

PM 21 264-482

ROVRAL® 4 Flowable Fungicide

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ACTIVE INGREDIENT:

Iprodione: 3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxo-1-imidazolidinecarboxamide* 41.6%

INERT INGREDIENTS:

..... 58.4%

*Equivalent to 4 Lbs. Iprodione per gallon.

EPA Reg. No. 264-482

EPA Est. No.: 1812-GA-3

KEEP OUT OF REACH OF CHILDREN CAUTION

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

For MEDICAL And TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577

STATEMENT OF PRACTICAL TREATMENT ACCEPTED

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

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

MAY 30 1996

PRECAUTIONARY STATEMENTS

CAUTION

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if swallowed, inhaled or absorbed through skin. Avoid breathing vapor or spray mist, or contact with skin, eyes, or clothing. Get medical attention if irritation persists.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 264-482

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

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater. Drift or run-off from treated areas are hazardous to aquatic invertebrates in neighboring areas.

DIRECTIONS FOR USE

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

Read entire label before using this product.

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 of 12 hours.

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

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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 offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

RETURNABLE -- REFILLABLE CONTAINERS

This material may be repackaged in 30 gallon returnable-refillable containers by Rhône-Poulenc Ag Company or a registered establishment under contract to Rhône-Poulenc Ag Company. After use, return the container to the point of purchase or designated locations. This container must only be refilled with ROVRAL® 4 Flowable Fungicide. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Prior to refilling, inspect thoroughly for damage such as cracks, punctures, abrasions and damaged or worn out threads on closure devices. Do not refill or transport damaged or leaking containers. Check for leaks after refilling and before transportation. If the container is not being refilled, return it to the point of purchase.

GENERAL CAUTIONS AND RESTRICTIONS

CROP ROTATION RESTRICTIONS FOR BEANS, BROCCOLI, CARROTS, CHINESE MUSTARD, COTTON, DRY BULB ONIONS, GARLIC, LETTUCE, PEANUTS, POTATOES AND RICE.

The following crops may be rotated after harvest: Beans, Broccoli, Carrots, Chinese Mustard, Cotton, Dry Bulb Onions, Garlic, Lettuce, Peanuts, Potatoes, and Rice.

GRAZING RESTRICTIONS FOR STONE FRUIT, ALMONDS AND GRAPES.

Do not graze animals in treated orchards. Do not feed cover crops grown in treated orchards to livestock.

If you are unsure about disease conditions, contact your local extension agent.

FUNGICIDE RESISTANCE STATEMENT

ROVRAL® 4 Flowable Fungicide is a dicarboximide fungicide. Resistance developed to other dicarboximide, such as Ronilan® may result in resistance to ROVRAL®. Therefore, DO NOT EXTEND THE TOTAL NUMBER OF APPLICATIONS PER CROP ON THIS LABEL WITH Ronilan. DO NOT TANK MIX THIS PRODUCT WITH Ronilan.

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. The spray solution should be buffered to a pH of 5.0 - 7.0. A high quality, nonionic spreader can be used as a spray tank additive for every application with the exception of in-furrow sprays. ROVRAL® should be added to the tank before the addition of any adjuvant. Consult the adjuvant label or manufacturer for crop tolerance and safety information when used with ROVRAL®. Mixing with very acidic products may result in precipitation of ROVRAL®.

HOW TO APPLY ROVRAL® 4 FLOWABLE FUNGICIDE TO COTTON

Use sprayer equipment calibrated to deliver the registered dose rate of ROVRAL® 4 Flowable Fungicide. Spray nozzles should be configured on the planter to apply ROVRAL® 4 Flowable Fungicide into the open seed furrow. Spray nozzles are most ideally located to place product after the seed is dropped and before devices which cover the open seed furrow.

