia)	1.2-1.7 pounds	Apply in sufficient water to obtain adequate coverage. Make the first application at the first sign of disease or when conditions are favorable for infection. Continue applications on a 7 to 10 day schedule. Do not apply more than 4 times per season or within 10 days of harvest. Do not feed treated plant parts to livestock.
Passion Fruit (Hawaii only)	Alternaria fruit and leaf spot (passion fruit brown spot)	1.6 pounds	Apply with ground equipment in sufficient water to obtain adequate coverage of fruit and leaves. Begin treatment when fruit spots appear (April to July) and continue treatments at 14 day intervals until weather conditions no longer favor disease development. Do not graze in treated area or feed vines or processing by-product to livestock used for food.

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Peanut	Cercospora (early) leafspot Cercosporidium (late) leafspot	.8-1.2 pounds	Apply in sufficient water for coverage when leaf wetness first occurs or 30 to 40 days after planting. Repeat at 10 to 14 day intervals. When conditions favor late leafspot or when rust or web blotch occur, apply 1.2 pounds per acre at 10 day intervals for the remainder of the season. Do not apply within 14 days of harvest. Do not allow livestock to graze in treated areas. Do not feed hay or threshings from treated fields to livestock. Terranil 9ODF may be applied through sprinkler irrigation equipment. See calibration directions preceding this section.
	Rust, Web blotch	1.2 pounds	
Potato	Early blight Late blight Botrytis vine rot (Botrytis spp.)	.8-1.2 pounds	Use in sufficient water to obtain adequate coverage. Begin applications when plants are 6 to 8 inches high or when disease threatens and continue at 7 to 10 day intervals or as needed to maintain disease control. Under severe disease conditions, use 1.2 pounds per acre on a 7 day schedule. Terrinal 9ODF may be applied through sprinkler irrigation equipment. See calibration directions preceding this section. Do not exceed a 10-day interval between applications when using sprinkler irrigation techniques.
	Dryland culture only: Early blight Late blight	.65-1.2 pounds	

<p>Soybean</p> <p>Do not exceed a total of three applications per season.</p>	<p>Anthracnose, Diaporthe pod and stem blight, Frogeye leaf spot (<i>Cercospora sojina</i>), Purple seed stain (<i>Cercospora kikuchii</i>), Septoria brown spot</p>	<p>1.2-2 pounds or .8-1.6 pounds</p>	<p>Terranil 90DF at 1.2-2 pounds per acre if two applications are scheduled or .8-1.6 pounds per acre if three applications are scheduled. Use the three application program in areas having a history of moderate to severe disease intensity. Applications should be made at 14 day intervals. Apply in sufficient water to obtain complete coverage. A minimum of five gallons of water per acre should be used for aerial applications. Terranil 90DF may be applied through sprinkler irrigation equipment. Follow calibration directions preceding this section.</p> <p>Determinate (southern) soybean varieties: Two application program--make the first application at early pod set (R3 stage, when majority of pods are $\frac{1}{8}$ to $\frac{3}{8}$ inch in length) and the second at beginning of seed formation (R5), which occurs about 14 days later. Three application program--make the first application at the beginning of flowering (R1), and second at early pod set (R3), and the third at beginning of seed formation (R5).</p> <p>Indeterminate (northern) soybean varieties: Two application program--make the first application when the largest pods are 1 to 1 $\frac{1}{2}$ inches in length and make the second application 14 days later. Three application program--make the first application one week after the first flowering and continue applications at 14 day intervals. Terranil 90DF may be co-applied with Benlate*50WP at a tank mix for disease control on indeterminate (northern) soybeans. Use 1.2 pounds of Terranil 90DF plus 8 ounces of Benlate 50WP per acre. Make the first application when pods near the top of plants are $\frac{1}{2}$-1 inch in length and a second application 14 days later. Do not apply Terranil 90DF within 6 weeks of harvest. Do not allow livestock to graze treated areas. Do not feed soybean hay or threshings from treated fields to livestock.</p> <p>*Benlate is a registered trademark of E. I. DuPont de Nemours and Co., Inc.</p>
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CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Tomato	FOLIAGE: (apply every 7 to 10 days): Early blight, Late blight, Gray leafspot, Gray leaf mold, Septoria leafspot	1.2-1.7 pounds	Apply in sufficient water to obtain adequate coverage. Begin applications when dew or rain occur and disease threatens. Use the highest rate and shortest interval specified when disease conditions are severe. Terranil 90DF may be combined in the spray tank with EPA registered pesticide products that claim copper as the active ingredient and are labeled for control of bacterial diseases of tomatoes. Check the copper manufacturer's label for specific instructions, precautions and limitations prior to mixing with Terranil 90DF. Do not use with Copper-Count*N in concentrated spray suspensions. Terranil 90DF may be applied through sprinkler irrigation. See calibration directions preceding this section. *Copper-Count is a registered trademark of Mineral Research & Development Corporation
	FRUIT: (apply every 7 to 14 days beginning at fruit set): Anthracnose, Alternaria fruit rot (black mold), Rhizoctonia fruit rot, Botrytis gray mold, Late blight fruit rot	1.7-2.3 pounds	

