

62719-402

3/13/2009

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

WASHINGTON, D.C. 20460

**OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES**

Raymond Brinkmeyer, Ph.D.  
Regulatory Leader – Regulatory Affairs  
Dow AgroSciences, LLC  
9330 Zionsville Road  
Indianapolis, IN 46268-1054

MAR 13 2009

Dear Dr. Brinkmeyer:

**SUBJECT:** Dithane DF Rainshield  
EPA Registration Number 62719-402  
Your Submission of December 17, 2008  
Your Submission of March 3, 2009  
OPPIN Decision Number D404533

The revised basic Confidential Statement of Formula (CSF), dated December 5, 2008 referred to above submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable. Please note that this CSF supersedes all previous CSF's for this product and will be added to the regulatory file.

The amendment referred to above, submitted in connection with registration under section (3) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading.

In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

As an alternative, you may refer consumers to the company's phone number or email address.

If you have any questions, please contact Lisa Jones on my team at (703) 308-9424 or [jones.lisa@epa.gov](mailto:jones.lisa@epa.gov).

Sincerely,



Mary L. Waller  
Product Manager (21)  
Fungicide Branch  
Registration Division (7505P)

Enclosure: Stamped label

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[Sub-Label A: Agricultural Uses]

(Base label):

62719-402

75% mancozeb

# Dithane<sup>®</sup> DF Rainshield<sup>®</sup> Fungicide

<b>Group</b>	<b>M3</b>	<b>FUNGICIDE</b>
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**Active Ingredients**

mancozeb: A coordination product of zinc ion and manganese ethylene bisdithiocarbamate .. 75.0%

In which the ingredients are:

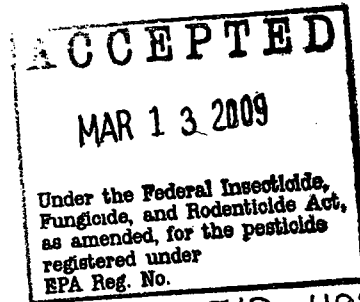
Manganese<sup>++</sup> ..... 15.00%

Zinc<sup>++</sup> ..... 1.9%

Ethylene bisdithiocarbamate ion (C<sub>4</sub>H<sub>6</sub>N<sub>2</sub>S<sub>4</sub>)<sup>--</sup> ..... 58.1%

Other Ingredients ..... 25.0%

Total ..... 100.0%



62719-402

**Keep Out of Reach of Children**

## CAUTION

### Precautionary Statements

#### Hazards to Humans and Domestic Animals

**Harmful If Absorbed Through Skin • Causes Moderate Eye Irritation • Prolonged or Frequently Repeated Skin Contact May Cause Allergic Reactions in Some Individuals**

**Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.**

#### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are nitrile rubber, natural rubber, or butyl rubber. If you want more options, follow the instructions for Category A on an EPA chemical resistance category selection chart.

#### Mixers, loaders, applicators and other handlers must wear:

- long-sleeved shirt
- long pants
- shoes and socks
- chemical-resistant gloves made of any waterproof material (except pilots, groundboom applicators, and airblast applicators)

See engineering controls for additional requirements

### User Safety Requirements

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing

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

### Engineering Controls

**Enclosed Cockpits:** Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)].

**Mechanical Flagging Engineering Controls:** Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE 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.

### First Aid

**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 to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

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

**If 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 day or night, for emergency treatment information.

### Environmental Hazards

This pesticide is toxic to aquatic organisms. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

### Nonrefillable rigid containers 50 lb or less:

#### Storage and Disposal

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

**Pesticide Storage:** Keep away from fire and sparks. Store in a cool, dry, well-ventilated area. Do not allow stored product to become wet or overheated in storage; decomposition, impaired activity, or fire may result. Keep container closed when not in use.

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Decomposition produces a foul odor; if observed, check for hot containers and immediately remove to open areas for 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 Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or 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.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

#### **Nonrefillable nonrigid containers:**

##### **Storage and Disposal**

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**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### **Refillable rigid containers larger than 5 gal:**

##### **Storage and Disposal**

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

**Pesticide Storage:** Keep away from fire and sparks. Store in a cool, dry, well-ventilated area. Do not allow stored product to become wet or overheated in storage; decomposition, impaired activity, or fire may result. Keep container closed when not in use.

Decomposition produces a foul odor; if observed, check for hot containers and immediately remove to open areas for 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 Handling:** Refillable container. Refill this container with pesticide 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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**Refer to label booklet for Directions for Use.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

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

EPA Reg. No. 62719-402

EPA Est. \_\_\_\_\_

®Trademark of Dow AgroSciences LLC

**Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268**

**Net Weight \_\_\_\_\_**

7 of 42

(cover):

# Dithane<sup>®</sup> DF Rainshield<sup>®</sup> Fungicide

<b>Group</b>	<b>M3</b>	<b>FUNGICIDE</b>
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mancozeb: A coordination product of zinc ion  
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Manganese<sup>++</sup> ..... 15.00%

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ion (C<sub>4</sub>H<sub>6</sub>N<sub>2</sub>S<sub>4</sub>)<sup>--</sup> ..... 58.1%

Other Ingredients ..... 25.0%

Total ..... 100.0%

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## CAUTION

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Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

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9330 Zionsville Road  
Indianapolis, IN 46268**

**Net Weight** \_\_\_\_\_

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**Precautionary Statements**

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**Hazards to Humans and Domestic Animals****CAUTION**

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**Personal Protective Equipment (PPE)**

Some materials that are chemical-resistant to this product are nitrile rubber, natural rubber, or butyl rubber. If you want more options, follow the instructions for Category A on an EPA chemical resistance category selection chart.

