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JAN 6 9 1990

ROVRAL® 4 Flowable Fungicide

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NOT REGISTERED FOR USE IN CALIFORNIA

ACTIVE INGREDIENT:

Iprodione: 3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxo-1-imidazolidinecarboxamide*

264-482
41.6%

INERT INGREDIENTS:

58.4%

*Equivalent to 4 Lbs. Iprodione per gallon.

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

EPA Reg. No. 264-482

EPA Est. No.: 1812-GA-3

For **PRODUCT USE** Information Call 1-800-334-9745

For **EMERGENCY** Information **ONLY** Call 24 Hours A Day 1-800-334-7577

PRECAUTIONARY STATEMENTS

CAUTION

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Avoid contact with skin, eyes, or clothing. In case of contact immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.

STATEMENT OF PRACTICAL TREATMENT

IN CASE OF CONTACT: Wash skin with soap and water.

IF IN EYES: Flush with water for 15 minutes and get medical attention.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water or wetlands.

Do not contaminate water when disposing of equipment washwater. Drift or run-off from treated areas are hazardous to aquatic invertebrates in neighboring areas.

GENERAL INFORMATION: ROVRAL® is a flowable formulation of iprodione for the control of certain diseases on Almonds and Stone Fruits (Apricots, Cherries, Nectarines, Peaches, Plums, and Prunes), Garlic, Lettuce, Grapes, Ginseng, Carrots, Broccoli, Beans, Peanuts, Potatoes, Caneberries, and Dry Bulb Onions, and rice.

NOTE TO USER: Do not graze animals in treated orchards. Do not feed cover crops grown in treated orchards to livestock.

DIRECTIONS FOR USE THROUGH SPRINKLER IRRIGATION SYSTEMS

Apply this product only through sprinkler irrigation systems including microjet, drip, solid set and center pivot. Do not apply this product through any other type of irrigation system.

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

APPLICATION INSTRUCTIONS: First prepare a suspension of ROVRAL® 4 Flowable Fungicide in a mix tank. Fill tank with 1/2 to 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Add the required amount of ROVRAL® 4 Flowable Fungicide, and then the remaining volume of water. (Suspension concentrations using the appropriate dosage per acre recommended on this label of ROVRAL® 4 Flowable Fungicide per 1 to 4 gallons of water are recommended) Then set sprinkler to deliver 0.1 to 0.3 inch of water per acre. Start sprinkler and uniformly inject the suspension of ROVRAL® 4 Flowable Fungicide into the irrigation water line so as to deliver

the desired rate per acre. The suspension of ROVRAL® 4 Flowable Fungicide should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing. If you should have any other questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

NOTE: When treatment with ROVRAL® 4 Flowable Fungicide has been completed, further field irrigation over the treated area should be avoided for 24 to 48 hours to prevent washing the chemical off the crop.

GENERAL PRECAUTIONS FOR APPLICATIONS THROUGH SPRINKLER IRRIGATION SYSTEMS

Maintain continuous agitation in mix tank during mixing and application to assure a uniform suspension. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute solution per unit time. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e. g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

Do not apply when wind speed favors drift, when system connection or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product must be dismantled and drained. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from nonuniform distribution of treated water.

Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation shall shut the system down and make necessary adjustments should the need arise.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water supplies are in place.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN ANY MANNER INCONSISTENT WITH ITS LABELING.

REENTRY STATEMENT

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not 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 a treated area or in an area about to be treated with this product. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers and given in a language customarily understood by the workers. Oral and written warning must include the STATEMENT OF PRACTICAL TREATMENT and REENTRY STATEMENTS as they appear on the label.

HOW TO USE ROVRAL® 4 FLOWABLE FUNGICIDE

Partially fill the spray tank with clean water. Measure the required amount of ROVRAL® 4 Flowable Fungicide and pre-mix with a small volume of water, add this to the tank. Agitate to ensure thorough mixing while filling tank with remaining water. Maintain agitation during application and apply with properly calibrated application equipment. Do not allow spray mixture to stand overnight or for prolonged periods, as some chemical breakdown may occur, particularly in water with a high pH.