TREE FRUITS	SPRAY VOLUME (Gallons per Acre)		
Apply Terranil 90DF in sufficient water and with proper calibration to obtain uniform coverage of tree canopy. Application with ground equipment is preferable to aerial application because ground applications generally give better coverage of the tree canopy. If application with ground equipment is not feasible, Terranil 90DF may be applied with aircraft using at least 20 gallons per acre. When concentrate sprays are used or when treating non-bearing or immature trees, the lower rate of Terranil 90DF listed may be used. Do not allow livestock to graze in treated areas. The following spray volumes are recommended as gallons of spray per acre:	CROP	Dilute	Concentrate
	Peach, Nectarine, Apricot, Tart Cherry, Plum, Prune	300	20 to 150
	Sweet Cherry	400	20 to 200

TERRANIL 90DF RATE PER

CROP	DISEASES	ACRE	100 GAL*	APPLICATION DIRECTIONS
Peach Nectarine Apricot Cherry Plum Prune	Leaf curl, Coryneum blight (shothole)	2.6-3.4 pounds	.8-1.2 pounds	For best control of both diseases apply at leaf fall in late autumn, using sufficient water and proper sprayer calibration to obtain uniform coverage. When conditions favor high disease levels, use the high rate of application and apply once or twice more in mid to late winter before budswell. If the leaf fall application is not practical, application of Terranil 90DF for control of leaf curl may be made at any time prior to budswell the following spring. Where Coryneum blight (shothole) occurs, also apply at budbreak to protect newly emerging leaves and at shuck-split to prevent fruit infections.
	Brown rot blossom blight	2.6-4.6 pounds	.8-1.2 pounds	Use 3.4-4.6 pounds per acre on trees taller than 20 ft. and 2.6 to 3.4 pounds per acre on smaller trees. Make one application at popcorn (pink, red, or early white bud) and a second application at full bloom. If weather conditions favor disease development, make an additional application at petal fall.
	Cherry leafspot; Peach, nectarine, apricot scab	2.6-3.4 pounds	.8-1.2 pounds	In addition to the bloom applications listed above, make one application at shuck-split. Do not apply Terranil 90DF after shuck-split and before harvest. If additional disease control is needed before harvest, use another registered fungicide. For control of cherry leafspot after harvest, make one application to foliage within 7 days after fruit is removed. In orchards with a history of high leafspot incidence, make a second application 10-14 days later.

*Volumetric rates to be used only with full dilute spray volume specified on this label for tree fruits.

TURF AND ORNAMENTALS

Terranil 90DF is formulated for use on golf course tees, greens and fairways, ornamental turfgrass and ornamental herbs, shrubs and trees. It is highly effective for the control of a broad spectrum of turf and ornamental plant diseases when it is used according to the directions on this product label. Thorough, uniform coverage of plant surfaces is essential for good disease control.

TURF: Do not mow or water after treatment until spray deposit on turfgrass is thoroughly dry; Terranil 90DF should always be used in conjunction with good turf management practices.

Golf Course Fairways: Apply in 30 to 40 gallons of water per acre. Begin applications when conditions favor disease development and repeat applications as long as these conditions persist. Under severe disease conditions, use the highest rate and shortest interval corresponding with the application schedule selected from the table below.

DISEASE	APPLICATION INTERVAL	APPLICATION RATES PER ACRE
Sclerotinia Dollar Spot	7-10 days 14-21 days	2 ¼ to 4 ½ lbs. 4 ½ to 8 lbs.
Helminthosporium Leafspot	7-10 days 14-21 days	4 ½ lbs. 4 ½ to 8 lbs.
Rhizoctonia brown patch	7-14 days	4 ½ to 8 lbs.
Anthracnose	7-14 days	7 to 14 lbs.

Golf Course Tees and Greens and Ornamental Turfgrass: Apply in an adequate amount of water to provide complete coverage. This amount may vary from 2 to 10 gallons per 1,000 square feet. See below for suggested rates and timing. Under severe disease conditions, use the curative rates and spray on a 7 day schedule.

Do not use Terranil 90DF through sprinkler irrigation equipment on golf courses.

