

100-658 7M21
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Ridomil®/Bravo 81W

Fungicide

For the control of certain diseases in broccoli, cabbage, cauliflower, cucurbit vegetables, onions, potatoes and tomatoes.

ACCEPTED
JUN 13 1986
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 100-658

Active Ingredients:

Metalaxyl: N-(2,6-dimethylphenyl)-N-(methoxyacetyl)alanine methyl ester	9.0%
Chlorothalonil: Tetrachloroisophthalonitrile.....	72.0%
Inert Ingredients:	19.0%
Total:	100.0%

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Ridomil/Bravo 81W is a wettable powder.

Keep Out of Reach of Children

DANGER/PELIGRO

PRECAUCION AL USUARIO: Si usted no lee inglés, no use este producto hasta que la etiqueta haya sido explicado ampliamente.

Statement of Practical Treatment

If in eyes: flush with plenty of water and get medical attention.

If swallowed: induce vomiting by touching back of throat with finger. Drink promptly a large quantity of milk, egg whites, or gelatin solution. If none of these are available, drink large quantities of water. Avoid alcohol. Call a physician or Poison Control Center. Do not induce vomiting or give anything by mouth to an unconscious person.

If inhaled: remove victim to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. Get medical attention immediately.

Continued ... 2

If on skin: Wash promptly with plenty of soap and water.
Rinse thoroughly. Get medical attention.

Note to Physician

If swallowed, probable mucosal damage may contraindicate
the use of gastric lavage.

If in eyes, specialized ophthalmologic attention may be
required.

See additional precautionary statements on back of bag.

See directions for use on back of bag.

EPA Reg. No. 100-
EPA Est.

Five Pounds
Net Weight

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.

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.

DIRECTIONS FOR USE

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

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

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

Reentry Statements

Do not enter treated areas without protective clothing until sprays have dried.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in the treated area or in an area about to be treated with this product. Oral warnings must be given which inform workers of areas or fields that may not be entered without specific protective clothing until sprays have dried and appropriate actions to take in case of accidental exposure, as described under Precautionary Statements on the back of this label. 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. Written warnings must include the following information: "DANGER. Area treated with Ridomil/Bravo 81W on (date of application). Do not enter without appropriate protective clothing until sprays have dried. Flush eyes or skin with plenty of water. Call a physician if irritation persists. Remove contaminated clothing and wash before reuse."

General Information

Ridomil/Bravo 81W contains 9% of the active ingredient metalaxyl and 72% of the active ingredient chlorothalonil. Metalaxyl is a systemic fungicide that provides control of downy mildew and late blight diseases of selected crops. Chlorothalonil is a broad-spectrum protectant fungicide that controls many diseases of vegetables.

Note: Metalaxyl 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/Bravo 81W as recommended, a resistant strain of fungi may be present. If the treatment is ineffective due to the presence of a metalaxyl resistant strain of fungi, neither Ridomil/Bravo 81W 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 in your particular crop and disease control situation.

Mixing Instructions

Ridomil/Bravo 81W is an effective fungicide when used according to label directions for control of a broad spectrum of plant diseases. Thorough, uniform coverage is essential for disease control. Ridomil/Bravo 81W should be added slowly into the spray tank during filling. With concentrate sprays, premix the required amount of Ridomil/Bravo 81W with water in a clean container and add to the spray tank as follows: 1) Add 1/4 - 1/2 of the required amount of water to the spray tank, 2) Add the proper amount of Ridomil/Bravo 81W, then add the rest of the water, 3) Use a pump with capacity to maintain 35-40 psi at nozzles, and provide sufficient agitation in tank to keep the mixture in suspension. Do this by recirculating 20 gal/min/100 gal. tank size thorough correctly positioned sparger tubes or jets.

Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on the suction side of the pump should

be 16-mesh or coarser. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Check nozzle manufacturer's recommendations.

To assure compatibility of Ridomil/Bravo 81W with other products it is being mixed with, i.e., pesticides, surfactants, or fertilizers, pour the products into a 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 should be considered compatible.

Application Instructions

Apply Ridomil/Bravo 81W in sufficient water to obtain adequate coverage of foliage. Gallonage needed will vary with crop and will vary with crop and amount of plant growth. Spray volume usually will range from 20 to 150 gallons/A for dilute sprays and 5 to 10 gallons/A for concentrate ground sprays and aerial applications.

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

When making foliar applications of Ridomil/Bravo 81W in cucurbit vegetables, onions, broccoli, cabbage and cauliflower, do not apply more than 11 lbs. per crop.

Cole Crops (Broccoli, Cabbage, and Cauliflower)

Ridomil/Bravo 81W provides effective control of downy mildew and alternaria leaf spot when used as a foliar application in a preventive disease control program.

Downy Mildew: Apply 1 1/2 - 2 lbs./A in sufficient water to obtain thorough coverage. Begin applications when the plants start emerging in direct seeded crops, after transplants are set in the field, or when conditions are favorable for disease development. Continue applications at 14-day intervals until the threat of disease is over.

Alternaria Leaf Spot (Southeastern States Only): Apply 1 1/2 lbs./A in sufficient water to obtain thorough coverage. Begin applications when the plants start emerging in direct seeded crops, after transplants are set in the field, or when conditions are favorable for disease development. Continue applications at 7-10 day intervals. Other effective alternaria fungicides can also be alternated with Ridomil/Bravo 81W on a 7-10 day schedule.

Note: 1) Do not apply within 7 days of harvest or illegal residues may result.

