



Reg # 100-607

PM-21

Labelling File

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

1742

DEC 7 1993

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Theresa Kamicker
CIBA-GEIGY CORP.
P.O. Box 18300
Greensboro, NC 27419

Subject: Label Amendment Submission of 07/16/93 in Response to PR Notice 93-7
EPA Reg. No. 100-607
RIDOMIL 2E FUNGICIDE

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 reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (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 not been reviewed or 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:

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
- AND
- WITHIN one year from date of this acceptance.

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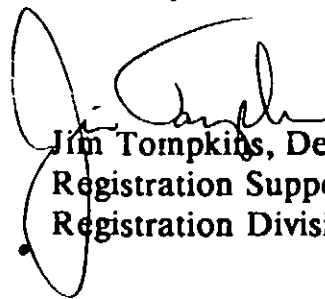
Submit the final printed labeling via the U.S. Postal Service to:

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

Hand or courier deliveries of final printed 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

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CIBA-GEIGY CORP.
EPA REG. NO. 100-607 07/16/93
RIDOMIL 2E FUNGICIDE

There is a typographical error(s) in the SPANISH language text.

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WPS
RIDOMIL® 2E SUPER LABEL
(Front Cover)

One Gallon and One Quart Labelmaster Booklet

Ridomil® 2E

Fungicide

For the control of certain diseases in various crops caused by the Oomycete class of fungi.

One Gallon
U. S. Standard Measure

One Quart
U. S. Standard Measure

Active Ingredient:

Metalaxyl: <u>N</u> -(2,6-dimethylphenyl)- <u>N</u> -(methoxyacetyl) alanine methyl ester	25.1%
<u>Inert Ingredients:</u>	74.9%
Total:	100.0%

Ridomil 2E contains 2 lbs. active ingredient per gallon.

EPA Reg. No. 100-607

EPA Est. 100-AL-1

KEEP OUT OF REACH OF CHILDREN.

WARNING

AVISO

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.)

See additional precautionary statements and directions for use inside booklet.

Ciba-Geigy

CGA 65L14Y 043 (one gallon)
CGA 65L15Y 043 (one quart)

ACCEPTED
with COMMENTS
in EPA Letter Dated

DEC 7 1993

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

100-607

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product. If terms are not acceptable, return the unopened product container at once.

Conditions of Sale and Warranty

The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of Ciba-Geigy or the Seller. All such risks shall be assumed by the Buyer.

Ciba-Geigy warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above. Ciba-Geigy makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Ciba-Geigy or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product. Ciba-Geigy and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of Ciba-Geigy.

BEST AVAILABLE COPY

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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 a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. Exception: if the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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
- Chemical-resistant gloves, such as barrier laminate or viton
- Shoes plus socks
- Protective eyewear

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, OR ILLEGAL RESIDUES.

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General Information

Ridomil is a systemic fungicide for use on selected crops to control certain diseases caused by members of the Oomycete class of fungi. Other fungicides must be used to control diseases incited by other classes of fungi.

THIS PRODUCT IS NOT TO BE USED IN FOLIAR APPLICATIONS UNLESS SPECIFIED ON THIS LABEL OR IN SOLUTIONS USED TO DIP PLANTS. DO NOT USE IN NURSERIES, TURF, OR LANDSCAPE PLANTINGS UNLESS SPECIFIED IN THIS LABEL.

Note: Ridomil is a systemic fungicide having a specific mode of action and could be subject to development of resistant strains of fungi. Development of resistance cannot be predicted. Therefore, Ciba-Geigy cannot assume liability for crop damage resulting from resistant strains of fungi. If treatment is not effective following the use of Ridomil as recommended, a resistant strain of fungi may be present. If the treatment is ineffective due to the presence of a Ridomil resistant strain of fungi, neither Ridomil nor any other fungicide with similar action will effectively control that disease. Consideration should then be given to the prompt use of other types of suitable fungicides. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance on your particular crop and disease control situation.

Do not make foliar applications to field grown tobacco, or other crops unless specified since this practice may encourage more rapid development of resistance.

Where rate ranges are specified on this label, use the higher rate when heavy disease pressure is expected and the lower rate when disease pressure is expected to be light unless otherwise noted.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap, as crop injury may result.

Mixing Instructions

Add 1/4-1/2 of the required amount of water to the spray tank, add the proper amount of Ridomil 2E, then add the rest of the water. When tank mixing other products with Ridomil 2E, follow the proper sequence of adding products to the spray tank.

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Wettable powders or water dispersible granules should be added to the water in the tank first, followed by flowable products, with emulsifiable concentrates, such as Ridomil 2E, added last. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

Ridomil 2E is usually compatible with Balan®, Bravo®, Dasanit® + Di-Syston®, Dithane® M-22, Dithane M-45, Dasanit + Nematicur®, Dasanit, D-z-n®, Enide®, Furadan®, Lorsban®, Manzate®, Manzate 200, Mocap®, Mocap Plus 4-2EC, Paarlant®, Terraclor® 2E, Terraclor 75W, and Tillam®.

To assure the compatibility of Ridomil 2E with these and other products, pour the products into a small container of water in the correct proportions. After thorough mixing, let stand for five minutes. If the combination remains mixed, or can be remixed readily, the mixture is compatible.

For banded applications, the area actually is the area covered by the band, not total cropland area planted. Some row-crop recommendations are based on treating in-the-row and these rates generally are specified as amounts (fl. oz.) of product per certain row length (often 1,000 ft.). Others express rates as amount per treated acre which means the total area treated with the pesticide. If rates are expressed as amount per treated acre and banded applications are used, the amount of pesticide used per acre will be proportionately less. The following formula can be used to calculate the amount of Ridomil 2E needed per acre of crop when banded applications are made.

Calculate the amount of Ridomil 2E needed for band treatment by the formula:

$$\frac{\text{band width in inches}}{\text{row spacing in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

Application Instructions

Apply Ridomil 2E by ground or air in sufficient water or liquid fertilizer to provide uniform coverage of the soil surface. Apply in a minimum of 20 gal /A for ground applications and 5 gals./A by air. Refer to the specific crop directions for use for application recommendations.

BEFORE TANK MIXING RIDOMIL 2E WITH OTHER REGISTERED PRODUCTS FOR ANY USE ON THIS LABEL, READ THE LABEL OF THE TANK MIX PARTNER TO BE CERTAIN IT IS LABELED FOR USE ON THE PARTICULAR CROP AND THAT USE PATTEENS ARE COMPATIBLE WITH THOSE OF RIDOMIL 2E.

Application Through Irrigation Systems

Ridomil 2E, alone or in combination with other pesticides which are registered for application through irrigation systems, may

be applied through irrigation systems. Apply this product only through center pivot, solid set, hand move, moving wheel, micro-sprinkler or drip 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 non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Operating Instructions

1. The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
2. The pesticide injection pipeline 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.

Application Instructions

Ridomil 2E must be applied on the schedule specified in the specific crop use recommendations, not according to the irrigation schedule.

