



# Dithane™ Rainshield™ Fungicide

GROUP	M 3	FUNGICIDE
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## Contains Mancozeb

AGRICULTURAL

READ THE LABEL AND BOOKLET BEFORE USING  
KEEP OUT OF REACH OF CHILDREN

GUARANTEE: Mancozeb.....75.0%

Warning: contains the allergen sulfites

Wettable granule

REGISTRATION NO. 20553 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 3.5 kg - bulk

### Corteva Agriscience Canada Company

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Calgary, Alberta

T2P 1M4

1-800-667-3852

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## **PRECAUTIONS**

### **KEEP OUT OF REACH OF CHILDREN**

May cause irritation of nose, throat, eyes and skin. Do not breathe spray mist. Wear coveralls, chemical resistant gloves, and goggles during mixing/loading. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Thoroughly launder clothing before re-use.

### **FIRST AID**

**Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.**

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**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 eye. Call a poison control centre or doctor for treatment advice.

### **TOXICOLOGICAL INFORMATION**

No specific antidote. Employ supportive care. Treatment should be based on judgment of the physician in response to reactions of the patient.

### **AGRICULTURAL CHEMICAL**

Do not ship or store with food, feeds, drugs or clothing.

### **ENVIRONMENTAL HAZARDS**

This product is toxic to fish. Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not apply when weather conditions favour drift from areas treated.

### **STORAGE**

Keep away from fire and sparks. Store in cool, dry, well ventilated place. Do not allow to become wet or overheated in storage: decomposition, impaired activity, or fire may result. Keep container closed when not in use. Pallets of containers should not be stacked more than 3 high. Provide access aisles for each 2 rows. Decomposition produces foul odour: if observed, check for hot containers and remove immediately to open areas for disposal. Do not contaminate food or feed by storage or disposal.

### **DISPOSAL**

1. Thoroughly empty the contents of the container into the application device.
2. Make the empty container unsuitable for further use.
3. Dispose of the container in accordance with provincial requirements.
4. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

### **GENERAL INFORMATION**

#### **DIRECTIONS FOR USE**

READ ALL DIRECTIONS CAREFULLY BEFORE APPLYING. FAILURE TO FOLLOW LABEL INSTRUCTIONS MAY RESULT IN ERRATIC FUNGICIDE CONTROL OR CROP DAMAGE.

### **Mixing Instructions**

Do not premix Dithane Rainshield Fungicide into a smaller tank. Pour Dithane Rainshield Fungicide slowly into a 1/4 filled spray tank while the agitator is running. Fill tank with water. Add other co-applied fungicides, insecticides, growth regulators, micronutrients, and spray adjuvants, that are registered under the *Pest Control Products Act* after Dithane Rainshield Fungicide has been placed into suspension. Do not let Dithane Rainshield Fungicide settle out in an un-agitated spray tank. Rinse out spray tank, pumps, and nozzles at the end of the day.

When preparing spray solutions for use in aircraft sprayers, premix thoroughly in a nurse tank then add to sprayer containing 1/3 to 1/2 the desired final water volume. After adding slurry continue to fill tank to desired water volume.

Thorough, uniform coverage is essential for good disease control. For low volume airblast sprayers, adjust the mixing rate accordingly.

### **Generic Aerial Application label Instructions**

#### **Directions for Use**

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

#### **Use Precautions**

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the *National Aerial Pesticide Application Manual*, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas.

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in fine particles (mist). Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat, (such as shelter-belt) or aquatic habitat.

#### **Operator Precautions**

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

### **Product Specific Precautions**

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-800-667-3852 or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

Volume: Apply the recommended rate in a minimum spray volume of 25 litres per hectare.

### **VEGETABLES**

**POTATOES** - For early and late blight. Begin applications early, apply 1.10 kilograms Dithane Rainshield Fungicide per hectare when plants are 10-15 cm high. Increase the rate to 1.75 kilograms per hectare as plants increase in size, and to 2.25 kilograms per hectare at row closure. Apply every 7-10 days throughout the season.

#### **Reduced Spray Interval Schedule**

During periods of wet weather favouring late blight and/or vigorous crop growth, spray intervals may be reduced to 5-6 days. Apply 1.1 kilograms per hectare until row closure then increase the rate to 1.75 kilograms per hectare until conditions allow the return to the regular spray schedule.

Thorough, uniform coverage is essential for good disease control. Do not apply within 1 day of harvest. Use 40 litres of water per hectare for aerial applications.

**TOMATOES** - For control of early and late blight, Anthracnose, Stemphyllium, (grey leaf spot). Use Dithane Rainshield Fungicide at 1.10 to 3.25 kilograms per hectare in sufficient water to provide adequate coverage. Start applications when disease is first reported in the area and repeat every 7 to 10 days or more often under severe disease conditions. Do not apply within 7 days of harvest.