LEAFY VEGETABLES

DOSAGE RATE

CROP	HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY
			PINTS/100 GAL	PINTS/ACRE	
Lettuce*	Apply as a foliar spray in sufficient water to obtain thorough coverage (50 to 100 gallons per acre).	Lettuce Drop (<i>Sclerotinia</i> sp.) Bottom Rot (<i>Rhizoctonia solani</i>)	-	1.5 to 2.0	Application should be made with tractor mounted boom sprayers equipped with flat fan or hollow cone nozzles directed to ensure thorough coverage of the lower portion of the plants and the surrounding soil surface. Do not drench. The higher rate should be used under severe disease conditions. Apply at the 3 leaf stage of growth and again 10 days later. If conditions still favor disease development, a third application should be made 10 days after the second spray. Do not apply within 14 days of harvest. Do not make more than 3 applications of ROVRAL® 4 Flowable per season.

VEGETABLES

CROP	HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY
			PINTS/ ACRE	GALS./WATER PER ACRE	
Broccoli*	Application should be made with a tractor mounted boom sprayer with 2 flat fan nozzles per row (one on either side) directed at the base of the plant and the adjacent soil surface. Position nozzles to insure thorough coverage of the stem. Do not drench.	Black Leg (<i>Phoma lingam</i>)	2.0	40 to 200	Apply immediately after thinning (2 to 4 leaf stage) as a directed spray to the base of the plant and the adjacent soil surface. If disease conditions persist or reoccur, a second application may be made up to the day of harvest Apply in 40 to 200 gal. of spray solution per acre.
Carrots*	Apply as a foliar spray in sufficient water to obtain thorough coverage.	Alternaria Blight (<i>Alternaria dauci</i>)	1.0 to 2.0	Minimum 10	Make the first application of ROVRAL [®] 4 Flowable as conditions become favorable for disease development in the Spring. Continue applications on a 7 to 14 day interval as long as conditions favor disease development. The higher rate and/or shorter spray interval should be used under severe disease conditions. ROVRAL [®] 4 Flowable should be applied in a minimum of 10 gallons per acre of solution, and may be applied up to the day of harvest. Do not make more than 8 applications of ROVRAL [®] 4 Flowable per season.
Dry Bulb Onions*	A single, flat fan, or cone nozzle should be centered and adjusted to provide complete coverage of each row. Up to 10 applications can be made per season. Do not apply within 7 days of harvest. Apply ROVRAL [®] 4 Flowable using ground equipment in accordance with the directions in the table.	Botrytis Leaf Blight (<i>Botrytis squamosa</i>) Purple Blotch (<i>Alternaria pom</i>) Botrytis Neck Rot (<i>Botrytis allii</i>)	1.5	50 to 100	Apply as a foliar spray as soon as conditions become favorable for disease. Continue application on 7 to 14 day interval as long as conditions favor disease development. Under severe disease conditions, the shorter interval should be used.
Garlic*	Apply as an in furrow spray in sufficient water to obtain thorough coverage.	White Rot (<i>Sclerotium cepivorum</i>)	4.0**	50 to 100	Apply ROVRAL [®] 4 Flowable in the furrow at planting. Position a single flat fan nozzle to treat the covering soil used to fill the furrow. **Using a 38 to 40 inch bed spacing.

***NOTE TO USER:**

The following crops may be rotated after harvest: Garlic, Dry Bulb Onions, Broccoli, Lettuce, Peanuts, Carrots, Beans, and Potatoes.
The following crops may be rotated one month following the last iprodione application: Root Crops, Tomatoes, and Cotton.