With the exception of avocados and citrus, Ridomil 2E has not been sufficiently tested when applied through irrigation systems to assure consistent product performance for all labeled uses. The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler or drip irrigation equipment. Users must check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler or drip irrigation equipment.

Note: Do not inject Ridomil 2E at full strength or deterioration of valves and seals may occur. Use a dilution ratio of at least 10 parts water to 1 part Ridomil 2E. Ridomil 2E is corrosive to many seal materials. Leather seals are best. EPDM or silicone rubber seals can be used, but should be replaced once a year. Do not use Viton, Buna-N, Neoprene or PVC seals.

Center Pivot Irrigation Equipment (Use only with drive systems which provide uniform water distribution)

- Determine the size of the area to be treated.
- Determine the time required to apply 1/2 - 1 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of Ridomil 2E required to treat the area covered by the irrigation system.
- Add the required amount of Ridomil 2E and sufficient water to meet the injection time requirements to the solution tank.
- Maintain constant solution tank agitation during the injection period.
- Continue to operate the system until the Ridomil 2E solution has cleared the sprinkler head.

Solid Set, Hand Move and Moving Wheel Irrigation Equipment

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval.
- Determine the amount of Ridomil 2E required to treat the area covered by the irrigation system.
- Add the required amount of Ridomil 2E into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during the calibration.
- Inject Ridomil 2E at the end of the irrigation cycle in 1/2 - 1 inch of water or as a separate application to maximize the effectiveness of the fungicide.
- Stop injection equipment after treatment is completed. Continue to operate the system until the Ridomil 2E solution has cleared the last sprinkler head.

Micro Sprinkler or Drip Irrigation Systems

General Instructions

- Each run of the irrigation system must be calibrated separately to determine the time it takes water to move through the system and to make sure all emitters in the system are putting out the same amount of water.
- Only pressure injection or venturi equipment is recommended.
- Determine the area to be treated in each irrigation run.
- Measure the output of each of the emitters or drip tubes closest to and farthest from the injector site.
- For calibration, substitute a concentrated detergent (such as Wisk) or a soluble fertilizer for the Ridomil 2E in the injector tank. The detergent will bubble as it leaves the emitters. The time period over which bubbles occur should be checked for both the closest and farthest emitters. If these times are not within 2 minutes of each other, adjust the dilution ratio and/or the injection rate.
- If a soluble fertilizer is used, measure the time intervals with a salt bridge. If a drip system is being calibrated, substitute soluble fertilizer for the Ridomil 2E in the injector and measure the time intervals with a salt bridge.

Step-by-Step Instructions

- Before starting to calibrate, operate the system until all the emitters are putting out at equal flow rates or until the system is operating at full pressure.
- Make up an indicator solution of detergent or fertilizer, using the same ratio to be used when mixing Ridomil 2E.
- Set the injector to apply the indicator solution at the injection rate to be used in the actual Ridomil 2E application.
- Attach a 5-inch length of flexible tubing over the emitter closest to the injection point, another length over the emitter farthest away. Both emitters should be monitored to determine the time intervals that the indicator solutions are observed.
- Begin injecting the indicator solution. Direct the flow from the tubes at the emitters into a small container. Begin timing when the indicator solution is first detected; stop timing when the indicator solutions are no longer detected.
- If the period of detection of the indicator solution between the 2 emitters are within 2 minutes of each other, comparable coverage will be obtained. If they are not, make adjustments by increasing the dilution ratio, using more water per part of Ridomil 2E, or adjust the injector to a slower flow rate.
- Once the system is calibrated, dilute the needed amount of Ridomil 2E with water using a minimum of 10 parts water to 1 part Ridomil 2E.
- Do not begin to inject Ridomil 2E into the system until all emitters are producing equal flow rates, or until the system is at full pressure.
- Inject the Ridomil 2E into the system at the end of the irrigation set in 1/2 - 1 inch of irrigation water.

Alfalfa*

*Including birdsfoot trefoil

Ridomil 2E applied to the soil at planting will provide control of damping-off caused by Pythium spp. and root rots caused by Phytophthora spp.

Stand Establishment

Apply 1 to 2 pts./A as a broadcast surface spray at planting in a minimum of 20 gals. of water or following impregnation on fertilizer.

If alfalfa seed was previously treated with metalaxyl as a seed dressing, an application of Ridomil 2E at 1 pt./A is recommended at planting. Use the higher rate (2 pts./A) in areas where disease pressure is expected to be heavy.

Note: To avoid possible illegal residues, do not feed green forage or cut hay for 60 days following application.

Apples (Bearing and Nonbearing Trees)

Use of Ridomil 2E will aid in the control of crown, collar and root rot caused by Phytophthora spp. when used in conjunction with good cultural practices and rootstocks that are most tolerant to the disease. Ridomil 2E applications should be made before symptoms appear, especially in areas of the orchard favorable for disease development. Ridomil 2E will not revitalize trees showing moderate to severe disease symptoms.

Broadcast Spray or Banded Applications: Apply 2 gals./treated acre as a broadcast spray (6 fl. oz./1,000 sq. ft.) in sufficient water to obtain thorough coverage. The treated area is based on the area under the tree canopy or the area of the sprayed row. Soil surface sprays of Ridomil 2E will not be effective until the fungicide is moved into the root zone by rainfall or irrigation. Applications should be made in early spring before growth starts and in the fall after harvest but before the ground freezes.

Drench: Mix 1 qt. of Ridomil 2E with 100 gals. of water. Apply the amount of diluted mixture indicated in the table below around the trunk of each tree. Applications should be made in early spring before growth starts and in the fall after harvest but before the ground freezes. On new plantings, delay the first application until 2 weeks after planting.

Note: To determine trunk diameter, measure the trunk 12 inches above the soil line.

<u>Trunk Diameter</u>	<u>Qts. of Diluted Mixture/Tree</u>
< 1 inch	1 qt.
1-3 inches	2 qts.
3-5 inches	3 qts.
> 5 inches	4 qts.

Notes: (1) Do not dip roots of trees in or spray bare roots with solutions containing Ridomil 2E. (2) Do not graze or feed cover crops in treated orchards, or illegal residues may occur.

Asparagus

Ridomil 2E will control crown rot and spear rot caused by Phytophthora spp.

Apply 2 qts./A as a broadcast spray in a minimum of 10 gals. of water over the beds.

Cutting Beds: Apply 30 to 60 days before the first cutting. For additional control, make another application just before the beginning of harvest.

New Plantings: Apply after planting seedlings or after covering one-year old crowns.

Avocados

Root Rot - Phytophthora cinnamomi

Begin applications at the start of the growing season or at transplanting. Two additional applications should be made at three-month intervals. Applications are not needed during the winter months of November through February. Ridomil 2E may be applied as a sleeve drench at the time of transplanting, as a soil surface spray under sprinkler irrigation systems, as a directed spray under drip emitters or injected into the irrigation water.

Sleeve Drench: Mix 1 fl. oz. of Ridomil 2E with 18 gals. of water. At the time of transplanting, drench the roots inside the sleeve with 1 qt. of Ridomil solution per tree.

