PM 14 538-225 PJ 199

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OCT 24 1991

5403973 161/38

The O.M. Scott & Sons Company
14111 Scottslawn Road
Marysville, OH 43041

Gentlemen:

Subject: Grub Control
EPA Registration No. 538-225

This is in response to your letter of September 17, 1991 transmitting your revised data matrix for the subject product.

The data matrix has been corrected in accordance with our letter of June 27, 1991 and has been included in our file for the product.

Sincerely yours,

Robert A. Forrest
Product Manager (14)
Insecticide-Rodenticide Branch
Registration Division (H7505C)

64915:I:Forrest:L14-10:KEVRIC:10/22/91:11/22/91:aw:wo:dd:rj

CONCURRENCES

SYMBOL								
SURNAME								
DATE								

EPA Form 1320-1 (12-70)

OFFICIAL FILE COPY

US ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES PROGRAMS
REGISTRATION DIVISION (TS-767)
WASHINGTON, DC 20460

NOTICE OF PESTICIDE: ☐ REGISTRATION ☐ REREGISTRATION

(Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended)

EPA REGISTRATION NO.	DATE OF ISSUANCE
538-225	6-27-91
TERM OF ISSUANCE	

NAME OF PESTICIDE PRODUCT

Grub Control

NAME AND ADDRESS OF REGISTRANT *(Include ZIP code)*

O.M. Scott & Sons Company
14310 Scottslawn Road
Marysville, OH 43041

5397283 161/19

5397425 161/38

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prio. to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A) provided that you:

1. Submit/cite all data or other material required for registration/reregistration of your product under FIFRA section 3(c)(5) or FIFRA section 4 when the Agency requires all registrants of similar products to submit such data.

2. Make the labeling changes listed below before you release the product for shipment:

   a. Add the phrase "EPA Registration No. 538-225."

   b. Specify the application rate in terms of the amount of product to be applied per square feet.

   c. Update your current Environmental Hazards statements to read as follows:

      This pesticide is toxic to fish and wildlife. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

☐ ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL	DATE
	6-27-91

EPA Form 8570-6 (Rev. 5-76) PREVIOUS EDITION MAY BE USED UNTIL SUPPLY IS EXHAUSTED.

64991:I:CR-31:Mautz.L14-14:KEVRIC:06/19/91:07/19/91:CL:wo:aw

d. Relocate the following statement from its present location in the "Environmental Hazards" paragraph to your restrictions paragraph (located on the top of your right back panel of your submitted label).

> Do not graze treated areas or use clippings from treated areas for feed or forage.

e. State your application rate in terms of the amount of product per 1000 sq. ft.

3. Submit your revised data matrix corrected as indicated below:

a. The product chemistry data portion of your data matrix submitted with your letter of June 3, 1991 is inaccurate in that it cites Mobay's data, whereas you had submitted your own product specific chemistry data. Please refer to your data submissions of May 12, 1988 and October 30, 1989 (MRID No. 41288201). Though the former data submission was reviewed by our product chemist, it was not assigned an MRID number since it was not in compliance with PR Notice 86-5.

Revise your data matrix to reflect your own data.

b. Correct column 10 for the 81-4 and 81-5 guideline nos. to read 243557 as it appeared on your data matrix submitted September 1, 1987.

4. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

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

Robert A. Forrest
Product Manager (14)
Insecticide-Rodenticide Branch
Registration Division (H7505C)

Enclosures

JACKET COPY

PACKAGE COPY FOR
GRUB CONTROL XXXXX

4 9 9

10/15/86 RZ
10/17/86 RZ
11/06/86 RZ
12/09/86 RZ
02/12/87 RZ
05/26/87 RZ
08/28/90 VS/CR

(Scotts) Grub Control

(NOTE: Above description will be inverted.)

Treats 5,000 sq ft (465 m^2)

SCOTTS POLICY
No-Quibble
Guarantee
SEE BACK FOR DETAILS

(Scotts(R))

Grub
Control
(Illustration)

controls white grubs, mole crickets,
and billbug larvae

FOR USE ON TURFGRASS LAWNS ONLY

ACCEPTED
with COMMENTS
In EPA Letter Dated:
JUN 27 1991
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended for the registration number 538-225

NET WEIGTH: 11 1/2 LBS (5.22 kg)

LEFT COLUMN

KEEP OUT OF REACH OF CHILDREN
CAUTION
PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals: CAUTION: Harmful if swallowed. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and warm water after handling. Wash contaminated clothing with soap and hot water before reuse. Keep out of reach of children.