DISEASE	APPLICATION INTERVAL	RATE Ounces Per 1,000 Square Feet	
		Preventive*	Curative**
Anthracnose	7-14 days	2½ to 5	--
Copper spot	7-10 days	3½ to 5	5 to 6½
Curvularia leaf spot	7-10 days	1¾ to 3½	3½ to 6½
Dollar spot	7-14 days	1¾ to 3½	3½ to 6½
Gray leafspot	7-10 days	1¾ to 3½	3½ to 6½
Helminthosporium leafspot and melting out	7-10 days	1¾ to 3½	3½ to 6½
Large brown patch	7-10 days	1¾ to 3½	3½ to 6½
Red thread	7-10 days	1¾ to 5	5 to 6½
Stem rust of bluegrass	7-14 days	3½ to 5	5 to 6½
Dichondra: Alternaria leafspot (California only)	7-14 days	3½ to 5	5 to 6½

*Recommended rates for preventing disease establishment; use lower rate when disease conditions are light to moderate, higher indicated rates when conditions are severe.

**Rates for use on a 7 day schedule when disease is present. Higher indicated rate should be applied under severe conditions.

Turfgrasses - Gray snow mold caused by *Typhula* spp.: Apply in sufficient water to obtain adequate coverage (2 to 10 gallons per 1,000 square feet). Apply 4½ to 9 ounces of Terranil 90DF per 1,000 square feet of turf area. Application must be made before snow cover in autumn. Use the higher rate if turf layer remains frozen prior to snow cover. If snow cover is intermittent or lacking during the winter, re-apply at 4½ ounces per 1,000 square feet at monthly intervals until gray snow mold conditions no longer prevail. In areas where pink snow mold (*Gerlachia* or *Fusarium* patch) is likely to occur, apply at 4½ ounces per 1,000 square feet in combination with either Tersan* 1991 50WP at 2 ounces per 1,000 square feet or Chipco** 26019 50WP at 4 ounces per 1,000 square feet of turf area.

*Tersan is a registered trademark of E. I. DuPont de Nemours & Company, Inc.

**Chipco is a registered trademark of Rhone-Poulenc, Inc.

Fusarium (*Gerlachia*) Patch: For control of *Fusarium* patch only in areas where snow cover is intermittent or lacking during the winter, apply 4½ to 8 ounces per 1,000 square feet of turf area. Begin applications in late autumn and re-apply at 21 to 28 day intervals until conditions favorable for *Fusarium* patch no longer prevail.

intervals until conditions favorable for Fusarium patch no longer prevail.

ORNAMENTALS AND CONIFERS: Apply Terranil 90DF at a rate of 1 ¼ pounds per 100 gallons of water unless other directions are given in the tables below. Begin applications as directed for each species and disease condition cited and repeat on a 7 to 14 day schedule until conditions are no longer favorable for disease development. During periods when conditions favor severe disease incidence, generally cloudy or wet weather, use the higher rate specified and the shortest indicated interval between applications.

Aerial application to conifers is permitted although ground applications generally give better coverage. If application with ground equipment is not feasible, Terranil 90DF may be applied aurally to forest stands in 10-20 gallons of water and to Christmas trees in 10-50 gallons of water.

Terranil 90DF may be used in greenhouses. ~~Applicators and attending personnel should wear protective clothing including long sleeves, gloves, goggles or face shield, plus a face-fitting respirator specifically designed to remove organic pesticide vapors and particulates.~~ Do not use mistblowers or high pressure spray equipment when making applications in greenhouses.

ORNAMENTALS

SPECIES	DISEASES CONTROLLED	SUGGESTED FIRST APPLICATION
BROADLEAF SHRUBS AND TREES:		
Ash (Fraxinus) Azalea* Rhododendron* Buckeye, Horsechestnut Cherry-Laurel Crabapple Dogwood Euonymus Firethorn Flowering almond, Quince, Sand Cherry Hawthorn Holly Mountain Laurel Oak (red group only) Oregon-Grape (Mahonia) Photinia Pieris (Andromeda) Poplar Privet Sycamore, Planetree Viburnum	Cercospora, Cercosporidium, Cylindrosporium leafspots Phytophthora die-back, Ovulinia flower blight Leaf blotch, Anthracnose Cercospora leafspot Scab, Cedar-apple rust, Sphaeropsis leafspot Septoria leafspot Anthracnose Scab Monilinia blossom/branch blight Rust, Fabraea leafspot Rhizoctonia web blight Cercospora leafspot Taphrina blister, Actinopelte leafspot, Anthracnose Rust Fabrea (Entomosporium) leafspot Phytophthora die-back Marssonina leafspot Cercospora leafspot Anthracnose Powdery mildew	Spring bud break New leaf emergence; Early bloom Spring bud break Petal fall Spring bud break Early bloom Spring bud break Spring bud break Early bloom Prebloom Warm, moist conditions Spring bud break Dormant budswell Spring bud break Spring bud break New leaf emergence Spring bud break Prolonged wet conditions Spring bud break Mid-summer