Note: The sleeve drench will not replace the soil surface applications for long term control of root rot.

Sprinkler Irrigation: Apply as a soil surface spray under the canopy of the tree in sufficient water to obtain uniform coverage. See the following table for the amount of Ridomil 2E to use based on the diameter of the tree canopy. Start applications at the beginning of the growing season or at transplanting and continue at 3-month intervals.

Drip Irrigation: Apply the recommended amount of Ridomil 2E (see table) to the soil directly under the drip emitter at each tree. If there is more than 1 emitter per tree, distribute the total amount of Ridomil 2E needed among the emitters.

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Injection into Irrigation Water (Sprinkler or Drip Irrigation Only): Inject Ridomil 2E into the irrigation water at a rate of 2-4 fl. oz./1,000 gals. (3 3/4-7 1/2 ppm active ingredient) at each irrigation. If Ridomil 2E is not applied at each irrigation, use the table below to determine how much Ridomil 2E should be injected into the irrigation water. If Ridomil is to be used more frequently than every 3 months, adjust the rates so that no more than the specified amount is applied during each 3-month period. See the General Information section of this label for further instructions and precautions when making applications through irrigation systems.

<u>Diameter of Tree Canopy (Ft.)</u>	<u>Amount of Ridomil 2E Per Ten Trees/3 Months</u>
2	1/2-1 fl. oz.
5	3-6 fl. oz.
10	13-26 fl. oz.
15 or wider	29-58 fl. oz.

Notes: (1) For best results, use Ridomil 2E as soon as soil tests indicate the presence of Phytophthora. (2) For new plantings, the use of Phytophthora resistant rootstocks with Ridomil 2E is recommended. Mature trees in moderate to advanced stages of decline cannot be cured with Ridomil 2E. (3) Do not apply more than 6 gals./A of Ridomil 2E/year. (4) Do not make an application within 28 days of harvest, or possible illegal residues may result.

Blueberries

Use of Ridomil 2E will aid in the control of root rot caused by Phytophthora spp. when used in conjunction with good cultural practices to minimize disease problems. Ridomil 2E will not revitalize plants showing moderate to severe root rot symptoms.

Established Plantings: Apply 1 pt./1000 linear ft. of row (14.5 pts./A broadcast basis) in a 3 foot band over the row before the plants start growth in the spring. One additional application may be made to coincide with periods most favorable for root rot development.

New Plantings: Apply 2 gals./A broadcast to the soil at or after the time of planting. One or two additional applications should be made at 2-3 month intervals or to coincide with periods most favorable for root rot development. For banded applications, an 18-inch band over the row is recommended. Use the formula in the General Information section of the label to calculate the amount needed per acre.

Note: On new plantings, do not apply more than 3.6 gals./A broadcast during the 12 months before bearing harvestable fruit, or possible illegal residues may result.

Citrus

Includes grapefruits, lemons, limes, oranges, tangelos, tangerines, citrus citron, kumquats and hybrids of these.

Use Ridomil 2E on citrus for control of citrus foot rot, root rot, and trunk cankers caused by Phytophthora spp. Ridomil 2E can be applied as a topical canker application and as a soil application, as a spray or through sprinkler or drip irrigation systems. If trees are on a drip irrigation system, distribute the amount of Ridomil 2E needed per tree (see tables) to the soil directly under the drip emitters at each tree. If there is more than one emitter per tree, distribute the total amount of Ridomil 2E needed among the emitters.

Note: Where nematodes are a problem, best results can be achieved if effective EPA-registered nematicides are used. Nematicides can be used in combination or in sequence with Ridomil applications.

Precaution: For best Phytophthora control, a combination of cultural practices and resistant varieties is recommended. The use of Ridomil 2E is not recommended in Florida for use on the highly susceptible sweet orange rootstock.

Citrus in Nurseries (Arizona, California, Florida and Puerto Rico Only)

Make the first application of Ridomil 2E at the time of planting. Make repeat applications at three-month intervals during the period when trees are actively growing. For banded applications, use a band wide enough to cover the root systems of the plants. Do not apply Ridomil 2E solutions to bare roots.

Soil Drench: Apply 4-6 fl. oz./100 gals. of water as a drench over the row at a rate of 100-250 gals./1,000 feet of row. The width of the drench treatment should be wide enough to cover the root systems of the plants. Follow with a 1/2-1 inch irrigation over the treated area.

Soil Surface Spray: Apply 1-2 gals./treated acre in a broadcast or banded surface spray to seedbeds, liners, or bedded stock in sufficient water to obtain thorough coverage. If applications are banded, the treated area should be wide enough to cover the root systems of the plants. Follow the applications with a 1/2-1 inch irrigation over the treated area.

Citrus Resets or New Plantings (Arizona, California, Florida and Puerto Rico Only)

Make the first application of Ridomil 2E to citrus resets or new plantings at the time of transplanting. Make up to 3 additional applications per year at 3-month intervals or when root growth flushes occur.

Water Ring Drench: Mix 4-6 fl. oz./100 gals. of water. Apply 5 gals. of the mix around the base of each tree within the watering ring.

Soil Surface Spray (Arizona and California Only): Apply 1-2 gals./treated acre (3-6 fl. oz./ 1,000 sq. ft.) in sufficient water to obtain uniform coverage of the soil surface. Apply spray to the soil surface beneath the tree canopy or apply through irrigation water. If natural rainfall is not expected within 3 days of a soil surface application, irrigate with 1/2-1 inch water over the treated area. See instructions below for application through irrigation water.

Soil Surface Spray (Florida and Puerto Rico Only):

Apply 1 gal./treated acre (3 fl. oz./1,000 sq. ft.) under the canopy of the tree. Applications may be made through low volume irrigation systems at the rate of 1 qt./grove acre for trees less than 5 years old. Two-three applications per year are recommended. Applications may be made on a spring + summer, summer + fall or spring + summer + fall schedule.

Established Plantings

Soil Application (Florida and Puerto Rico Only): Apply 1/2 gal./treated acre to groves that have a Phytophthora propagule count of 10 to 20 per cubic centimeter (cc) of soil as a feeder root rot disease maintenance treatment. Applications may be made through low volume irrigation for trees 5 years or older at the rate of 1 qt./grove acre. Two-three applications per year are recommended. Applications may be made on a spring + summer, summer + fall or spring + summer + fall schedule. For groves with extremely high propagule counts (above 20 per cc of soil), apply 1 gal./treated acre for one year (2-3 applications) to reduce the population.

Soil Surface Spray (Arizona and California Only): For best results, begin Ridomil applications during the spring root-flush period. One or two additional applications per year can be made at 3-month intervals or to coincide with flushes of root growth. Use the following table to determine the proper rate based on tree size and the number of applications per year. For applications based on broadcast rates, use Ridomil 2E at 1-2 gals./A (3-6 fl. oz./1,000 sq. ft.) when 3 applications are planned and at 3 gals./A (9 fl. oz./1,000 sq. ft.) when two applications are

planned. Apply in sufficient water to provide uniform coverage or apply through irrigation water. See instructions below for application through irrigation water.