Statement of Practical Treatment:

If in Eyes: Flush with plenty of water.

If on Skin: Wash with soap and hot water.

If Swallowed: Call a physician or Poison Control Center. Give a glass or two of water and induce vomiting by touching finger to back of throat. Do not induce vomiting or give anything to an unconscious or convulsing person.

Environmental Hazards: This pesticide is toxic to fish and wildlife. Do not apply directly to water or wetlands. Keep out of lakes, streams, or ponds. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not graze treated areas or use clippings from treated areas for feed or forage.

STORAGE: Store in a clean, dry place. Reseal opened bag by folding top down and securing.

PESTICIDE DISPOSAL: Securely wrap original container in several layers of newspaper and discard in trash.

CONTAINER DISPOSAL: Do not reuse bag. Discard bag in trash.

ACTIVE INGREDIENT:

Isofenphos, 1-Methylethyl 2-[[ethoxy[(1-methylethyl)amino] phosphinothioyl]-oxy]benzoate.	1.50%
INERT INGREDIENTS:	98.50%
Total	100.00%

EPA Reg No 538-XXX EPA Est. XXX-XX-X Product of USA
The O. M. Scott & Sons Company
Marysville, Ohio 43041

RIGHT GUSSETS:

(Scotts) Grub Control SCOTTS POLICY
No-Quibble
Guaranteed
SEE BACK FOR DETAILS

XXXXX

LEFT GUSSET:

(Scotts) Grub Control SCOTTS POLICY
No-Quibble
Guaranteed
SEE BACK FOR DETAILS

XXXXX

PULL TAB
and remove for
pour spout

(ILLUS.)

GC - XXXXX
5 M
PROOF
OF
PURCHASE
(Scotts)

Treats 5,000 sq ft (465 m^2)

Easy
Open PULL HERE

(Scotts$_{(R)}$) Grub Control

(Illustrations)

controls white grubs, (Japanese bettle, masked chafer, European chafer), mole crickets, and billbug larvae

(Use Scotts Lawn Insect Control to control chinch bugs, sod webworms, and other surface insect problems - see list on Lawn Insect Control package)

DIRECTIONS FOR USE

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

- For White Grub Control: For optimum results, control grubs in the summer/ early fall by applying the product before peak grub feeding activity (June-July in southern states; late July-early August in northern states).

- For Billbug Larvae Control: Apply in early-mid summer prior to the time of maximum larval activity. This is usually during the June-July period.

- For Mole Cricket Control: The best time to treat is during May-July when the crickets have hatched and are still young.

- In order to move the insecticide down to the zone of insect activity, please adhere to the following watering instructions:

Insect	Water
White Grub & Billbug Larvae*	1/2 to 1 inch immediately after application
Mole Cricket	1/2 inch before application, followed by 1/2 to 1 inch after application.

*For best results, water your lawn 24 hours prior to application. This will better enable the active ingredient to penetrate the thatch and control the white grubs and billbug larvae.

RIGHT

- Do not allow children or pets on the treated lawn until it has dried.
- Do not use other lawn control products for at least one week after application.
- Do not apply Grub Control more than twice annually.

Application Rate	Scotts Drop Spreaders	Scotts EasyGreen™ Rotary
(treats 5,000 sq ft)	XX	XX

TIPS ON SPREADING WITH SCOTTS SPREADERS

Scotts Drop:

- First apply two header strips
- Operate spreader the longest way of the lawn
- Overlap wheels to insure complete insect control
- Shut off spreader when you have reached the header strips or anytime you stop
- Mow lawn first if grass is tall enough to touch the bottom of the spreader

EasyGreen™ Rotary:

- Slide shut-off lever to the right. Application automatically starts and stops when you do.
- Avoid misses by making each pass about 30 inches from the previous one so some overlapping occurs.

(ILLUS.) (ILLUS.)

XXXXX

Scotts Policy
No-Quibble Guarantee

If for any reason you are not satisfied with the results after using this product, you are entitled to get your money back. Simply send us evidence of purchase and we will mail you a refund check promptly.