Cucurbit Vegetables (Cucumbers, Melons and Squash)

Ridomil/Bravo 81W provides effective control of many diseases of cucurbit vegetables when used as a foliar spray in a preventive disease control program.

Downy Mildew: Apply 1 1/2 - 2 lbs./A in sufficient water to obtain thorough coverage. Begin applications when plants are in the first true leaf stage or when conditions are favorable for disease development and continue at 14-day intervals until the threat of disease is over. Under severe disease pressure, use the higher rate.

Anthracnose, Cercospora Leaf Spot, Gummy Stem Blight, Leaf Blight and Scab: Apply 2 lbs./A in sufficient water to obtain thorough coverage. Begin applications when plants are in the first true leaf stage or when conditions are favorable for disease development and continue at 14-day intervals until the threat of disease is over. Under severe disease pressure, shorten the spray interval to 7 days and use 1 - 1 1/2 lbs./A, or use another EPA-registered fungicide between the Ridomil/Bravo 81W applications.

Note: Do not make the last application within 5 days of harvest, or illegal residues may result.

Onions (Dry Bulb, Seed and Green Onions)

Ridomil/Bravo 81W provides effective control of many onion diseases when used as a foliar spray in a preventive disease control program.

Downy Mildew: Apply 1 1/2 - 2 lbs./A in sufficient water to obtain thorough coverage. Begin applications when conditions are favorable for disease development and continue at 14-day intervals until the threat of disease is over. Use a compatible spreader-sticker at rates recommended on the product label. Under severe disease pressure, use the higher rate.

Botrytis Leaf Blight (Blast) and Purple Blotch: Apply 2 lbs./A on a 14-day schedule and apply other registered effective fungicides between the Ridomil/Bravo 81W sprays; or apply 2 lbs./A of Ridomil/Bravo 81W on a 7-day schedule.

Notes: 1) Do not apply to sweet Spanish onions if they have received or will receive additional chlorothalonil applications; 2) Do not apply to dry bulb onions within 7 days of harvest or to green onions within 14 days of harvest and 3) Do not apply more than 4 times per year on green onions or illegal residues may result. If more than 14 days remain before harvest of green onions after 4 applications of Ridomil/Bravo 81W, it is recommended that another labeled fungicide be used to complete the application season.

Potatoes

Ridomil/Bravo 81W, when used as a foliar spray in a preventative disease control program, provides effective control of late blight, early blight and Botrytis vine rot. Two to three applications will provide control of tuber rot in the field caused by Phytophthora spp. and in storage rot caused by Pythium and Phytophthora spp.

Late Blight: Apply 1 1/2 - 2 lbs./A in sufficient water to obtain thorough coverage. Start applications when conditions are favorable for disease but before infection occurs, and continue at 14-day intervals until threat of disease is over.

Tuber Rot and Storage Rot (Phytophthora and Pythium spp.): Apply 2 lbs./A in sufficient water to obtain thorough coverage. Make one application at flowering and another 14 days later. If the field has a history of tuber rot or if foliar infections are present, make a third application 14 days after the second.

Early Blight and Botrytis Vine Rot: Apply 1 1/2 - 2 lbs./A in sufficient water to obtain thorough coverage. Begin applications when plants are six inches high or when conditions are favorable for disease and continue at 14-day intervals until the threat of disease is over. Under severe disease pressure, use 1 1/2 lbs./A on a 7-day schedule or use other effective EPA-registered fungicides between the Ridomil/ Bravo 81W sprays.

~~Note:~~ Do not apply within 7 days of harvest, or illegal residues may result.

Tomatoes

Ridomil/Bravo 81W, when used as a foliar spray in a preventive disease control program, provides effective control of several tomato diseases.

Late Blight: Apply 1 1/2 - 2 lbs./A in sufficient water to obtain thorough coverage. Begin applications when conditions are favorable for disease, but before infection, and continue at 14-day intervals until threat of disease is over.

Early Blight, Anthracnose and Gray Leaf Spot: Apply 2 lbs./A in sufficient water to obtain thorough coverage. Begin applications when conditions are favorable for disease development and continue at 14-day intervals. Under heavy disease pressure, use other effective EPA-registered fungicides between the Ridomil/ Bravo 81W sprays.

Rotational Crops

Any crop on this label may be planted during the fall following application of Ridomil/Bravo 81W. Small grain cover crops may also be planted the fall following application, provided they are plowed down and not used for food or feed. Corn, root crops, or any crop on this label may be planted the year following treatment. Other crops may be planted 18 months following application.

Storage and Disposal

Pesticide

Store in a dry place. Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Wastes resulting from the use of this pesticide are acutely hazardous. 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

Completely empty bag into application equipment. Dispose of empty bag in a sanitary landfill, by incineration or, if allowed by state and local authorities, by burning. Stay out of smoke from burning bags.

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 procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call (919)292-7100 day or night.

Precautionary Statements

Hazards to Humans and Domestic Animals

DANGER

Corrosive. Causes irreversible eye damage. May be fatal if swallowed or inhaled. Harmful if absorbed through skin. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield when handling this product. Do not breathe spray mist. ~~Wear a mask or a jointly approved pesticide respirator (by the Mining Enforcement and Mining Administration, and the National Institute for Occupational Safety and Health) when handling this product.~~ Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash before reuse.

Environmental Hazards

This product is toxic to fish. Do not apply directly to water. Apply only as specified on this label. Do not apply when weather conditions favor drift from treated area. Do not contaminate water when cleaning equipment or disposing of wastes.

Ridomil® trademark of CIBA-GEIGY Corporation for metalaxyl
Bravo® trademark of SDS Biotech Corporation for chlorothalonil

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