Diameter of Tree Canopy (Ft.)	Fl. Oz. of Ridomil 2E per Ten Trees	
	2 applications/yr.	3 applications/yr.
5	1.5	1
10	7.5	5
15	15	10
20	30	20

Trunk Spray for Control of Gummosis Caused by Phytophthora spp. (Arizona, California and Texas Only): Add 1 gal. of Ridomil 2E to 3 gals. of water and spray the surface of the trunks using enough spray to thoroughly wet the cankers. Ridomil may be applied up to 3 times per year.

Notes: (1) To avoid possible illegal residues, do not make trunk and soil applications to the same tree in the same cropping season (2) Do not apply more than 6 gals. of Ridomil 2E/treated acre/year.

Application Through Irrigation Water (Sprinkler or Drip Irrigation Only): See comments and precautions in the General Information section of this label. Inject Ridomil 2E into the irrigation water at rates specified in the tables above.

Cole Crops, (Broccoli, Cabbage and Cauliflower)

Includes broccoli, Chinese broccoli (gai lan, white flowering broccoli), cabbage, Chinese cabbage (tight-heading varieties only), and cauliflower only.

Ridomil 2E applied as a soil application at planting will control damping-off caused by Pythium spp. and basal stem rot caused by Phytophthora spp. Applications may be made preplant incorporated or as a soil surface spray after planting.

Preplant Incorporated Application: Apply 4-8 pts./treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For control of Pythium damping-off only use 1-2 pts./A. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre.

Surface Application: Apply 4-8 pts./treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre. If natural rainfall is not expected before the seeds start germinating, Ridomil 2E should be incorporated mechanically before planting or be moved into the seed zone after planting with 1/2-1 inch sprinkler irrigation.

Notes: (1) Do not use Ridomil 2E for disease control in greenhouse crops. (2) Do not dip plants in solutions containing Ridomil 2E, or crop injury may occur. (3) Ridomil 2E may be tank mixed with Terraclor 75WP to control club root (Plasmodiophora brassicae) or wirestem/black root (Corticium solani). Before applying, observe all precautions, limitations, rates, and directions for use including the need for incorporation on the Terraclor 75WP label.

Cotton

Seed Rots and Seedling Diseases of Cotton Caused by Pythium spp.

Apply 1/4-1/2 pt./13,000 linear feet of row (0.3-0.6 fl. oz./1,000 linear ft.) as an in-furrow spray in 5-15 ga's. of water or liquid fertilizer at planting. Mount the spray nozzle so the spray is directed into the furrow over the seed just before the seeds are covered.

For control of Pythium and Rhizoctonia apply 2-4 qts. Terraclor 2E or 1 1/3-2 3/4 lbs. Terraclor 75W/13,000 linear ft. of row in tank mixture with Ridomil 2E or use labeled rates of Ridomil PC@ 11G.

Note: When Ridomil 2E is applied with Terraclor 2E or Terraclor 75W, observe all precautions and restrictions that appear on the Terraclor 2E or Terraclor 75W labels.

Cranberries

Use Ridomil 2E as a soil application for control of Phytophthora root rot of cranberries caused by Phytophthora spp.

Apply Ridomil 2E at 4-7 pts./A as a broadcast soil application for control of Phytophthora root rot of cranberries. Three applications per crop season are recommended. Make the first application in the fall after harvest. Make the second application in the spring followed by a third application 45 days before harvest.

Apply Ridomil 2E using ground or chemigation equipment. Use a minimum of 20 gals. of water per acre when applying by ground equipment. Refer to the Application Through Irrigation Systems section of the label for instructions and precautions when making applications through irrigation systems.

Notes: 1) Do not apply Ridomil 2E to cranberries by air. 2) To avoid possible illegal residues, do not apply within 45 days before harvest and do not apply more than 21 pts./A per growing season.

Cucurbit Vegetables

Includes balsam pear (bitter melon), Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, gherkin, edible gourds, cantalope, casaba, crenshaw, honeydew melon, honey balls, mango melon, muskmelon, Persian melon, pumpkin, summer squash, winter squash, watermelon, and cucurbit hybrids only.

Ridomil 2E applied at planting will provide control of damping-off and cottony leak caused by Pythium spp. Applications may be made preplant incorporated or as a soil surface spray after planting.

Preplant Incorporated Application: Apply 4-8 pts./treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre.

Surface Application: Apply 4-8 pts./treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre. If natural rainfall is not expected before the seeds start germinating, Ridomil 2E should be incorporated mechanically before planting or be moved into the seed zone after planting with 1/2-1 inch sprinkler irrigation.

Notes: (1) Do not use Ridomil 2E for disease control in greenhouse crops. (2) Do not dip plants in solutions containing Ridomil 2E, or crop injury may occur.

Deciduous Fruits and Nuts in Orchards
(Nonbearing)*

*For bearing DF&N, see Directions for Use under the Apples and Stone Fruits, Walnuts and Almonds sections of this label.

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Phytophthora Diseases

Use of Ridomil 2E will aid in the control of crown, collar, and root rot of deciduous fruit and nut trees caused by Phytophthora spp. when used in conjunction with good cultural practices and rootstocks that are most tolerant to the disease. Applications should be made before symptoms appear, especially in areas favorable for disease development. Ridomil 2E will not revitalize trees showing moderate to severe disease symptoms.

On new plantings, make the first application at the time of planting (See Notes below.). Additional applications should be made at three-month intervals during the time when conditions are favorable for disease development. For established plantings, make the first application in the spring before growth starts.

Apply 2 gals./treated acre (6 fl. oz./1,000 sq. ft.) in sufficient water to obtain uniform coverage of the soil under the canopy of the trees. For banded applications, use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre. Soil surface sprays of Ridomil 2E will not be effective until the fungicide is moved into the root zone by rainfall or irrigation.

Notes: (1) Do not apply to plantings that will bear harvestable fruit within 12 months of the last application, or possible illegal residues may result. (2) To avoid injury, do not use Ridomil 2E to dip or spray tree roots. Do not concentrate it around the tree trunks. (3) Do not apply to trees under stress. (4) In California, do not apply Ridomil 2E to newly planted trees within 90 days of planting. (5) Do not apply more than 6 gals. of Ridomil 2E/treated acre/year.

Ginseng

Ridomil 2E applied to the soil before early spring growth followed by applications of Ridomil 5G (see Ridomil 5G label) will control Phytophthora root rot in ginseng caused by Phytophthora cactorum

Apply Ridomil 2E at 3 pts./A as a drench in 100-400 gals. of water uniformly to the soil surface in the spring before the plants begin growing.

Note: Do not make any supplemental applications of Ridomil 2E.

Hops

Ridomil 2E applied as a soil drench followed by foliar applications with Kocide 101 will control downy mildew caused by

Pseudoperonospora humulii.

Soil Drench: Apply 1 qt. of Ridomil 2E/A of hops in a minimum of 20 gals. of water or liquid fertilizer to the soil surface over the crowns after pruning, but before training. Early application before shoots are 6 inches long is preferable.