0 (UPC) 0

322457 XXXXX

SCOTTS... the lawn people
MARYSVILLE, OHIO 43401

(NOTE: The description below will be inverted.)

XXXXX (Scotts) Grub Control

1456R

EPA

COMPANY NUMBER 9779

PRODUCT SERIAL NO. 280

LABEL APPROVAL DATE 5-30-91

Reg # 9779-280 PM-22 1 of 17

R®

Chlorothalonil 90DF
Agricultural Turf and Ornamental Fungicide
(90% water dispersible granules)

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.

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 CORP.
Terra Centre, 600 Fourth Street, Sioux City, Iowa 51101
Riverside Serves Agriculture. Agriculture Serves Everyone.

NET CONTENTS
____ LBS.

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.

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. 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.

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.

RE-ENTRY STATEMENT

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 while mixing, loading and applying this product. Because certain states may require more restrictive re-entry 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."

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 Chlorothalonil 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 Chlorothalonil 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 fourty-five minute period. Mix desired amount of Chlorothalonil 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 Chlorothalonil 90DF will remain in suspension during the injection cycle. Chlorothalonil 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 Chlorothalonil 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 l) or water pump must include a)ctional pressure switch which will stop the water pump motor when the water pressure decr. .ses 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 s" .tem 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 ' .rage of at least 25 individuals daily at least 60 days out of the year.

Chemig. .ion 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.

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.

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.

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

Chlorothalonil 90DF is an excellent fungicide when used according to label directions for control of a broad spectrum of plant diseases. Chlorothalonil 90DF can be used effectively in dilute or concentrate sprays. Thorough, uniform coverage is essential for disease control. Do not combine Chlorothalonil 90DFin 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 Chlorothalonil 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.

NOTE TO USER: Do not rotate to crops other than those listed on labels within 12 months of the last treatment. After 12 months from the last application, leafy vegetables (i.e. spinach, lettuce, kale, etc.) may also be rotated.

MIXING PROCEDURES: Be sure sprayer is clean and not contaminated with any other materials, or crop injury or sprayer clogging may result. Fill tank 1/4 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 ntainer into tank. Let it wet and settle into water. Continue filling tank until 90% .ll. 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
Bean (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.
bbage, .auliflower, 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.
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. Chlorothalonil 90DF may be applied through sprinkler irrigation equipment. See calibration directions preceding this section.

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
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. Chlorothalonil 90DF may be applied through sprinkler irrigation equipment as directed above.
	Basal stalk rot (Rhizoctonia solani)	1.7-2.4 pounds	
	Pink rot (Suppresion)	2.4 pounds	
	Early blight Late blight	1.3-1.6 pounds/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.
Cranberries	Fruit rots, Lophodermium leaf/twig blight	3-1/2 to 5-3/4 pounds	Apply at late bloom and repeat at 10 to 14 day intervals. Under severe conditions, use the 5-3/4 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. Chlorothalonil 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.
Cucumber	Target spot, Anthracnose, Downy mildew	1.3-1.6 pounds	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. Chlorothalonil 90DF may be applied through sprinkler irrigation equipment as directed above.
	Powdery mildew (except southwestern states), Gummy stem blight, Leaf blight, Scab	1.6-2.4 pounds	
	Fruit belly rot (Rhizoctonia solani)	6.9 pounds	Use Chlorothalonil 90DF in sufficient water to obtain runoff to soil surface. Make a single application when vines begin to form. Chlorothalonil 90DF may be applied through sprinkler irrigation equipment as directed above.

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Cantaloupe, Muskmelon, ›neydew elon, 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. Chlorothalonil 90DF may be applied through sprinkler irrigation equipment. See calibration directions preceding this section.
	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. Re-apply 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 Chlorothalonil 90DF on mint is restricted to Indiana, Michigan and Wisconsin.
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	

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
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.
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. Chlorothalonil 90DF 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. Chlorothalonil 90DF 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	