ROVRAL® 4 FLOWABLE FUNGICIDE IS REGISTERED FOR USE ON THE FOLLOWING:

Field and Row Crops

Cotton
Peanuts
Rice

Fruit Trees and Nuts

Almonds
Stone Fruits
Apricots
Cherries
Nectarines
Peaches
Plums
Prunes

Ginseng

Small Fruit

Berries
Grapes
Strawberries

Vegetables

Beans (Snap, Dry, and Lima)
Broccoli
Carrots
Chinese Mustard (Florida Only)
Dry Bulb Onions
Garlic
Lettuce (Head & Leaf types)
Potatoes

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FIELD AND ROW CROPS

COTTON*

HOW TO USE	DISEASES	DOSAGE RATE		
		FL. OUNCES PER 1000 FEET OF ROW	TOTAL FL OUNCES PER ROW SPACING PER ACRE	GALS. WATER PER ACRE
<p>Apply at-planting using planter mounted spray nozzles which delivers the spray solution to the open seed furrow. Direct spray in-furrow immediately behind the seed drop tube and before the furrow closure devices.</p> <p>Apply the higher rate of ROVRAL® 4 Flowable Fungicide if a field has a history of high seedling disease pressure or if weather conditions favor seedling disease development (e.g. cool and wet).</p>	<p>Damping-off, "Sore Shin" (<i>Rhizoctonia solani</i>)</p>	0.25 - 0.5	40"-3.2 - 6.5	5
			38"-3.4 - 6.9	Minimum
			36"-3.6 - 7.3	
			30"-4.4 - 8.7	
				Not currently registered for use in California.

* Do not allow grazing or feeding of cotton forage to livestock.

PEANUTS*

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
<p>Apply using a tractor mounted spray boom equipped with hollow cone or low pressure nozzles (e.g. 8008LP, 8010LP or TK7.5 that produce large droplets). Nozzles should be adjusted to provide complete coverage of the row.</p> <p>Vine spreaders may be used in combination with flat fan nozzles for banding. The two pint per acre rate needs to be used in the band.</p> <p>Applications may also be made by chemigation.</p>	<p>Sclerotinia Blight (<i>Sclerotinia minor</i>)</p>	2.0	40 Minimum	<p>Make the initial application when conditions first become favorable for disease development. Up to two subsequent applications should be made at 14 to 21 day intervals.</p> <p>For best results apply using a preventative program.</p>	<p>A maximum of 3 applications or 6 lbs of product can be applied per season with the last spray being at least 2.0 lbs/Acre.</p> <p>Do not apply within 10 days of harvest. (PHI = 10 days).</p> <p>Do not apply by air.</p> <p>Do not feed peanut hay to livestock.</p> <p>* Not currently registered in California.</p>

RICE*

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
Apply as a broadcast spray using aerial equipment.	Sheath blight <i>(Rhizoctonia solani)</i> Brown Spot <i>(Bipolaris oryzae)</i> Sheath Spot <i>(Rhizoctonia oryzae)</i>	1.0	10 Minimum	The first foliar application should be made between joint movement and booting. If favorable disease conditions continue a second application can be applied 14 days after the first application, but no later than 75% heading.	Maximum of 2 applications can be made per season.
** ROVRAL® 4F will suppress or give partial control of this disease.	**Narrow Brown Leaf spot <i>(Cercospora oryzae)</i>				* Not currently registered in California.

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

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 capax*) 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'Anquille River (Lee County).

FRUIT TREE AND NUTS

ALMONDS

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALLONS WATER PER ACRE		
<p>ROVRAL® 4F should be used as an integral part of a complete disease control program.</p> <p>Apply as a foliar spray in sufficient water to obtain thorough coverage of blossoms, foliage, and/or fruit.</p> <p>The use of aerial application after petal fall may result in reduced control due to lack of canopy penetration and coverage.</p>	<p>Brown Rot Blossom Blight (<i>Monilinia laxa</i>)</p> <p>Shot Hole (<i>Stigmina carpophila</i>)</p>	1.0	<p>20 - 400 (ground)</p> <p>15 Minimum (air)</p>	<p>The table below is only recommended as a general guideline. Applications should be based on local disease and growing conditions. Contact your local extension agent for regional recommendations.</p> <p>Spray Schedule Table</p> <p>Apply first at pink bud and, if conditions favorable, if disease development persist or recur up to 3 subsequent applications can be made at:</p> <p>1) full bloom</p> <p>2) petal fall</p> <p>3) up to 5 weeks after petal fall.</p>	<p>Do not make more than 4 applications per season.</p>

