279-9564 5/17/2014 1/10

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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Andy Eimanis
FMC Corporation
1735 Market Street
Philadelphia, PA 19103

MAY 17 2014

Subject: ROVRAL 4 Flowable Fungicide
EPA Reg. No. 279-9564
Notification dated April 8, 2014
Decision Number 490464

Dear Ms. Eimanis:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated April 8, 2014. The Registration Division (RD) has conducted a review of this request for applicability under PRN 98-10 and finds that your application falls within the scope of PRN 98-10. The inclusion of the mode of action and group number on the front panel of your product label is acceptable. A copy of the product label will be placed in the file for our records.

If you have any questions, please call Marcel Howard at 703-305-6784 or email at howard.marcel@epa.gov.

Sincerely,

Hope Johnson
Product Manger (21)
Fungicide Branch
Registration Division (7504P)

2/10

Please read instructions on reverse before completing form. Form Approved—OMB No. 2070-0060, Approval expires 2-28-95

United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☑ Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
279-9564	Hope Johnson	☑ None ☐ Restricted
4. Company/Product (Name)	**PM#**	
FMC Corporation	21	

5. Name and Address of Applicant *(Include ZIP Code)*

FMC Corporation
1735 Market Street
Philadelphia, PA 19103

☐ *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

☐ Amendment - Explain below.
☐ Resubmission in response to Agency letter dated _____
☑ Notification - Explain below.
☐ Final printed labels in repsonse to Agency letter dated _____
☐ "Me Too" Application.
☐ Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification providing the most recent MOA and resistance category appearing on our commercial label

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes	☐ Yes	☐ Yes	☐ Metal
☑ No	☑ No	☑ No	☑ Plastic
Certification must be submitted	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	☐ Glass ☐ Paper ☐ Other (Specify) _____

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☑ Label ☐ Container	1 gal, 2.5g, etc.	☑

6. Manner in Which Label is Affixed to Product ☑ Lithograph ☐ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
A. Eimanis	Senior Registration Manager	215-299-6415

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title	
A. Eimanis	Senior Registration Manager	
4. Typed Name	**5. Date**	
A. Eimanis	04/08/2014	

3/10

FMC Agricultural Products

FMC Corporation
1735 Market Street
Philadelphia, PA 19103

215.299.6000 phone
215.299.6468 fax
www.fmc.com

4/21

Via FedEx

April 8, 2014

Hope Johnson
Product Manager
Registration Division (7505P) NOTIF
U. S. Environmental Protection Agency
One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202

Re: PRN 98-10 notification voluntarily adding Proper resistance MOA and Group number to the Front Panel of EPA Registration No. 279-9564

Dear Ms. Johnson

FMC is making this PRN 98-notification in the interest of providing that the most recent MOA and resistance category appear on all of our commercial labels. The proper resistance MOA for this insecticide is Group 2. To complete this notification, we are enclosing the following:

- Completed EPA Application Form describing the purpose of this notification
- Three copies of the product labeling showing the change
- A copy of the most recent label posted on PPLS as current approved.

"This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA."

Sincerely,

A. Eimanis
Senior Registration Manager
andy_eimanis@fmc.com
215.299.6415
Enclosures.

4/10

rovral® brand

4 Flowable Fungicide

Group	2	Fungicide

EPA Reg. No. 279-9564 **EPA Est. No.: 279-NY-1**

ACTIVE INGREDIENT:

Iprodione: 3-(3,5-dichlorophenyl)-N- (1-methylethyl)-2,4-dioxo-1-imidazolidinecarboxamide*	41.6%
OTHER INGREDIENTS:	58.4%
TOTAL	100.0%

*Equivalent to 4 Lbs. Iprodione per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

For TRANSPORTATION and SPILLS Call CHEMTREC: (800) 424-9300.

NOTIFICATION

MAY 17 2014

FMC Corporation
Agricultural Products Group
1735 Market Street
Philadelphia, PA 19103

Net Contents: 2.5 Gallons

02-01-12R

FIRST AID	
IIF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED	• Call a Poison Control Center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow • Do not induce vomiting unless told by a Poison Control Center or doctor.
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.

For MEDICAL Emergencies Call 24 Hours A Day 1-800-331-3148.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders, others exposed to the concentrate, cleaners/repairers of equipment, and applicators applying as a dip treatment must wear long-sleeve shirt and long pants, chemical-resistant gloves such as barrier laminate, butyl rubber (> 14 mils), nitrile rubber (> 14 mils), neoprene rubber (> 14 mils), polyvinyl chloride (PVC) (> 14 mils), or viton (> 14 mils), chemical-resistant apron, and chemical-resistant footwear plus socks.