Foliar Spray: When primary infection (spikes) persist after a soil drench treatment and/or there is the first evidence of secondary (foliar) infection, foliar sprays of Ridomil 2E in combination with contact copper fungicides may be used. Apply 1 qt. of Ridomil 2E/A in a tank-mix combination with 2 lbs. of Kocide 101 (or an equivalent rate of a comparable copper fungicide). Apply with ground equipment in a minimum of 50 gals. of water/A.

Notes: To avoid possible illegal residues, (1) Do not make more than 3 applications of Ridomil 2E per season (1 soil drench + 2 foliar sprays) and (2) Do not make the last application within 45 days before harvest; (3) Do not apply foliar sprays of Ridomil 2E without a copper fungicide.

Leafy Vegetables (Head Lettuce and Spinach Only)

Ridomil 2E applied as a soil application will control damping-off caused by Pythium spp. in head lettuce and spinach and white rust (Albugo occidentalis) and downy mildew in spinach. Applications may be made banded over the row, preplant incorporated, or injected with liquid fertilizer.

Preplant Incorporated Application: Apply 4-8 pts./treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre.

Surface Application: Apply 4-8 pts./treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre. If natural rainfall is not expected before the seeds start germinating, Ridomil 2E should be incorporated mechanically before planting or be moved into the seed zone after planting with 1/2-1 inch sprinkler irrigation.

White Rust and Downy Mildew Control (Spinach Only): In addition to the preplant incorporated or surface application described above, apply 1 pt. of Ridomil/A of crop, shanked in 40-50 days after planting or after the first cutting. One other applica-

tion may be shanked in after the next cutting. Use sufficient mechanical or bypass agitation to keep the Ridomil 2E mixed with the water or fertilizer.

Notes: (1) The additional applications of Ridomil 2E noted above and made after each cutting by shanking the fungicide into the beds along with liquid fertilizer provide continuing control of white rust. However, white rust can only be controlled in a preventative disease control program that begins with an application of Ridomil to the soil at planting. If Ridomil is not used at planting, do not use Ridomil at any other time throughout the season. Do not apply Ridomil in foliar applications or in situations where white rust infections are already established. The use of Ridomil 2E in curative applications greatly increases the risk of the fungus developing resistance to metaxyl. The development of resistance will destroy the effectiveness of Ridomil in controlling white rust. (2) To avoid possible illegal residues, do not harvest spinach within 21 days of a Ridomil 2E application. (3) Do not use Ridomil 2E for disease control in greenhouse crops.

Legume Vegetables (Succulent or Dried)

Includes field beans, French beans, kidney beans, lima beans, mung beans, navy beans, pinto beans, runner beans, snap beans, wax beans, broad beans (fava beans), chickpeas (garbanzo beans), lentils, lupines (sweet, white sweet, white and grain), garden peas, field peas, sugar peas, southern peas (blackeyed peas, crowder peas, cowpeas, catjang) and edible soybeans, etc.

Pythium Damping-Off and Root Rot: Ridomil 2E applied at planting will control damping-off and root rot caused by Pythium spp. Applications may be made preplant incorporated, or as a soil surface spray after planting.

Preplant Incorporated Application: Apply 2-4 pts./treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre.

Surface Application: Apply 2-4 pts./treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre. If natural rainfall is not expected before the seeds start germinating, Ridomil 2E should be incorporated mechanically before planting or be moved into the seed zone after planting with 1/2-1 inch sprinkler irrigation.

Notes: (1) Do not use Ridomil 2E for disease control in greenhouse crops. (2) Ridomil 2E may be tank mixed with Terraclor 2E or 75WP to control Rhizoctonia root and stem rot or white mold (*Sclerotinia sclerotiorum*) in snap and dry beans. Observe all precautions, limitations, rates, and directions for use on the respective Terraclor label before applying.

Onions - Dry Bulb, Green*, and Onions Grown for Seed

*Includes green onions, leeks, spring onions or scallions, Japanese bunching onions, green shallots, or green eschalots.

Ridomil 2E applied at planting will control damping-off caused by *Pythium* spp. Applications may be made preplant incorporated or as a soil surface spray after planting.

Preplant Incorporated Application: Apply 2-4 pts./treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top two inches of soil. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre.

Surface Application: Apply 2-4 pts./treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre. If natural rainfall is not expected before the seeds start germinating, Ridomil 2E should be incorporated mechanically before planting or be moved into the seed zone after planting with 1/2-1 inch sprinkler irrigation.

Note: Do not use Ridomil 2E for disease control in greenhouse crops.

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Papaya (Hawaii Only)

Ridomil 2E aids in the control of Phytophthora root rot of papaya in nurseries and in new plantings in the field.

Papaya in Nurseries: Apply Ridomil 2E as a soil drench by mixing 2-4 fl. oz. with 40 gals. of water and applying to 800 sq. ft. Apply to seedlings 3 to 4 weeks after planting seed. Repeat application one month later if necessary. Do not apply more than twice per year in the nursery.

Papaya in the Field - New Plantings: Make the first application of Ridomil 2E at the time of transplanting to the field or within one week of transplanting. Apply 3 1/2 to 7 qts./A* of soil treated (2 1/2 to 5 fl. oz./1,000 sq. ft.) as a soil surface spray in sufficient water to obtain thorough coverage of the soil under the canopy of the trees. After application, immediately irrigate with 1/8-1/4 inch of water. Repeat in 2-4 weeks if conditions are favorable for disease. Use the table below as a guide for treating individual trees.

Notes: To avoid possible illegal residues, (1) Do not apply more than 2 applications per year in the field to newly transplanted stock, and (2) Do not apply within 3 months of harvest.

<u>Diameter of Tree Canopy (Ft.)</u>	<u>Fl. Oz. of Ridomil 2E Per Ten Trees</u>
3	3/16 - 3/8
4	3/8 - 3/4
6	3/4 - 1 1/2
8	1 1/4 - 2 1/2

*1 quart = 0.5 lb. ai

Peanuts

Ridomil 2E is a soil-applied systemic fungicide for use in control of seedling and pod diseases of peanuts incited by Pythium spp.

Seedling Diseases: Apply 1 pt./A of crop as an application to the seed in-furrow or in a 7-inch band at the time of planting. For in-furrow applications, position the spray so the fungicide is mixed with the soil covering the seed. Avoid spraying the seed directly with the spray solution or crop injury may occur.

Pod Rot: Apply 1-2 qts./A at early pod set or pegging through overhead irrigation systems. See the General Information section of this label for further instructions and precautions when making applications through irrigation systems.

Notes: (1) Where pathogens other than Pythium spp. are present, use fungicides that control those diseases in combination with Ridomil 2E. (2) Where the predominant pod rot pathogens are Pythium spp. and Rhizoctonia spp.; use Ridomil PC 11G at labeled rates.

Peppers and Eggplant

Soil applications of Ridomil 2E will control damping-off caused by Pythium spp. and crown rot caused by Phytophthora capsici. Ridomil 2E must be applied to the soil before the plants are infected with Phytophthora to obtain satisfactory disease control.