BEANS (Snap, Dry, and Lima)

CROP	HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY
			PINTS/ ACRE	GALS./WATER PER ACRE	
BEANS* (Snap, Dry, and Lima)	Apply ROVRAL® 4 Flowable using ground equipment with a spray pressure of 50 to 100 psi using three nozzles per row arranged with 1 directly over the row and 1 on each side of the row.	Gray Mold (<i>Botrytis spp.</i>) White Mold (<i>Sclerotinia spp.</i>)	1.5 to 2.0	20 to 40	Apply ROVRAL® as a foliar spray at early bloom (25 to 50% of plants with at least 1 open bloom) and, if conditions are still favorable for disease development, again at peak bloom (maximum number of open blooms). Under severe disease conditions, the higher rate should be used. Thorough coverage is essential for proper disease control. Do not allow foraging for 14 days after last application of ROVRAL® 4 Flowable. Do not feed snap bean hay to livestock. Do not feed dry bean hay to livestock until 45 days after last application. Do not feed succulent bean hay to livestock.

PEANUTS

CROP	HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY
			PINTS/ ACRE	GALS./WATER PER ACRE	
Peanuts*	Apply ROVRAL® 4 Flowable using a tractor mounted boom sprayer equipped with low pressure nozzles (e.g., 8008 LP, 8010 LP, and TK 7.5) that produce large droplets. A single nozzle should be centered and adjusted to provide complete coverage of the row.	Sclerotinia Blight (<i>Sclerotinia sp.</i>)	2.0	40	Make an initial application when conditions first become favorable for disease development. Up to 2 subsequent applications should be made at 4 week intervals. Do not apply within 10 days of harvest.

***NOTE TO USER:** The following crops may be rotated after harvest: Garlic, Dry Bulb Onions, Broccoli, Lettuce, Peanuts, Carrots, Beans, and Potatoes.
The following crops may be rotated 1 month following the last iprodione application: Root crops, Tomatoes, and Cotton.

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POTATOES

CROP	HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY
			PINTS/ACRE	GALS./WATER PER ACRE	
Potatoes*	A single, flat fan or cone nozzle should be centered and adjusted to provide complete coverage of each row. Up to 4 applications can be made per season. DO NOT APPLY WITHIN 14 DAYS OF HARVEST. Apply ROVRAL® 4 Flowable using ground application or chemigation, in sufficient water for thorough coverage (minimum of 10 GPA).	Early Blight (<i>Alternaria solani</i>) White Mold (<i>Sclerotinia sclerotiorum</i>)	2.0	Minimum 10	For early blight, begin applications when conditions first become favorable for disease development. Up to 3 subsequent applications can be applied at 7 to 10 day intervals or as required. For white mold, apply at first sign of disease or immediately prior to row closing and, if conditions are favorable for disease development, again 28 days later.

RICE

CROP	HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY
			PINTS/PRODUCT/ACRE	GALS./WATER PER ACRE	
RICE (in all areas except California)	Apply ROVRAL® Fungicide as a broadcast spray using aerial equipment. ROVRAL® Fungicide should be used with a minimum of 10 gallons of water per acre.	Sheath blight (<i>Rhizoctonia solani</i>)	1.0		ROVRAL® Fungicide may be applied twice per year. The first application should be made between joint movement and booting. The second application should be applied 2 weeks after the first application but no later than 75% heading.

Do not apply in areas where catfish and crayfish are commercially cultivated.

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CANEBSERRIES

CROP	HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY
			PINTS/ACRE	GALS./WATER PER ACRE	
Caneberries	Apply ROVRAL® 4 Flowable as a foliar spray with ground equipment in sufficient water to obtain thorough coverage at bloom and/or fruit (minimum of 100 gallons).	Botrytis Fruit Rot (<i>Botrytis cinerea</i>)	1.0 to 2.0	Minimum 100	Apply ROVRAL® 4 Flowable first at early bloom (5 to 10% bloom) and make a repeat application again at full bloom. Up to 3 subsequent applications can be applied at 14 day intervals or as required. The final application can be made up to and including the day of harvest.