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STONE FRUIT

Apricots, Cherries, Nectarines, Peaches, Plums, and Prunes

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALLONS WATER PER ACRE		
<p>ROVRAL® 4F should be used as an integral part of a complete disease control program.</p> <p>Apply as a foliar spray in sufficient water to obtain thorough coverage of blossoms, foliage, and/or fruit.</p> <p>Under severe disease conditions, the higher rate and shorter spray interval is recommended.</p> <p>The use of aerial application after petal fall may result in reduced control due to lack of canopy penetration and coverage</p>	<p>Brown Rot Blossom Blight (<i>Monilinia spp.</i>)</p>	1.0 - 2.0	<p>20 to 400 (ground)</p> <p>15 Minimum (air)</p>	<p>Apply when bud tissue is susceptible to disease (i.e. pink, red, or white bud). If conditions favorable for disease development persist or recur apply again at full bloom and at petal fall.</p>	<p>Do not make more than 4 applications of this product per season.</p> <p>Preharvest applications may be made up to 7 days before harvest (PHI=7 days)</p>
	<p>Fruit Brown Rot (<i>Monilinia spp.</i>)</p>	1.0 - 2.0	<p>20 to 400 (ground)</p> <p>15 Minimum (air)</p>	<p>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 recur, additional applications should be made. Applications can be made on a 7-14 day interval following the first preharvest application if needed.</p>	
	<p>Shot Hole (<i>Stigmata carpophila</i>)</p> <p>Scab (<i>Ventura carpophila</i>)</p>	1.0 - 2.0	<p>20 to 400 (ground)</p> <p>15 Minimum (air)</p>	<p>At least one of the blossom sprays should be applied at shuck-split. If only one blossom spray is applied, a second foliar spray may be made 14 days after the shuck-split application, followed by 2-3 preharvest sprays starting 5 weeks before harvest on a 7-14 day interval.</p> <p>Mid-season cover sprays with another registered fungicide should not be eliminated.</p>	
	<p>Cherry Leaf Spot (<i>Blumeriella jaapii</i>)</p>	1.0 - 2.0	<p>20 to 400 (ground)</p> <p>15 Minimum (air)</p>	<p>Follow the Brown Rot Blossom Blight and Fruit Rot spray program. At least one foliar spray should be made between petal fall and shuck split, with an additional foliar spray applied 14 days after harvest.</p>	

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GINSENG*

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
ROVRAL® 4F should be used as part of a complete spray program. Apply as a foliar spray in sufficient water to obtain thorough coverage using ground equipment. Alternating Program: Use as an alternating treatment on a 14 day interval with another fungicide registered for control of Alternaria Blight.	Alternaria Blight (<i>Alternaria panax</i>)	1.5 - 2.0	10 Minimum	Make the first application when conditions become favorable for disease development. Continue applications on a 14 day interval if using the alternating spray program.	Do not make more than 5 applications per season. Do not apply within 36 days of harvest (PHI = 36 days).
Tank Mix Program: Apply as a tank mix with another fungicide registered for control of Alternaria Blight.	Alternaria Blight (<i>Alternaria panax</i>)	1.0 - 1.5	10 Minimum	Make the first application when conditions become favorable for disease development. Continue on a 7 to 10 day interval.	Do not use more than 10 lbs per season. Do not apply within 36 days of harvest (PHI = 36 days).

* Not currently registered in California.

SMALL FRUIT

BERRIES

Caneberry: Blackberry; loganberry; red and black raspberry; cultivar and/or hybrids of these
Bushberry: Blueberry, highbush and lowbush; currant; elderberry; gooseberry; huckleberry

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
Apply as a foliar spray with ground equipment in sufficient water to obtain thorough coverage of blossoms and fruit. Under severe disease conditions, the higher rate is recommended.	Botrytis Fruit Rot (<i>Botrytis cinerea</i>)	1.0 - 2.0	100 Minimum	Make the first application at early bloom (5 to 10% bloom) and again at full bloom. Two additional applications can be applied at 14 day intervals or as required.	Do not make more than 4 applications per season. The final application can be made up to and including the day of harvest. (PHI = 0 day).

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HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
<p>Apply as a foliar spray in sufficient water to obtain thorough coverage. The application equipment should be calibrated and adjusted to direct the spray at the bunches to insure thorough coverage.</p> <p>Application may be made by chemigation except in the state of New York.</p> <p>Under severe disease conditions, the higher rate is recommended.</p> <p>This product must be used in conjunction with good cultural practices designed to minimize conditions conducive for Bunch Rot development.</p> <p>Thorough Coverage of the Bunches is Essential.</p>	<p>Bunch Rot (<i>Botrytis cinerea</i>.)</p>		50 Minimum	<p>The table below is only recommended as a general guideline. Applications should be based on local disease and growing conditions. Contact your local extension agent for regional recommendations.</p> <p>Spray Schedule Table</p>	<p>Do not make more than 4 applications per season.</p> <p><u>The final application may be made up to 7 days before harvest (PHI=7 days).</u></p>
		1.0-2.0		1) Early to mid-bloom	
		1.5-2.0		2) Prior to bunch closing	
		1.5-2.0		3) Beginning of fruit ripening (veraison)	
		1.5-2.0		4) Final application prior to harvest as needed.	