Applicators using hand held equipment must wear coveralls over long-sleeve shirt and long pants, chemical-resistant gloves such as barrier laminate, butyl rubber (> 14 mils), nitrile rubber (> 14 mils), neoprene rubber (> 14 mils), polyvinyl chloride (PVC) (> 14 mils), or viton (> 14 mils), chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposures, and a dust/mist, filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P or HE filter.

Applicators using aircraft or mechanical ground equipment (ground-boom, airblast, etc.), and flaggers for aerial applications must wear long-sleeve shirt and long pants, and shoes plus socks.

Applicators and all other handlers not specified above must wear long-sleeve shirt and long pants, chemical-resistant gloves such as barrier laminate, butyl rubber (> 14 mils), nitrile rubber (> 14 mils), neoprene rubber (> 14 mils), polyvinyl chloride (PVC) (> 14 mils), or viton (> 14 mils), and shoes plus socks.

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.

Discard clothing or other materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

ENGINEERING CONTROLS
When handlers use closed systems, enclosed [illegible], or aircraft in a manner that meets the requirements listed in [illegible] 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.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This chemical can contaminate surface water through aerial and ground spray applications. Under some conditions, it may also have a high potential for runoff into surface water after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water.

This pesticide is toxic to invertebrates. 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. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

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 indirectly 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 48 hours for grapes. The restricted entry interval for all other WPS uses is 24 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, chemical-resistant gloves such as barrier laminate, butyl rubber (> 14 mils), nitrile rubber (> 14 mils), neoprene rubber (> 14 mils), polyvinyl chloride (PVC) (> 14 mils), or viton (> 14 mils), and shoes plus socks.

STORAGE AND DISPOSAL

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Do not contaminate w[illegible] 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
Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times Offer for recycling, if available, 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
Refillable container. Refill this container with iprodione only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. This material may be repackaged in 30 gallon returnable-refillable containers by FMC Corporation or a registered establishment under contract to FMC Corporation. After use, return the container to the point of purchase or designated locations. 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 INSTRUCTIONS AND INFORMATION

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® brand 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® brand 4 Flowable Fungicide, and then the remaining volume of water. (Suspension concentrations using the appropriate dosage per acre recommended on this label of ROVRAL® brand 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® brand 4 Flowable Fungicide into the irrigation water line so as to deliver the desired rate per acre. The suspension of ROVRAL® brand 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® brand 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 pres-

sure 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. If you are unsure of wind conditions, contact your local extension agent.

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.

AERIAL SPRAY DRIFT

SENSITIVE AREAS: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitats for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulation.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed. The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

INFORMATION ON DROPLET SIZE: (This section is advisory in nature and does not supersede the mandatory label requirements)

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions below).

CONTROLLING DROPLET SIZE: (This section is advisory in nature and does not supersede the mandatory label requirements)

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

BOOM LENGTH: (This section is advisory in nature and does not supersede the mandatory label requirements)

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

APPLICATION HEIGHT: (This section is advisory in nature and does not supersede the mandatory label requirements)

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

SWATH ADJUSTMENT: (This section is advisory in nature and does not supersede the mandatory label requirements)

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

WIND: (This section is advisory in nature and does not supersede the mandatory label requirements)

Drift potential is lowest between wind speeds of 2 - 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY: (This section is advisory in nature and does not supersede the mandatory label requirements)
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS: (This section is advisory in nature and does not supersede the mandatory label requirements)

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

HOW TO USE ROVRAL® BRAND 4 FLOWABLE FUNGICIDE

Partially fill the spray tank with clean water. Measure the required amount of ROVRAL® brand 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® brand 4 Flowable Fungicide 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® brand 4 Flowable Fungicide. Mixing with very acidic products may result in precipitation of ROVRAL® brand 4 Flowable Fungicide.

HOW TO APPLY ROVRAL® BRAND 4 FLOWABLE FUNGICIDE IN-FURROW FOR COTTON

Use sprayer equipment calibrated to deliver the registered dose rate of product. Spray nozzles should be configured on the planter to apply the product 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® BRAND 4 FLOWABLE FUNGICIDE IS REGISTERED FOR USE ON THE FOLLOWING:	
Field and Row Crops	**Small Fruit**
Cotton	Berries (except blueberries) *
Peanuts†	Grapes
Fruit Trees and Nuts	Strawberries
Almonds	**Vegetables**
Stone Fruits	Beans (Snap, Dry, and Lima)
Apricots	Broccoli
Cherries	Carrots
Nectarines	Chinese Mustard (Florida Only)
Peaches	Dry Bulb Onions
Plums	Garlic
Prunes	Lettuce (Head & Leaf types)
Ginseng†	Potatoes

* Rovral® brand 4 Flowable Fungicide is not registered for use on blueberries. Do not use on any variety of blueberries.