***NOTE TO USER:** The following crops may be rotated after harvest: Garlic, Dry Bulb Onions, Broccoli, Lettuce, Peanuts, Carrots, Beans, and Potatoes.
The following crops may be rotated 1 month following the last iprodione application: Root crops, Tomatoes, and Cotton.

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ENDANGERED SPECIES RESTRICTIONS IN THE STATE OF ARKANSAS

The use of iprodione on rice is restricted to protect the endangered fat pocketbook pearly mussel (*Potamilus cupax*) and its habitat. Use is prohibited in the following areas of Arkansas.

Mississippi County: Within the basin that drains directly into the Right Hand Chute of Little River, south of Big Lake National Wildlife Refuge.

Poinsett County: Between Crowley's Ridge and the levee east of the Right Hand Chute of Little River and the St. Francis Floodway. Use is also prohibited west of Rt. 140 and north of Rt. 63 at the siphon near Marked Tree. Except that the prohibited area does not include the area bounded by Arkansas Highway 373 on the west, Highway 63 on the east and Highway 14 on the south.

Cross, St. Francis, and Lee Counties: Between Crowley's Ridge and the levee east of the Right Hand Chute of Little River and the St. Francis Floodway as far south as the confluence of L'Anguille River (Lee County).

STONE FRUITS AND NUTS

DOSAGE RATE

CROP	HOW TO USE	DISEASE	PINTS/ ACRE	PTS/100 GAL	WHEN TO APPLY
Apricots Cherries Nectarines Peaches Plums Prunes	<p>The rate of ROVRAL® 4 Flowable per 100 gallons are based on a standard of 400 gallons per acre. dilute spray for mature trees. For less than mature trees, apply the rate per 100 gallons until run-off. If less than 400 gallons of spray solution per acre is applied to mature trees, refer to the rate per acre to ensure that the proper amount of material is applied.</p> <p>Apply ROVRAL® as an overall spray in sufficient water to obtain thorough coverage of bloom, foliage, and/or fruit (20 to 400 gallons per acre by ground equipment and in a minimum of 15 gals. per acre by air). Aerial applications are only recommended during the bloom period.</p>	<p>Brown Rot Blossom Blight (<i>Monilinia spp.</i>)</p> <p>Fruit Brown Rot (<i>Monilinia spp.</i>)</p>	<p>1.0 to 2.0</p>	<p>0.25 to 0.50</p>	<p>Brown Rot Blossom Blight Apply first at early bloom (approximately 5% bloom). If conditions are favorable for disease development, apply again at full bloom and at petal fall.</p> <p>Fruit Brown Rot: An application should be made whenever temperatures and moisture conditions favor disease infection in the 5 week period prior to harvest. If these conditions persist or reoccur, a second application should be made. This second application should be made no sooner than 7 days following the first pre-harvest application. Pre-harvest applications may be made up to and including the day of harvest. Do not apply more than 2.0 pints of ROVRAL® 4 Flowable per acre per application.</p> <p>Do not make more than 5 applications of ROVRAL® 4 Flowable per season.</p>
Almonds	<p>The rates of ROVRAL® 4 Flowable per 100 gallons are based on a standard of 400 gallons per acre dilute spray for mature trees. For less than mature trees, apply the rate per 100 gallons until run-off. If less than 400 gallons of spray solution per acre is applied to mature trees refer to the rate per acre to ensure that the proper amount of material is applied.</p> <p>Apply ROVRAL® Flowable as an overall spray in sufficient water to obtain thorough coverage of bloom and foliage (in a minimum of 20 gals per acre by air). The use of aerial equipment is not recommended after petal fall.</p>	<p>Brown Rot Blossom Blight (<i>Monilinia laxa</i>)</p> <p>Shothole (<i>Stigmina carpophila</i>)</p>	<p>1.0</p>	<p>0.25</p>	<p>Brown Rot Blossom Blight Shothole: Apply first at pink bud and, if conditions favorable for disease development persist or reoccur up to 3 subsequent applications can be made at: 1) full bloom; 2) petal fall; and 3) up to 5 weeks after petal fall.</p> <p>Do not make more than 4 applications of ROVRAL® 4 Flowable per season.</p>

NOTE TO USER: Do not graze animals in treated orchards. Do not feed cover crops grown in treated orchards to livestock.