Apply 4-8 pts./treated acre at the time of planting in sufficient water (20-50 gals.) or liquid fertilizer to provide uniform coverage. If rainfall is not expected before the plants begin growth, Ridomil 2E should be incorporated mechanically before planting or be moved into the root zone after planting with 1/2-1 inch of sprinkler irrigation water. For banded applications, a 12-16 inch band is recommended. After the initial application, two supplemental post-directed applications at 4 pts./treated A should be made at 30-day intervals. The spray should be directed at the base of the plants and cover 6-8 inches of soil on either side of the plants. Such applications must be incorporated mechanically or by sprinkler irrigation to move the Ridomil into the root zone. Ridomil 2E may be applied with liquid fertilizer shanked in as a band treatment to either side of the plant. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre.

Precautions: (1) Ridomil may cause some yellowing of the pepper leaves. (2) Plants already infected with Phytophthora cannot be cured with Ridomil 2E applications. (3) The foliar blight phase of Phytophthora cannot be controlled with foliar applications of Ridomil 2E. (4) Do not use Ridomil 2E for disease control in greenhouses. (5) In areas where there is a history of late Phytophthora infections, an application of another EPA-registered fungicide labeled for Phytophthora control is recommended 17-21 days following the last Ridomil 2E application.

Notes: To avoid possible illegal residues, (1) Do not apply within 7 days of harvest, and (2) Do not apply more than 12 pts. of Ridomil 2E per acre of crop per season

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Pineapple

Ridomil 2E, applied as a "seed piece" dip, provides effective control of heart rot disease of pineapple caused by Phytophthora spp.

Apply Ridomil 2E as a crown dip before planting at the rate of 1-2 qts./100 gals. of water. Use 75 to 100 gals. of dip solution per planted acre, depending on crown size, plant density and dipping techniques.

Note: If there is a crop failure within 1 year of planting treated crowns, do not harvest plant material for animal feed.

Raspberries

Ridomil 2E is a soil-applied systemic fungicide for use in the control of Phytophthora root rot.

Apply 1 pt./1,000 linear ft. of row to the soil surface in a three-foot band over the row. Make 1 application in the spring and another in the fall after harvest. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre.

Note: Do not apply Ridomil 2E within 45 days before harvest or possible illegal residues may result.

Root and Tuber Vegetables

Includes artichoke (Jerusalem), beet (sugar* and table), carrot, cassava, chicory, ginger, ginseng**, horseradish, parsnip, potato***, radish, rutabaga, salsify, sweet potato, turnip and yams.

*See separate section for Sugar Beets.

**See separate section for Ginseng.

***See Note at end of section. Do not apply Ridomil 2E to potatoes.

Ridomil 2E applied to the soil at planting will provide control of diseases caused by Pythium and Phytophthora spp. Applications may be made preplant incorporated or as a soil surface spray after planting.

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Preplant Incorporated Application: Apply 4-8 pts./treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per dose.

Surface Application: Apply 4-8 pts./treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre. If natural rainfall is not expected before the seeds start germinating, Ridomil 2E should be incorporated mechanically before planting or be moved into the seed zone after planting with 1/2-1 inch sprinkler irrigation.

Notes: (1) Do not use Ridomil 2E for disease control in greenhouse crops., (2) To avoid development of resistance in the pathogen population, do not apply Ridomil 2E to potatoes.

Soybeans

Ridomil 2E is a soil-applied systemic fungicide for use in the control of Phytophthora root and stem rot and Pythium damping-off. Ridomil 2E may be applied broadcast, banded or in the seed furrow before the seeds are covered. The seed furrow applications will provide more consistent results if rain is not expected before the seeds germinate.

For best results against Phytophthora root and stem rot, use Ridomil 2E with soybean varieties that have some tolerance to the races of Phytophthora present in the field. The higher rate of Ridomil 2E should be used in areas with a history of heavy Phytophthora damage. Under heavy late season Phytophthora pressure, Ridomil 2E may not provide complete control.

Surface Applications: For full season control, apply 5 pts./treated acre in sufficient water or liquid fertilizer to provide uniform coverage at the time of planting. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre. For early to mid season control, apply 1 1/2-3 pts./treated acre.

In-Furrow Applications: For full season control, apply 1 1/10 fl. oz./1,000 linear feet of row as an in-furrow spray in 5-10 gals. of water or liquid fertilizer at planting. Position the spray so the fungicide is mixed with the soil covering the seed. Avoid spraying the seed directly with the spray solution or crop injury may occur. Use sufficient water or liquid

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fertilizer to provide uniform coverage. Use the following table to determine the amount of Ridomil 2E needed per acre based on row spacing. For early to mid season control, apply 3/10-6/10 fl. oz./1,000 linear feet of row.

Suggested Rates Per Acre According to Row Spacing

Row Spacing	Linear Feet of Soybean Row Per Acre	Fluid Ounces of Ridomil 2E Needed Per Acre		
		<u>Rate Desired</u>		
		3/10 fl. oz.	6/10 fl. oz.	1/10 fl. oz.
38 in.	13,756	4	.8	15
36 in.	14,520	4 1/2	9	16
30 in.	17,424	5 1/2	11	19
24 in.	21,780	6 1/2	13	24
20 in.	26,136	8	16	28

Note: Ridomil 2E is specific for Pythium and Phytophthora and will not control other diseases that may attack soybeans.

Stone Fruits*, Walnuts and Almonds

*Including apricots, cherries (sweet, sour), nectarines, peaches, plums (Chickasaw, Damson, Japanese), prunes.

Use of Ridomil 2E will aid in the control of crown, collar and root rot caused by Phytophthora spp. when used in conjunction with good cultural practices and rootstocks that are most tolerant to the disease. Ridomil 2E applications should be made before symptoms appear, especially in areas favorable for disease development. Ridomil 2E will not revitalize trees showing moderate to severe disease symptoms.

On new plantings, make the first application of Ridomil 2E two weeks after planting. Additional applications should be made at 2-3 month intervals or during periods most favorable for root, crown or collar rot development.

For established plantings, the application should be made in the spring before the plants start growth. Additional applications should be made at 2-3 month intervals or to coincide with periods most favorable for root, crown or collar rot development.

Apply 2 gals./treated acre (6 fl. oz./1,000 sq. ft.) in sufficient carrier to obtain thorough coverage of the soil under the canopy of the trees. Sufficient surface area should be treated in nurseries to cover the root zone of the plants. Up to 3 applications can be made per year. For banded applications, use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre. Soil

surface sprays of Ridomil 2E will not be effective until the fungicide is moved into the root zone by rainfall or irrigation.

Precautions: (1) Do not dip the roots of trees in Ridomil 2E solutions, spray the roots or concentrate it around the tree trunks or injury may occur. (2) Do not apply it to trees under stress. (3) For intense plantings (2-3 times the normal planting rate) make applications on a per area basis, i.e., per acre or 1,000 sq. ft. Do not calculate the amount of Ridomil 2E on a per tree basis. (4) In California, do not apply Ridomil 2E to newly planted trees within 90 days of planting.