**ONIONS** - For control of Botrytis leaf blight (leaf spot or blast). Apply 2.25 to 3.25 kilograms per hectare when disease first appears and repeat every 7 days as needed. Add a suitable wetting agent. Do not use on green bunching onions. Do not use later than 10 days before harvest.

**CELERY** - For early and late blight. Begin spraying at 2.25 kilograms per hectare in the plant bed when plants first come through the ground. Make further applications at 3-5 day intervals until plants are set in field. Continue field applications on a regular weekly schedule. Do not apply later than 14 days before harvest. Strip, trim and wash the celery at harvest.

**CARROTS** - For leaf spot diseases. Start applications of 2.25 kilograms per hectare when plants are 6 weeks old or when disease threatens. Repeat at 7-10 day intervals. Do not apply later than 7 days before harvest. Do not use treated tops for food or feed.

**CANTALOUPE, CUCUMBERS, PUMPKIN, SQUASH, MELONS AND WATERMELONS** - For control of Downy Mildew, Anthracnose, Scab, Gummy Stem Blight and Alternaria leaf spot. Use Dithane Rainshield Fungicide at 1.10 to 3.25 kilograms per hectare in sufficient water to provide adequate coverage. Start applications when runners begin to form or at first sign of disease and repeat at weekly intervals. Direct spray for thorough coverage of both upper and lower leaf surfaces. Do not apply within 14 days of harvest.

## FRUIT

APPLES - For the control of scab and cedar apple rust and quince rust. For a protective schedule begin application of Dithane Rainshield Fungicide in the green tip up to 1.25 cm (half inch) green sprays. Repeat any subsequent pre-bloom, bloom, and cover sprays in accordance with the timing in your local schedule for a protective program. Use 2.0 kilograms of Dithane Rainshield Fungicide per 1000 litres of water in single strength sprays or the equivalent in concentrate sprays. If moderate disease conditions prevail, the dosage can be reduced to 1.5 kilograms in the cover sprays. The addition of a wetting agent will ensure a smoother, more even coverage of your spray material and helps prevent blotchy, visible residues. Fruit colour and finish on most apple varieties sprayed with Dithane Rainshield Fungicide have frequently been outstanding. Do not apply within 45 days of harvest.

**CAUTION - Do not feed treated apple pomace to livestock.**

GRAPES – For the control of Downy Mildew (*Plasmopara viticola*) and Black Rot (*Guignardia bidwellii*) on grapes, use Dithane Rainshield Fungicide at the rate of 2.13 kilograms per 1000 litres (7.2 kilograms per hectare) as follows – start applying when new shoots are 20-25 centimeters long (pre-bloom). Apply two to three more sprays 10-12 days apart post-bloom. Do not use spray within 30 days of harvest.

## TOBACCO (GREENHOUSE)

For blue mold control, apply 50 to 100 grams of Dithane Rainshield Fungicide in 25 to 50 litres of water and apply to 100 square metres. Spray seedlings to wet without run-off. Start spraying when plants are 1.5 centimetres across and then twice per week until transplanting.

## HERBS

GINSENG - For control of Alternaria leaf blight. Use Dithane Rainshield Fungicide at 4.4 kg/ha in 2,000 L of water. Apply when disease first appears and follow with five subsequent sprays at two week intervals as part of a regular spray program. Do not apply within 30 days of harvest. Do not feed treated ginseng (roots or foliage) to livestock.

## FIELD CROPS

WHEAT (ALL VARIETIES, INCLUDING DURUM) - For the control of tan spot, Septoria leaf blotch, and leaf rust.

Early Spray: Apply at a rate of 1.1 kilograms per hectare at the Feekes 1-3/Zadoks 12-21 growth stages, when the crop is in the 3 leaf to tillering stage.

AND / OR

Late Spray: Apply at a rate of 2.25 kilograms per hectare at the Feekes 10.5/Zadoks 59 growth stages, when the head is fully emerged but prior to flowering (heading stage).

For ground spray applications with flat fan nozzles, use 100 litres of water per hectare at a pressure of 345 kPa. Use 40 litres of water per hectare for aerial applications. Do not make more than two applications during the season and do not apply within 40 days of harvest.

**CAUTION: Do not graze the treated crop or cut for hay; there are not sufficient data to support such use.**

**LENTILS** - For the control of anthracnose and ascochyta blight, apply Dithane Rainshield Fungicide at the rate of 2.25 kilograms of product per hectare. Apply the first application before bloom, when bud formation is evident. A second application should be applied 10 to 14 days after the initial application at early to mid bloom but prior to row closure. If conditions for disease development persist, a third application may be applied 10-14 days later. Do not apply more than three applications of Dithane Rainshield Fungicide per season. For ground spray applications with flat fan nozzles, use 100-200 litres of water per hectare at a pressure of 275-345 kPa. Use 40 litres of water per hectare for aerial applications. Do not apply within 35 days of harvest.