† Not currently registered for use in California.

GENERAL PRECAUTIONS AND RESTRICTIONS

Use of this product at residential sites is prohibited.

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

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

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.

If applying this product adjacent to a water body such as a lake, reservoir, river, permanent stream, marsh or natural pond, estuary, or commercial fish pond, there must be at least a 25-foot vegetative buffer strip between the water body and the point of application.

Do not apply this product when the wind direction is toward aquatic areas as listed above.

FUNGICIDE RESISTANCE STATEMENT

ROVRAL® brand 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®.

APPLICATION INSTRUCTIONS

FIELD AND ROW CROPS

COTTON

HOW TO USE	DISEASE	DOSAGE RATE			
		FLUID OUNCES PER 1000 FEET OF ROW	TOTAL OUNCES PER ROW SPACING PER ACRE	GALS. WATER PER ACRE	
Apply at-planting using spray nozzles mounted on the planter to deliver the spray solution to the open seed furrow. Direct the spray in-furrow immediately behind the seed drop tube and before the furrow closure devices. Apply the higher rate of ROVRAL® brand 4 Flowable Fungicide if the field has a history of high seedling disease pressure or if weather conditions favor seedling disease development (e.g. cool and wet).	**Damping-off, "Sore Shin"** *(Rhizoctonia solani)*	0.25 - 0.5	40"=3.2-6.5 38"=3.4-6.9 36"=3.6-7.3 30"=4.4-8.7	2.5 Minimum	

PEANUTS*

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
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. 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. Applications may also be made by chemigation.	**Sclerotinia Blight** *(Sclerotinia minor)*	2.0	40 Minimum	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. For best results apply using a preventative program.	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. Do not apply within 10 days of harvest. (PHI = 10 days). Do not apply by air. Do not feed peanut hay to livestock. *** Not currently registered for use in California.**

FRUIT TREE AND NUTS

ALMONDS

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
ROVRAL® brand 4 Flowable Fungicide should be used as an integral part of a complete disease control program. Apply as a foliar spray in sufficient water to obtain thorough coverage of blossoms, foliage, and/or fruit **The use of aerial application after petal fall may result in reduced control due to lack of canopy penetration and coverage.**	**Brown Rot Blossom Blight** *(Monilinia laxa)* **Shot Hole** *(Wilsonomyces carpophilus)* **Alternaria Leaf Spot** *(Alternaria alternata)* **Jacket Rot** *(Botrytis cinerea)*	1.0	20 – 400 (ground) 15 Minimum (air)	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. **Spray Schedule Table** Apply first at pink bud and, if conditions favorable for disease development persist or recur up to 3 subsequent applications can be made at: 1) full bloom 2) petal fall 3) up to 5 weeks after petal fall. The optimal timing for jacket rot control is full bloom. Applications may be made up to 5 weeks after petal fall for *Alternaria*. If conditions remain conducive for the development of *Alternaria* leaf spot beyond 5 weeks after petal fall, additional applications of a fungicide effective against *Alternaria* will be necessary since Rovral is not labeled for use on almonds beyond 5 weeks after petal fall.	Do not make more than 4 applications per season.
Tank Mix Program Apply as a tank mix with CAPTAN 50WP to broaden disease control. All applicable directions, restrictions, and precautions on the CAPTAN 50WP label are to be followed.	**Brown Rot Blossom Blight** *(Monilinialaxa)* **Shot Hole** *(Wilsonomyces carpophilus)* **Almond Scab** *(Cladosporium (carpophilum)* **Anthracnose** *(Colletotrichum acutatum)*	1.0 pint/A Rovral 4F **PLUS** 4 – 6 lbs./A Captan 50WP	20 – 300 (ground) 15 Minimum (air)		

STONE FRUIT

APRICOTS, CHERRIES, NECTARINES, PEACHES, PLUMS AND PRUNES

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
ROVRAL® brand 4 Flowable Fungicide should be used as an integral part of a complete disease control program. Apply as a foliar spray in sufficient water to obtain thorough coverage of blossoms and foliage. Under severe disease conditions, the higher rate and shorter spray interval is recommended.	**Brown Rot Blossom Blight** *(Monilinia spp.)* **Shot Hole** *(Wilsonomyces carpophilus)* **Scab** *(Cladosporium carpophilum)* **Jacket Rot** *(Botrytis cinerea, Monilinia spp.)*	1.0 - 2.0	20 to 400 (ground) 15 Minimum (air)	Apply when bud tissue is susceptible to disease development (i.e., pink, white or red bud). If conditions favorable for disease development persist or recur, apply at full bloom or at petal fall. The use of this product may be alternated with other registered fungicides as additional applications may be required during the bloom period. The optimal timing for jacket rot control is full bloom.	Do not make more than 2 applications of this product per season. This product may not be applied after petal fall.