STRAWBERRIES

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	PINTS PER 100 Gallons		
DIP Dip the transplants in the solution for 1 to 5 minutes and plant immediately.	Botrytis Crown Rot <i>(Botrytis cinerea)</i>	--	2.0	Apply as a preplant dip immediately prior to planting.	Do not make more than 1 application.
FOLIAR SPRAY Apply as a foliar spray in not less than 100 gallons of water per acre. Aerial applications can be made with a minimum of 10 gallons of water per acre. Thorough coverage is essential for disease control. Under severe disease conditions, the higher rate and shorter spray interval is recommended. *ROVRAL® 4F will suppress or give partial control of this disease.	Gray Mold <i>(Botrytis cinerea)</i> Stem End Rot <i>(Gnomonia comari)</i> Phomopsis Soft Rot <i>(Phomopsis obscurans)</i> Purple Leaf Spot <i>(Mycosphaerella spp.)</i> Anthracnose* <i>(Colletotrichum spp.)</i>	1.5 - 2.0	--	Make the first application no later than 10% bloom. Additional sprays may be made on a 10-14 day interval.	Do not make more than 4 applications per season. ROVRAL® may be applied up to and including the day of harvest (PHI = 0 days).
Tank Mix Program Apply as a tank mix with another fungicide registered for control of Gray Mold on strawberries. Do not combine with Ronilan. *ROVRAL® 4F will suppress or give partial control of this disease.		1.0	--	Make the first application no later than 10% bloom. Additional sprays may be made on a 7-14 day interval.	Do not make more than 10 applications per season. ROVRAL® may be applied up to and including the day of harvest (PHI = 0 days).

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VEGETABLES

BEANS (Snap, Dry, and Lima)

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
<p>Apply using ground equipment with a spray pressure of 50-100 PSI using a three nozzle/row boom arranged with one directly over the row and a drop on each side of the row.</p> <p>Application can also be made by air or chemigation.</p> <p>Under severe disease conditions the higher rate and shorter spray interval should be used.</p> <p>Thorough coverage is essential for disease control.</p>	<p>Gray Mold (<i>Botrytis cinerea</i>)</p> <p>White Mold (<i>Sclerotinia sclerotiorum</i>)</p>	1.5 to 2.0	<p>40 Minimum (ground)</p> <p>10 Minimum (air)</p>	<p>Apply as a foliar spray at first bloom to when 10% of the plants have one open bloom and again 5-7 days later or up to peak bloom, if conditions are favorable for disease development.</p>	<p>Two applications maximum per season, with the last application made no later than peak bloom.</p> <p>Do not allow foraging for 14 days after last application.</p> <p>Do not feed snap or succulent bean hay to livestock.</p> <p>Do not feed dry bean hay to livestock until 45 days after last application.</p> <p>Do not use this product on cowpeas.</p>

BROCCOLI

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
<p>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 ensure thorough coverage of the stem.</p> <p>Application may be made by chemigation.</p>	<p>Black Leg (<i>Leptosphaeria maculans</i>)</p>	2.0	<p>40 Minimum (ground)</p>	<p>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 recur, a second application may be made up to the day of harvest.</p>	<p>Do not make more than 2 applications per crop.</p> <p>Do not drench.</p> <p>This product can be applied up to the day of harvest (PHI = 0 days).</p>