Notes: To avoid possible illegal residues, (1) Do not graze livestock in treated areas, and (2) Do not graze or feed cover crops grown in treated orchards.

Strawberries

Ridomil provides control of red stele (*Phytophthora fragariae*), vascular collapse (*P. cactorum*) and leather rot (*P. cactorum*) when used as directed. Applications may be made using ground application equipment or through drip irrigation systems.

New Plantings: Apply Ridomil 2E at 2 qts./treated acre in sufficient water to move the fungicide into the root zone of the plants. Make 1 application after transplanting followed by an additional application 30 days before the beginning of harvest or at fruit set. A third application may be made during the harvest season, depending on environmental conditions and disease pressure. For banded applications, use the formula in the General Information section of this label to determine the amount of Ridomil 2E needed per acre. When applying Ridomil 2E through drip irrigation systems, use the same amount as would be applied in a banded application to cover the root zone of the plants. Observe the precautions concerning application of Ridomil through irrigation systems in the General Information section of this label.

Established Plantings: Apply Ridomil 2E at 2 qts./treated acre in sufficient water to move the fungicide into the root zone of the plants. Make 1 application in the spring after the ground thaws and before first bloom. A second application may be applied after harvest in the fall. For supplemental control of leather rot, an application may be made during the growing season at fruit set. For banded applications, use the formula in the General Information section of this label to determine the amount of Ridomil 2E needed per acre. When applying Ridomil 2E through drip irrigation systems, use the same amount as would be applied in a banded application to cover the root zone of the plants. Observe the precautions concerning application of Ridomil through drip irrigation systems in the General Information section of this label.

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Notes: (1) To avoid possible illegal residues, do not use more than a total of 6 qts. of Ridomil 2E/treated acre/year. (2) For low annual rainfall areas, a surface application of Ridomil 2E needs to be moved into the root zone by rainfall, overhead irrigation, or mechanical incorporation.

Sugar Beets

Ridomil 2E will provide control of diseases caused by Pythium spp. Applications may be made preplant incorporated or as a surface spray at planting.

Preplant Incorporated Application: Apply 4-8 pts./treated acre as a broadcast soil application in sufficient water or liquid fertilizer and incorporate in the top 2 inches of soil. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre.

Surface Application: Apply 4-8 pts./treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre. If natural rainfall is not expected before the seeds begin germinating, Ridomil 2E should be incorporated mechanically before planting or be moved into the seed zone after planting with 1/2-1 inch sprinkler irrigation.

Note: Do not use Ridomil 2E for disease control in greenhouse crops.

Tobacco

Ridomil 2E is a soil-applied systemic fungicide for use in the field before transplanting for control of black shank (Phytophthora parasitica, var. Nicotianae) and blue mold (Peronospora tabacina) on all types of tobacco. Ridomil 2E may also be applied in tobacco plant beds for control of blue mold and damping-off caused by Pythium spp. For control of anthracnose and other tobacco diseases, use fungicides that control those diseases.

Tobacco Plant Bed

For control of blue mold and damping-off caused by Pythium spp., apply Ridomil 2E only as a preplant broadcast soil application at the rate of 1 qt./treated acre in 50 gals. of water or liquid fertilizer (1 fl. oz. or 2 tablespoons/150 sq. yds. of bed in 2 gals. of water or liquid fertilizer). Apply before or at the time of seeding to the surface of the plant bed and lightly

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incorporate or follow with 1/2 inch sprinkler irrigation water. In Pennsylvania, use 2 qts./treated acre (2 fl. oz. or 4 table-
spoons/150 sq. yds. of bed in 2 gals. of water or liquid fertil-
izer).

Notes: (1) Do not use Ridomil 2E for disease control in green-
house crops. (2) Do not dip plants in solutions containing
Ridomil 2E, or crop injury may occur.

Field Planted Tobacco

Blue Mold: Apply Ridomil 2E as a broadcast soil application and
incorporate in the top 2-4 inches of soil before forming beds.
For flue-cured tobacco, use 1-2 qts./treated acre, depending on
disease pressure and length of control desired. Under low dis-
ease pressure or for early season control, use 1 qt./treated
acre. For burley and other tobacco types, use 2 qts./treated
acre.

For prolonged control of blue mold in field planted tobacco,
make a supplemental application of 1 qt./acre of crop as a soil
application at lay-by or the last cultivation. Position the
nozzles so that the spray is deposited under the plants and is
covered by soil by the cultivator. Do not make this application
if more than 2 qts./A of Ridomil 2E were applied at transplant-
ing or if no Ridomil 2E was applied at transplanting.

Note: For best control of blue mold, use Ridomil 2E in the
plant bed and follow with an application in the field prior to
transplanting. Do not use Ridomil 2E in transplant water or in
foliar applications on field tobacco because of the potential
for the development of resistance in the blue mold fungus, crop
injury or potential excessive residues in the crop.

Black Shank: Use Ridomil 2E as a broadcast soil application and
incorporate in the top 2-4 inches of soil before forming beds.
Apply Ridomil 2E using conventional ground application equipment
in sufficient water or liquid/dry fertilizer to provide uniform
coverage. Use the table below to determine the amount of
Ridomil 2E needed per acre depending on the black shank sever-
ity.

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Type of Tobacco	Disease Level in Field	Rate of Ridomil 2E Per Acre
Flue-Cured	Low to moderate (less than 6% disease)	2 qts.
	High (more than 6% disease)	4 qts.*
Burley and Other**	Low to moderate (less than 6% disease)	4 qts.
	High (more than 6% disease)	6 qts.

*Florida and Georgia - Use 6 qts./treated acre of Ridomil 2E in fields with heavy black shank levels (greater than 6%).

**Pennsylvania - Do not use Ridomil 2E for black shank control.

For prolonged control of black shank in field planted tobacco, the following is recommended: Apply Ridomil 2E at 2 qts./A just prior to transplanting followed by a second application of 1-2 qts./A at the first cultivation followed by a third application of 1-2 qts./A at lay-by or the last cultivation.

Note: If more than 2 qts./A of Ridomil 2E were applied at transplanting, do not exceed a total of 6 qts./A, including the supplemental applications.

Precautions: (1) For best results against black shank, use Ridomil 2E with tobacco varieties that have some resistance to black shank and use crop rotation. In fields where there is a history of severe black shank, use the highest rate and plant a variety that is resistant to the race of *Phytophthora* present in the field. (Burley L8 hybrids are only resistant to *Phytophthora* Race O.) (2) Ridomil 2E is not recommended for use in high black shank areas on highly susceptible flue-cured varieties such as Hicks, Virginia Gold or White Gold. (3) Failure to adequately control nematodes in fields treated with Ridomil 2E may result in poor control of black shank.

No-till Tobacco: Apply Ridomil 2E to the field before transplanting for control of black shank and blue mold on all types of tobacco. Apply 1-2 qts./treated acre as a preplant, broadcast or banded soil application. For banded applications, use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre. A supplemental lay-by application may be made 30-35 days after planting at 1.0 qt./A. Do not make the lay-by application if more than 2 qts./A of Ridomil 2E were applied at transplanting or if no Ridomil 2E was applied at transplanting.