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Soybean	Anthracnose, Diaporthe pod and stem blight, Frogeye leaf spot (Cercospora sojina), Purple seed stain (Cercospora kikuchii), Septoria brown spot	1.2-2 pounds or .8-1.6 pounds	Chlorothalonil 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. Chlorothalonil 90DF may be applied through sprinkler irrigation equipment. Follow calibration directions preceding this section. Determinate (southern) soybean varieties: Two application program-Make the first application at early pod set (R3 stage, when majority of pods are 1/8 to 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). Indeterminate (northern) soybean varieties: Two application program-Make the first application when the largest pods are 1 to 1½ 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. Chlorothalonil 90DF may be co-applied with Benlate*50WP as a tank mix for disease control on indeterminate (northern) soybeans. Use 1.2 pounds of Chlorothalonil 90DF plus 8 ounces of Benlate 50WP per acre. Make the first application when pods near the top of plants are ½-1 inch in length and a second application 14 days later. Do not apply Chlorothalonil 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.
	Anthracnose, Diaporthe pod and stem blight, Frogeye leaf spot (Cercospora sojina), Purple seed stain (Cercospora kikuchii), Septoria brown spot	1.2-2 pounds or .8-1.6 pounds	
Do not exceed a total of three applications per season.			*Benlate is a registered trademark of E. I. DuPont de Nemours and Co., Inc.

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)P	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
mato	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. Chlorothalonil 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 Chlorothalonil 90DF. Do not use with Copper-Count*N in concentrated spray suspensions. Chlorothalonil 90DF may be applied through sprinkler irrigation. See calibration directions preceding this section.
	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	

*Copper-Count is a registered trademark of Mineral Research & Development Corporation

TREE FRUITS

pply Chlorothalonil 90DF in sufficent water d 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, Chlorothalonil 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 Chlorothalonil 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:

	SPRAY VOLUME (Gallons per Acre)	
CROP	Dilute	Concentrate
Peach, Nectarine, Apricot, Tart Cherry, Plum, Prune	300	20 to 150
Sweet Cherry	400	20 to 200

CROP	DISEASES	CHLOROTHALONIL 90DF RATE PER ACRE	100 GAL*	APPLICATION DIRECTIONS
ach, ctarine 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 Chlorothalonil 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 leaf-spot; 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 Chlorothalonil 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.

Chlorothalonil 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; Chlorothalonil 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
Scleratinia	7-10 days	2 1/4 to 4 1/2 lbs.
Dollar Spot	14-21 days	4 1/2 to 8 lbs.
Helminthosporium	7-10 days	4 1/2 lbs.
Leafspot	14-21 days	4 1/2 to 8 lbs.
Rhizoctonia brown patch	7-14 days	4 1/2 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 Chlorothalonil 90DF through sprinkler irrigation equipment on golf courses.

DISEASE	APPLICATION INTERVAL	RATE Ounces Per 1,000 Square Feet Preventive*	Curative**
Anthracnose	7-14 days	2 1/2 to 5	-
Copper spot	7-10 days	3 1/2 to 5	5 to 6 1/2
Curvularia leaf spot	7-10 days	1 3/4 to 3 1/2	3 1/2 to 6 1/2
Dollar spot	7-14 days	1 3/4 to 3 1/2	3 1/2 to 6 1/2
Gray leafspot	7-10 days	1 3/4 to 3 1/2	3 1/2 to 6 1/2
Helminthosporium leafspot and melting out	7-10 days	1 3/4 to 3 1/2	3 1/2 to 6 1/2
Large brown patch	7-10 days	1 3/4 to 3 1/2	3 1/2 to 6 1/2
Red thread	7-10 days	1 3/4 to 5	5 to 6 1/2
Stem rust of bluegrass	7-14 days	3 1/2 to 5	5 to 6 1/2
Dichondra: Alternaria leafspot (California only)	7-14 days	3 1/2 to 5	5 to 6 1/2

*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 4 1/2 to 9 ounces of chlorothalonil 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 4 1/2 ounces per 1,000 square feet at monthly interals until gray snow mold conditions no longer prevail. In areas where pink snow mold (Gerlachia or Fusarium patch) is likely to occur, apply at 4 1/2 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 4 1/2 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.

ORNAMENTALS AND CONFIFERS: Apply Chlorothalonil 90DF at a rate of 1 1/4 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.