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HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
<p>Apply as a foliar spray in sufficient water to obtain thorough coverage.</p> <p>May be applied by ground, chemigation, or aerial equipment.</p> <p>The higher rate and/or shorter spray interval should be used under severe disease conditions.</p>	<p>Alternaria Blight (<i>Alternaria dauci</i>)</p> <p>Black Crown Rot (<i>Alternaria radicina</i>)</p>	1.0 - 2.0	10 Minimum	<p>Make the first application as conditions become favorable for disease development. Continue applications on a 7 to 14 day interval as long as conditions favor disease development.</p>	<p>Do not make more than 4 applications of this product per season.</p> <p>This product can be applied up to the day of harvest (PHI = 0 days).</p>
<p>Tank Mix Program</p> <p>Apply as a tank mix with another fungicide registered for control of Alternaria on carrots.</p>	<p>Alternaria Blight (<i>Alternaria dauci</i>)</p> <p>Black Crown Rot (<i>Alternaria radicina</i>)</p>	1.0	10 Minimum	<p>Make the first application as conditions become favorable for disease development. Continue applications on a 7 to 10 day interval as long as conditions favor disease development.</p>	<p>Do not make more than 10 applications per season.</p> <p>This product can be applied up to the day of harvest (PHI = 0 days).</p>

CHINESE MUSTARD (For Use In Florida Only)

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
Apply as a foliar spray in sufficient water to obtain thorough coverage.	Alternaria Leafspot (<i>Alternaria spp.</i>)	1.0	50 Minimum	Make the first application as conditions become favorable for disease development. Continue applications on a 10-14 day interval as long as conditions favor disease development.	Do not make more than 4 applications of this product per season. Do not apply within 10 days of harvest. (PHI = 10 days).

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GARLIC

*This rate is based on pints product/treated acre and represents the rate for a 38 - 40 inch row spacing.

12/84 LETTUCE (head & leaf types)

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
<p>Apply as a foliar spray in sufficient water to obtain thorough coverage.</p> <p>Ground application should be made with a tractor mounted boom sprayer equipped with three nozzles per seed line (one centered over the row and one on each side of the row) with two nozzles directed to ensure thorough coverage of the lower portion of the plants and the surrounding soil surface.</p> <p>Under severe disease conditions the higher rates should be used.</p> <p>* When applying in a band do not reduce the acre rate.</p> <p>Applications may also be made by air** or chemigation.</p>	<p>Lettuce Drop (<i>Sclerotinia spp.</i>)</p> <p>Bottom Rot (<i>Rhizoctonia solani</i>)</p>	1.5 - 2.0*	40. Minimum	<p>Apply from the 3 leaf stage to just after thinning and again 10 days later. If conditions still favor disease development, a third application should be made 10 days after the second spray.</p>	<p>Do not make more than 3 applications to each crop.</p> <p>Do not apply within 14 days of harvest (PHI=14 days).</p> <p>Do not cultivate after application. If necessary, make an application during or immediately after cultivation.</p> <p>Do not drench.</p> <p>** Aerial application can only be used for the first spray (3-leaf to thinning).</p>

POTATOES

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HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
<p>Apply with a boom sprayer with a single or multiple nozzles adjusted to provide thorough coverage of the foliage, particularly the older leaves.</p> <p>Under severe disease conditions the higher rate should be used for Early Blight.</p> <p>Application can also be made by chemigation or by air.</p> <p>When applying by sprinkler irrigation, deliver between 0.1 to 0.4 inches of water per acre.</p>	<p>Early Blight (<i>Alternaria solani</i>)</p>	1.0 - 2.0	10 Minimum	<p>Begin applications when conditions first become favorable for disease development. Up to 3 subsequent applications can be applied at 10-14 day intervals or as required.</p>	<p>A maximum of 4 total applications can be made per season.</p> <p>Do not apply within 14 days of harvest. (PHI = 14 days).</p> <p>Do not irrigate for 24 hours after application.</p>
<p>Apply with a boom sprayer using a single or multiple nozzles adjusted to provide thorough coverage of the lower stems and branches and the soil surface surrounding the plants or by chemigation.</p> <p>Thorough coverage is essential for control.</p>	<p>White Mold (<i>Sclerotinia sclerotiorum</i>)</p>	2.0	10 Minimum	<p>Apply just prior to row closing, or at early first sign of disease, and repeat on a 14 - 21 day interval, if favorable conditions for disease development continues.</p>	<p>Do not apply by air for White Mold control except in California.</p>

DIRECTIONS FOR USE THROUGH SPRINKLER IRRIGATION SYSTEMS

Apply this product only through sprinkler irrigation systems including microjet, solid set, wheel lines 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). The spray solution should be buffered to a pH of 5.0-7.0. Then set sprinkler to deliver 0.1 to 0.4 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 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

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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.

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, warnings 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.

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ROVRAL® 4 Flowable Fungicide (PENDING) Submitted 4/3/96.

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