Tomatoes

Soil applications of Ridomil 2E at planting will provide control of damping-off caused by Pythium spp. Soil applications applied 4-12 weeks before harvest under the vines will control fruit and root rot caused by Pythium spp. and Phytophthora spp.

Damping-Off (Pythium spp.): Apply 4-8 pts./treated acre in sufficient water or liquid fertilizer to provide uniform coverage at the time of planting. If rainfall is not expected before the seeds start to germinate, Ridomil 2E should be incorporated mechanically before planting, during the planting operation, or be moved into the seed zone after planting with 1/2 - 1 inch sprinkler irrigation. For banded applications, a 7-inch band is recommended. Use the formula in the General Information section of this label to calculate the amount of Ridomil 2E needed per acre.

Root and Fruit Rot (Phytophthora spp and Pythium spp.):

To aid in the control of root and fruit rot, 1-2 additional applications may be made during the growing season, depending on the severity of the conditions for disease infection.

Apply 4 pts./treated acre beginning 4-6 weeks after planting. A second application may be made as needed up to 4 weeks before harvest, but before the last irrigation. Ridomil may be applied as a directed soil surface spray under the vines or it may be injected into the beds with liquid fertilizer. If less than the full bed is treated, use the formula in the General Information section to determine the amount of Ridomil 2E needed per acre. If Ridomil is injected into the beds with liquid fertilizer, base calculations on a 7-inch band.

If soil surface sprays are used, the Ridomil must be incorporated into the soil with 1/2 - 1 inch of rainfall or sprinkler irrigation.

Ridomil may be applied with water or liquid fertilizer. Use the test in the General Information section to check for compatibility with various fertilizers.

Notes: (1) To avoid possible illegal residues, do not apply more than 12 pts./treated acre/season. (2) Keep Ridomil 2E suspended in the fertilizer solution with bypass or mechanical agitation. Refer to the General Information section for drip irrigation instructions. (3) Do not use Ridomil 2E for disease control in greenhouse crops.

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Rotation (Plantback) Restrictions

Do not plant any crop which is not registered for use with metalaxyl in metalaxyl-treated soil for a period of 12 months, with the exception of wheat, barley and oats. See following list.

<u>Rotation Crop</u>	<u>Planting Time From Last Ridomil 2E Application</u>
Alfalfa (inc. birdsfoot trefoil)	-0- days
Almonds	-0- days
Apples	-0- days
Asparagus	-0- days
Avocados	-0- days
Blueberries	-0- days
Broccoli	-0- days
Cabbage	-0- days
Cauliflower	-0- days
Chinese Broccoli (gai lon, white flowering broccoli)	-0- days
Chinese Cabbage (tight-heading varieties only)	-0- days
Citrus	-0- days
Cotton	-0- days
Cranberries	-0- days
Cucurbit Vegetables	-0- days
Deciduous Fruits and Nuts*	-0- days
Eggplant	-0- days
Ginseng	-0- days
Head Lettuce	-0- days
Hops	-0- days
Legume Vegetables	-0- days
Onions	-0- days
Papayas	-0- days
Peanuts	-0- days
Peppers	-0- days
Pineapples	-0- days
Potatoes	-0- days
Raspberries	-0- days
Root and Tuber Vegetables	-0- days
Soybeans	-0- days
Spinach	-0- days
Stone Fruits	-0- days
Strawberries	-0- days
Sugar Beets	-0- days
Tobacco	-0- days
Tomatoes	-0- days
Walnuts	-0- days
Wheat, Barley, Oats	14 days
Corn	12 months
Crops <u>Not Intended</u> for Food or Feed	-0- days
All Other Crops <u>In ended</u> for Food or Feed	12 months

*These crops and other perennial crops may be planted immediately following last application of Ridomil 2E provided they will not bear harvestable fruit within 12 months.

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Storage and Disposal

Store at temperatures above 40°F. Crystals may form at lower storage temperatures. If this occurs, place the product in a warm room (68°F or above) and roll or shake the container at frequent intervals until all crystals are dissolved.

Pesticide Disposal

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Wastes resulting from the use of this product are acutely toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

Container Disposal

Do not reuse empty container. Triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372 day or night.

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Precautionary Statements

Hazards to Humans and Domestic Animals

WARNING/AVISO

Causes eye injury. Do not get in eyes. Avoid contact with skin or clothing. Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing vapors or spray mist.

Statement of Practical Treatment

If in eyes: Immediately flush with plenty of water. Get medical attention.

If on skin: Wash thoroughly with soap and water. Get medical attention if irritation occurs.

If swallowed: Immediately contact a physician, hospital, or local Poison Control Center. Do not induce vomiting.

If inhaled: Move victim to fresh air. If not breathing, give artificial respiration (preferably mouth to mouth) and get medical attention.

Notes to Physician: If Ridomi! 2E is ingested, lavage stomach. A slurry of activated charcoal in water can be left in the stomach. Give a saline laxative and supportive therapy.

Personal Protective Equipment (PPE):

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category G on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate or viton
- Shoes plus socks
- Protective eyewear

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Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statements:

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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.

Environmental Hazards

For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Apply only as specified on this label. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

Physical or Chemical Hazards

Do not use or store near heat or open flame.

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Ciba Plant Protection

Ciba-Geigy Corporation

Greensboro, North Carolina 27419

[GANNONC.LABELR]RDM2WPS - 6/29/93

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(Back Cover)

Ridomil® 2E

Fungicide

For the control of certain diseases in various crops caused by the Oomycete class of fungi.

One Gallon
U. S. Standard Measure

One Quart
U.S. Standard Measure

Active Ingredient:

Metalaxyl: N-(2,6-dimethylphenyl)-N-(methoxyacetyl) alanine methyl ester	25.1%
<u>Inert Ingredients:</u>	<u>74.9%</u>
Total:	100.0%

Ridomil 2E contains 2 lbs. active ingredient per gallon.

See directions for use in attached booklet.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

EPA Reg. No. 100-607

EPA Est. 100-AL-1

KEEP OUT OF REACH OF CHILDREN.

WARNING

AVISO

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.)

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See label booklet for proper disposal of pesticide wastes.

Chemigation

Refer to supplemental labeling in attached booklet for use directions on chemigation. Do not apply this product through any type of irrigation system unless the supplemental labeling on chemigation is followed.

Ridomil® trademark of Ciba-Geigy Corporation
U.S. Patent No. 4,151,299

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Ciba Plant Protection
Ciba-Geigy Corporation
Greensboro, North Carolina 27419

Ciba-Geigy

CGA 65L14Y 043 (one gallon)
CGA 65L15Y 043 (one quart)

6/11/92 - 1992
Adm. changes
1/6/93 - Adding foliar
application to hops
(tank mix with Kocide 101)
4/23/93 - adding ginseng,
cranberry DFU's
6/23/93 - WPS

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