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

Chlorothalonil 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)	Cercospora, Cercosporidium, Cylindrosporium leafspots	Spring bud break
Azalea* Rhododendron*	Phytophthora die-back, Ovulinia flower blight	New leaf emergence; Early bloom
Buckeye, Horsechestnut	Leaf blotch, Anthracnose	Spring bud break
Cherry-Laurel	Cercospora leafspot	Petal fall
Crabapple	Scab, Cedar-apple rust, Sphaeropsis leafspot	Spring bud break
;wood	Septoria leafspot	Early bloom
uonymus	Anthracnose	Spring bud break
Firethorn	Scab	Spring bud break

SPECIES	DISEASES CONTROLLED	SUGGESTED FIRST APPLICATION
Flowering almond, Quince, Sand Cherry	Monilinia blossom/ branch blight	Early bloom
ıwthorn	Rust, Fabraea leafspot	Pre-bloom
Holly	Rhizoctonia web blight	Warm, moist conditions
Mountain Laurel	Cercospora leafspot	Spring bud break
Oak (red group only)	Taphrina blister, Actinopelte leafspot, Anthracnose	Dormant budswell
Oregon-Grape (Mahonia)	Rust	Spring bud break
Photinia	Fabrea (Entomosporium) leafspot	Spring bud break
Pieris (Andromeda)	Phytophthora die-back	New leaf emergence
Poplar	Marssonina leafspot	Spring bud break
Privet	Cercospora leafspot	Prolonged wet conditions
Sycamore, Planetree	Anthracnose	Spring bud break
Viburnum	Powdery mildew	Mid-summer
BULBS AND FLOWERING PLANTS:		
Carnation	Alternaria leafspot/branch rot	Transplant of cuttings
	Botrytis flower-blight	Cool, moist conditions
Chrysanthemum/Daisy	Mycosphaerella ray blight, Septoria leafspot	Transplant of cuttings
	Botrytis flower blight (gray mold)	Pre-bloom
Geranium	Botrytis blight, rust	Cool, moist conditions
Gladiolus	Curvularia leaf/flower spot, Botrytis leaf/flower spot	Early propagation
Hollyhock	Rust	Early seedling stage
Hydrangea* (foliage only)	Cercospora and Septoria leafspots, Rust	Early propagation
Iris	Botrytis blossom blight, Didymellina leafspot, Ink spot	Cool, moist conditions
Lily, Crocus, Daffodil, Narcissus, Tulip	Botrytic blight (gray mold, fire, measles), Stagonospora leaf scorch	Pre-bloom
Petunia*	Phytophthora blight (foliar phase), Botrytis blight	Pre-bloom
Rose (Use 7/8 lb. per 100 gallons)	Black spot, Botrytis blight	Spring budbreak
Statice	Anthracnose, Cercospora, Alternaria, Botrytis leaf blights	Spring budbreak
Zinnia	Powdery mildew	First sign of disease

*Discoloration of blooms has been noted on certain varieties when applications are made during flowering.

FOLIAGE PLANTS:

Dracaena	Fusarium leafspot	Pre-transplant
Pachysandra (Use 2 1/4 lbs. per 100 gallons)	Volutella leaf blight	Spring budbreak
Leatherleaf fern	Ascochyta blight, Cercospora leaf-spot, Cylindrocladium leafspot, Rhizoctonia blight	Spring budbreak

SPECIES	DISEASES CONTROLLED	SUGGESTED FIRST APPLICATION
Parlor palm	Bipolaris (Helminthosporium) leafspot	Cool, moist conditions
ayer plant (Maranta)	Helminthosporium leafspot	Early propagation
ster plant (Rhoeo)	Tan leafspot	Early propagation
Syngonium	Cephalosporium leafspot	Warm, moist conditions
Philodendron	Phytophthora blight, Dactylaria leafspot	Moist conditions

CONIFERS:

DISEASES CONTROLLED	CHLOROTHALONIL 90DF RATE/ACRE	APPLICATION DIRECTIONS
Rhabdocline needlecast (Douglas-fir)	1 1/8 to 2 1/4 lbs.	Apply at budbreak and repeat at 3 to 4 week intervals until needles are fully enlongated 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	2 1/4 to 4 1/2 lbs.	Single application technique: In Christmas tree plantations or forest stands, make one application in the spring when new shoot growth is 1/2 to 2 inches in length.
.leroderris Canker (pines), Swiss Needlecast (Douglas-fir)	1 1/8 to 2 1/4 lbs.	Make first application in spring when new shoot growth is 1/2 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	1 3/4 to 3 lbs.	
Rhizosphaera Needlecast (spruces), Scirrhia brown spot (pines)	4 1/2 lbs.	
Cyclaneusma and *Lophodermium* needlecasts (pines)	2 1/4 to 4 1/2 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.
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.