GINSENG*

HOW TO USE	DISEASE	DOSAGE RATE PINTS PER ACRE	DOSAGE RATE GALS. WATER PER ACRE	WHEN TO APPLY	USE RESTRICTIONS
ROVRAL® brand 4 Flowable Fungicide 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** *(Alternaria panax)*	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** *(Alternaria panax)*	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 for use in California.**

SMALL FRUIT

BERRIES

Caneberry: Blackberry; loganberry; red and black raspberry; cultivar and/or hybrids of these

Bushberry*: Currant; elderberry; gooseberry; huckleberry

HOW TO USE	DISEASE	DOSAGE RATE PINTS PER ACRE	DOSAGE RATE GALS. WATER PER ACRE	WHEN TO APPLY	USE RESTRICTIONS
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** *(Botrytis cinerea)*	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).

*** Rovral® brand 4 Flowable Fungicide is not registered for use on blueberries. Do not use on any variety of blueberries.**

GRAPES

HOW TO USE	DISEASE	DOSAGE RATE PINTS PER ACRE	DOSAGE RATE GALS. WATER PER ACRE	WHEN TO APPLY	USE RESTRICTIONS
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. Application may be made by chemigation except in the state of New York. Under severe disease conditions, the higher rate is recommended. This product must be used in conjunction with good cultural practices designed to minimize conditions conducive for Bunch Rot development. **Thorough coverage of the bunches is essential.**	**Bunch Rot** *(Botrytis cinerea)*	**Wine and Sherry Grapes:** 1.0-2.0 1.5-2.0 1.5-2.0 1.5-2.0	50 Minimum	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. **Spray Schedule Table** 1) Early to mid-bloom 2) Prior to bunch closing 3) Beginning of fruit ripening (veraison) 4) Final application prior to harvest as needed.	Do not make more than 4 applications per season. The final application may be made up to 7 days before harvest (PHI=7 days).
		Table and Raisin Grapes: 1.0-2.0	50 Minimum	Early to mid-bloom	Do not make more than one application per season

STRAWBERRIES

HOW TO USE	DISEASE	DOSAGE RATE PINTS PER ACRE	DOSAGE RATE PINTS PER 100 GALLONS	WHEN TO APPLY	USE RESTRICTIONS
DIP Dip the transplants in the solution for 1 to 5 minutes and plant immediately.	**Botrytis Crown Rot** *(Botrytis cinerea)*	–	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 is recommended. ***ROVRAL® brand 4 Flowable Fungicide will suppress or give partial control of this disease.**	**Gray Mold** *(Botrytis cinerea)* **Stem End Rot** *(Gnomonia comari)* **Phomopsis Soft Rot** *(Phomopsis obscurans)* **Purple Leaf Spot** *(Mycosphaerella spp.)* **Anthracnose*** *(Colletotrichum spp.)*	1.5 - 2.0	–	Apply when conditions are favorable for disease development.	Do not make more than 1 application per season. Do not apply ROVRAL® brand 4 Flowable Fungicide after first fruiting flower.
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® brand 4 Flowable Fungicide will suppress or give partial control of this disease.**		1.0	–	Apply when conditions are favorable for disease development.	Do not make more than 1 application per season. Do not apply ROVRAL® brand 4 Flowable Fungicide after first fruiting flower.

VEGETABLES

BEANS (Snap, Dry, and Lima)

HOW TO USE	DISEASE	DOSAGE RATE PINTS PER ACRE	DOSAGE RATE GALS. WATER PER ACRE	WHEN TO APPLY	USE RESTRICTIONS
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. Application can also be made by air* or chemigation. Under severe disease conditions the higher rate and shorter spray interval should be used. **Thorough coverage is essential for disease control.**	**Gray Mold** *(Botrytis cinerea)* **White Mold** *(Sclerotinia sclerotiorum)*	1.5 to 2.0	40 Minimum (ground) 10 Minimum (air)	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.	Two applications maximum per season, with the last application made no later than peak bloom. Do not allow foraging for 14 days after last application. Do not feed snap or succulent bean hay to livestock. Do not feed dry bean hay to livestock until 45 days after last application. Do not use this product on cowpeas. *** Aerial application is not currently registered for use in California.**

BROCCOLI

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
Apply 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. Application may be made by chemigation.	**Black Leg** *(Leptosphaeria maculans)*	2.0	40 Minimum (ground)	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.	Do not make more than 2 applications per crop. Do not drench. This product can be applied up to the day of harvest (PHI = 0 days).