SPECIES	DISEASES CONTROLLED	SUGGESTED FIRST APPLICATION
BULBS AND FLOWERING PLANTS:		
Carnation Chrysanthemum/Daisy Geranium Gladiolus Hollyhock Hydrangea* (foliage only) Iris Lily, Crocus, Daffodil, Narcissus, Tulip Petunia* Rose (Use 7/8 lb. per 100 gallons) Statice Zinnia	Alternaria leafspot/branch rot Botrytis flower-blight Mycosphaerella ray blight, Septoria leafspot Botrytis flower blight (gray mold) Botrytis blight, rust Curvularia leaf/flower spot, Botrytis leaf/flower spot Rust Cercospora and Septoria leafspots, Rust Botrytis blossom blight, Didymellina leafspot, Ink spot Botrytis blight (gray mold, fire, measles), Stagonospora leaf scorch Phytophthora blight (foliar phase) Botrytis blight Black spot, Botrytis blight Anthracnose, Cercospora, Alternaria, Botrytis leaf blights Powdery mildew	Transplant of cuttings Cool, moist conditions Transplant of cuttings Prebloom Cool, moist conditions Early propagation Early seedling stage Early propagation Cool, moist conditions Prebloom Prebloom Spring budbreak Spring budbreak First sign of disease
*Discoloration of blooms has been noted on certain varieties when applications are made during flowering.		
FOLIAGE PLANTS:		
Dracaena Pachysandra (Use 2 1/4 lbs. per 100 gallons) Leatherleaf fern Parlor palm Prayer plant (Maranta) Oyster plant (Rhoeo) Syngonium Philodendron	Fusarium leafspot Volutella leaf blight Ascochyta blight, Cercospora leafspot, Cylindrocladium leafspot, Rhizoctonia blight Bipolaris (Helminthosporium) leafspot Helminthosporium leafspot Tan leafspot Cephalosporium leafspot Phytophthora blight, Dactylaria leafspot	Pre-transplant Spring budbreak Spring budbreak Cool, moist conditions Early propagation Early propagation Warm, moist conditions Moist conditions

CONIFERS:		
DISEASES CONTROLLED	TERRANIL 90DF RATE/ACRE	APPLICATION DIRECTIONS
Rhabdocline needlecast (Douglas fir)	1½ to 2¼ lbs.	Apply at budbreak and repeat at 3 to 4 week intervals until needles are fully elongated and conditions no longer favor disease development. In plantations of mixed provenance, or when irregular budbreak occurs, apply weekly until all trees have broken bud, then every 3 to 4 weeks as specified above. In nursery beds, use the high rate on a 3 week schedule.
Swiss needlecast	2¼ to 4½ lbs.	Single application technique: In Christmas tree plantations or forest stands, make one application in the spring when new shoot growth is ½ to 2 inches in length.
Scleroderris Canker (pines), Swiss Needlecast (Douglas fir)	1½ to 2¼ lbs.	Make first application in spring when new shoot growth is ½ to 2 inches in length. Make additional applications at 3 to 4 week intervals until conditions no longer favor disease development. In nursery beds, apply the highest rate specified on a 3 week schedule.
Sirococcus Tip Blight	1¾ to 3 lbs.	
Rhizosphaera Needlecast (spruces), Scirrhia brown spot (pines)	4½ lbs.	
Cyclaneusma and Lophodermium needlecasts (pines)	2¼ to 4½ lbs.	Apply in early spring prior to budbreak. Repeat applications at approximately 6 to 8 week intervals until spore release ceases in late fall. Apply monthly during periods of frequent rainfall, and where Lophodermium infections occur during dormancy (Pacific Northwest). During drought periods, applications may be suspended, then resumed upon next occurrence of needle wetness.

CONIFERS (Continued):		
DISEASES CONTROLLED	TERRANIL 90DF RATE/ACRE	APPLICATION DIRECTIONS
Botrytis seedling blight, Phoma twig blight	1 1/8 to 2 1/4 lbs.	Begin applications in nursery beds when seedlings are 4 inches tall and when cool, moist conditions favor disease development. Make additional applications at 7 to 14 day intervals as long as favorable disease conditions persist.

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to Seller, and Buyer assumes the risk of any such use.