## **ORNAMENTALS**

**JUNIPERS** - (British Columbia only) for pear trellis rust control use 2.8 - 3.5 kg Dithane Rainshield Fungicide in 1,000 L water per hectare. Make 3 applications annually in the third week of August and the second and fourth weeks of September. Thorough coverage of all junipers in the nursery is required.

**ARBORVITAE, JUNIPER, DOUGLAS FIR** - For control of Coryneum blight, Keithia blight, Dieback, Rhabodcline needle cast, apply 2.75 - 3.5 kg in 1,000 L water per hectare. Spray at 10-14 day intervals during April, May, and early June to protect new growth.

**ASH, OAK, SYCAMORE** - For control of Anthracnose (*Gloeosporium* spp.) apply 2.75 - 3.5 kg in 1,000 L water per hectare. Spray at 10-14 day intervals beginning just prior to bud burst and continuing as long as wet weather persists in spring.

**HAWTHORN** - For control of Leaf Blight (*Diplocarpon* sp.), apply 2.75 - 3.5 kg in 1,000 L water per hectare. Spray at 10-14 day intervals as required beginning with bud burst in spring.

**HOLLY** - For control of Algae Leaf and twig blight (*Phytophthora ilicis*), apply 1.8 - 2.5 kg in 1,000 L water per hectare. Spray as required, especially during wet season. Avoid applications close to harvest to avoid visible residues.

**IVY** - For control of Leaf spot (*Hedera* spp), apply 1.25 - 2.25 kg in 1,000 L water per hectare. Spray as required, especially during the wet season.

**PINE** - For control of *Lophodermium* needle cast, apply 2.5 kg in 1,000 L water per hectare. Spray every 2-3 weeks during July, August and September.

**NOTE TO USER:** READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR SPECIAL USE APPLICATIONS: The DIRECTIONS FOR USE for this product for the use(s) described below were developed by persons other than Corteva Agriscience Canada Company and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Corteva Agriscience Canada Company itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crop(s) listed on this label.

Accordingly, the Buyer and User assume all liability arising, and agree to hold Corteva Agriscience Canada Company harmless from any claims based on efficacy and/or phytotoxicity in connection with the use(s) described on this label.

### **DIRECTIONS FOR USE**

#### **Honeysuckle**

For Honeysuckle Blight (*Herpobasidium deformans*). Apply as a dilute foliar spray; ground application; maximum of 3 applications per year; begin application at green tip to 1.25 cm (half inch) green leaf; repeat at 10-14 day intervals. Apply 2 kilograms Dithane Rainshield Fungicide per 1000 litres of water.

### **Alfalfa Grown for Seed**

For control of Leaf Spot and Stem spot disease apply prior to 50% bloom. Use Dithane Rainshield Fungicide at 1.46 kilograms per hectare, use a maximum of 3 applications per year.

Repeat 7-10 days after the first application and 10 days after the second application. Do not use for human or animal consumption. Do not graze the treated crop or cut for hay. Do not use on alfalfa sprout crops for human consumption.

Do not use seed crop residue for animal consumption

### **Dry Bulb Onions**

ONION SMUT (*Urocysti cepulae*) - One application per year. Apply 4.4 to 8.8 kilograms per hectare Dithane Rainshield Fungicide as a granular in the furrow at seeding time. Do not apply within 100 days of harvest.

### **RESISTANCE MANAGEMENT RECOMMENDATIONS**

For resistance management, Dithane Rainshield Fungicide contains a Group M3 fungicide. Any fungal population may contain individuals naturally resistant to Dithane Rainshield Fungicide and other Group M3 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed:

To delay fungicide/bactericide resistance:

- Where possible, rotate the use of Dithane Rainshield Fungicide or other Group M3 fungicides with different groups that control the same pathogens.
- Use tank mixtures with fungicide from a different group that is effective on the target pathogen when such use is permitted.
- Fungicide use should be based on an integrated disease management program that includes scouting, historical information related to pesticide use and crop rotation and considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide applications.
- Monitor treated fungal populations for resistance development. Notify Corteva Agriscience Canada Company if reduced sensitivity of the pathogen to Dithane Rainshield Fungicide is suspected. If disease continues to progress after treatment with this product, do not increase the use rate. Discontinue use of this product, and switch to another fungicide with a different site of action, if available.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information and to report suspected resistance, contact Corteva Agriscience Canada Company at 1-800-667-3852 or at [www.corteva.ca](http://www.corteva.ca).

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

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Label Code: CN-20553-011-E

Replaces: CN-20553-010-E

Specimen Notes:

Legal Entity change from DAS to Corteva