CARROTS

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. May be applied by ground, chemigation, or aerial equipment. The higher rate and/or shorter spray interval should be used under severe disease conditions.	**Alternaria Blight** *(Alternaria dauci)* **Black Crown Rot** *(Alternaria radicina)*	1.0 - 2.0	10 Minimum	*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.	*Do not make more* than 4 applications of this product per season. This product can be applied up to the day of harvest (PHI = 0 days).
Tank Mix Program Apply as a tank mix with another fungicide registered for control of Alternaria on carrots.	**Alternaria Blight** *(Alternaria dauci)* **Black Crown Rot** *(Alternaria radicina)*	1.0	10 Minimum	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.	Do not make more than 10 applications per season. This product can be applied up to the day of harvest (PHI = 0 days).

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** *(Alternaria spp.)*	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).

DRY BULB ONIONS

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
Apply using ground, air, or chemigation equipment. For ground applications, use a boom sprayer with either a single or multiple nozzles per row adjusted to provide complete coverage of each row.	**Botrytis Leaf Blight** *(Botrytis squamosa)* **Purple Blotch** *(Alternaria porri)* **Botrytis Neck Rot** *(Botrytis allii)* **Stemphylium Blight** *(Stemphylium vesicarium)*	1.5	10 Minimum (aerial) 50 Minimum (ground)	Apply as a foliar spray as soon as conditions become favorable for disease development. Continue application on a 14 day interval as long as conditions favor disease development.	Do not make more than 5 applications per season. Do not apply within 7 days of harvest. (PHI = 7 days).
Tank Mix Program Apply as a tank mix with another fungicide registered for the control of Botrytis Leaf Blight, Botrytis Neck Rot or Purple Blotch (as described above for ground application).	**Botrytis Leaf Blight** *(Botrytis squamosa)* **Purple Blotch** *(Alternaria porri)* **Botrytis Neck Rot** *(Botrytis allii)* **Stemphylium Blight** *(Stemphylium vesicarium)*	1.0	10 Minimum (aerial) 50 Minimum (ground)	Apply as a foliar spray as soon as conditions become favorable for disease. Continue applications on a 7 to 10 day interval as long as conditions favor disease development.	Do not make more than 10 applications per season. Do not apply within 7 days of harvest. (PHI = 7 days).

GARLIC

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
Apply as an in-furrow spray in sufficient water to obtain thorough coverage of the open furrow and covering soil.	**White Rot** *(Sclerotium cepivorum)*	4.0*	20 Minimum	Apply in the furrow at planting.	Do not make more than 1 application per year.

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

LETTUCE (head & leaf types)

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. 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. Under severe disease conditions the higher rates should be used. * When applying in a band do not reduce the acre rate. Applications may also be made by air** or chemigation.	**Lettuce Drop** *(Sclerotinia spp.)* **Bottom Rot** *(Rhizoctonia solani)* **Gray Mold** *(Botrytis cinerea)*	1.5 - 2.0*	40 Minimum	Apply from planting 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.	Do not make more than 3 applications to each crop. Do not apply within 14 days of harvest (PHI=14 days). Do not cultivate after application. If necessary, make an application during or immediately after cultivation. Do not drench. ****Aerial application can only be used for the first spray (between planting and thinning stage).**

POTATOES

HOW TO USE	DISEASE	DOSAGE RATE		WHEN TO APPLY	USE RESTRICTIONS
		PINTS PER ACRE	GALS. WATER PER ACRE		
Apply with a boom sprayer with a single or multiple nozzles adjusted to provide thorough coverage of the foliage, particularly the older leaves. Under severe disease conditions the higher rate should be used for Early Blight. Application can also be made by chemigation or by air. When applying by sprinkler irrigation, deliver between 0.1 to 0.4 inches of water per acre.	**Early Blight** *(Alternaria solani)*	1.0 - 2.0	10 Minimum	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.	A maximum of 4 total applications can be made per season. Do not apply within 14 days of harvest. (PHI = 14 days). Do not irrigate for 24 hours after application.
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. Thorough coverage is essential for control.	**White Mold (Sclerotinia sclerotiorum)**	2.0	10 Minimum	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.	Do not apply by air for White Mold control except in California.

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