GINSENG

CROP	HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY
			PINTS/ ACRE	GALS./WATER PER ACRE	
Ginseng	Apply as a foliar spray, in sufficient water to obtain thorough coverage, using ground equipment.	Alternaria Blight (Alternaria panax)	2.0	10 (Minimum)	<p>Make the first application of ROVRAL® 4 Flowable as conditions become favorable for disease development in the Spring. Continue applications on a 7 day interval as long as conditions favor disease development.</p> <p>Do not make more than 12 applications of ROVRAL® 4 Flowable per season. Do not apply within 36 days of harvest.</p> <p>ROVRAL® should be used as part of a complete program, including the use rate of alternate fungicides, for the control of Alternaria blight.</p>

GRAPES

CROP	HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY
			PINTS/ ACRE	GALS./WATER PER ACRE	
Grapes	<p>ROVRAL® 4 Flowable is a flowable formulation for the control of Bunch Rot on Grapes. Apply as a foliar spray in sufficient water to obtain thorough coverage (50 to 200 gals. per acre). The spray mixture should not be allowed to stand overnight as some breakdown of the product may occur from prolonged delays, particularly in water with a high pH. Maintain agitation during spray operations and apply with properly calibrated application equipment.</p> <p>Do not make more than 4 applications of ROVRAL® 4 Flowable per season.</p>	Bunch Rot (Botrytis sp.)	1.5 to 2.0	50 to 100	<p>Apply ROVRAL® 4 Flowable in accordance with directions provided in the table:</p> <p>SPRAY SCHEDULE</p> <ol style="list-style-type: none"> 1) Early mid-bloom. 2) Prior to bunch closing. 3) Beginning of fruit ripening (veraison). 4) Final application prior to harvest as needed. The last application may be made up to and including the day of harvest. <p>Thorough Coverage Of The Bunches Is Essential. Under severe disease conditions, the higher rate is recommended. ROVRAL® 4 Flowable must be used in conjunction with good cultural practices designed to minimize conditions conducive to Bunch Rot (<i>Botrytis cinerea</i>). It should be applied with equipment calibrated and adjusted to direct the spray at the bunches to ensure thorough bunch coverage.</p>

NOTE TO USER: Do not graze animals in treated orchards. Do not feed cover crops grown in treated orchards to livestock.

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STORAGE AND DISPOSAL
STORAGE

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL

Triple rinse (or equivalent). Then dispose of empty bag in a sanitary landfill or by incineration, or by other procedures approved by State and local authorities.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use when it is used in accordance with such directions; and (c) that the directions, warning and other statements on this label are based upon responsible experts' evaluation of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants, and of residues on food crops and upon reports of field experience. Tests have not been made on all varieties or in all states or under all conditions. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE, ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLE Y RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

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NOTICE TO BUYER

Purchase of this material does not confer any rights under patents governing this product or the use thereof in countries outside of the United States.

THIS SPECIMEN LABEL IS INTENDED FOR USE ONLY AS A GUIDE IN PROVIDING GENERAL INFORMATION REGARDING THE DIRECTIONS, WARNINGS AND CAUTIONS ASSOCIATED WITH THE USE OF THIS PRODUCT. AS WITH ANY AGRICULTURAL CHEMICAL, ALWAYS FOLLOW THE LABEL INSTRUCTIONS ON THE PACKAGE BEFORE USING.

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