**Mixers, loaders, applicators and other handlers must wear:**

- long-sleeved shirt
- long pants
- shoes and socks
- chemical-resistant gloves made of any waterproof material (except pilots, groundboom applicators, and airblast applicators)

See engineering controls for additional requirements

**User Safety Requirements**

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

**Engineering Controls**

**Enclosed Cockpits:** Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)].

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**First Aid**



**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 to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

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

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Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 day or night, for emergency treatment information.

### Environmental Hazards

This pesticide is toxic to aquatic organisms. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

### Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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 (REI) of 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 made of any waterproof material
- Shoes plus socks

### Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Professional applications to golf courses, industrial (office park), and municipal lawns are not within the scope of the Worker Protection Standard.

- Keep unprotected persons out of treated area until sprays have dried.

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**Storage and Disposal**

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

**Pesticide Storage:** Keep away from fire and sparks. Store in a cool, dry, well-ventilated area. Do not allow stored product to become wet or overheated in storage; decomposition, impaired activity, or fire may result. Keep container closed when not in use.

Decomposition produces a foul odor; if observed, check for hot containers and immediately remove to open areas for disposal.

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

**Nonrefillable rigid containers 5 gallons or less:**

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or 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.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**Nonrefillable nonrigid containers:**

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Refillable rigid containers larger than 5 gal:**

**Container Handling:** Refillable container. Refill this container with pesticide 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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## General Use Information

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Dithane® DF Rainshield® fungicide is a broad-spectrum protectant fungicide recommended for outdoor or greenhouse grown crops. Optimum disease control is achieved when the fungicide is applied in a regularly scheduled preventative spray program. The addition of an agricultural surfactant will improve fungicide performance by providing a more uniform spray deposit, increased foliar redistribution, and improved fungicide retention during periods of wet weather.

### Use Rate Determination

- Carefully read, understand, and follow label use rates and restrictions.
- When two pesticides are tank mixed, the more restrictive label conditions apply.
- Under low disease conditions, minimum label rates per application can be used while maximum label rates and the minimum interval may be used for severe or threatening disease conditions.
- **For proper application, determine the number of acres to be treated, the required label use rate and the volume to be applied per acre. Prepare only the amount of spray solution required to treat the measured acreage. Careful calibration of spray equipment is recommended prior to use.**
- **When applied by hand sprayers, 1 pound Dithane DF per 100 gallons per acre is equivalent to 1 level tablespoon per gallon spray solution.**

### Mixing Procedures

Slowly place into spray tank as it is being filled or thoroughly premix in a nurse tank for concentrate or aircraft sprayers. Add other co-applied fungicides, insecticides, growth regulators, micronutrients after Dithane DF has been placed into suspension.

When preparing spray solutions for use in a hand sprayer, premix as a slurry in a small container, and then add to sprayer containing 1/3 to 1/2 the desired final water volume.

### Compatibility

Dithane DF is compatible with most commonly used agricultural fungicides, insecticides and growth regulators. When preparing tank mixes, user should consult spray compatibility charts or State Cooperative Extension Service Specialists prior to actual use.

## SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

### Wind Speed

Do not apply at wind speeds greater than 15 mph.

### Temperature Inversions

If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

### Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of mancozeb. Where states have more stringent regulations, they must be observed.

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### Equipment

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

#### *Additional requirements for aerial applications:*

1. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
2. Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.
3. When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

#### *Additional requirements for ground boom application:*

1. Do not apply with a nozzle height greater than 4 feet above the crop canopy.

## Application

### Ground

Thorough coverage foliar sprays generally result in optimum disease control. To achieve good coverage use proper spray pressure, volume of spray mixture per acre, nozzles (generally hollow cone), disc (generally D-5 to D-7), nozzle spacing, and tractor speed. Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration.

### Hand Sprayers

Thoroughly spray plant foliage until runoff.

### Aerial

A uniform initial spray deposit over the crop canopy generally results in optimum disease control. Each aircraft should be prechecked for droplet size, uniformity of spray pattern, swath width, and spray volume. During aerial application, human flaggers are prohibited.

**Nozzle selection:** Hollow cone brass nozzles with a D-series orifice disc and core (whirlplate) are recommended. Nozzles should point straight down or slightly backward.

**Swath width:** For most field and vegetable crops, swaths just beyond the wingspan of 36 to 40 feet for light aircraft and up to 45 feet for heavier aircraft are suggested. Optimum swath for helicopters is usually 5 to 10 feet beyond normal boom length.

**Spray volume:** Aerial applications are to be made in a minimum of two (2) gallons of water per acre. On vegetable and field crops, 2 to 3 gallons of spray per acre are generally optimum; orchards and vineyards can be handled with spray volumes of 5 gallons per acre. Some tall or dense foliage crops requiring greater penetration to the lower leaf surface will require higher spray volumes. **Do not use less than 5 gallons per acre in California.**

**Altitude:** For most crops, the spray boom should be positioned in 5 to 10 feet above the crop canopy.

**Flagging:** Swaths should be marked at the end of the field with permanent flags. Swaths should be measured accurately with a chain or other device except when rows can be accurately counted.

## Chemigation Use Directions

### Sprinkler Irrigation

Dithane DF must be applied on a regular protectant fungicide schedule, **not an irrigation schedule**. If irrigation cycles are less frequent than recommended Dithane DF application intervals, ground or aerial applications must supplement chemigation applications to achieve adequate disease control.

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**General Requirements**

- Apply Dithane DF only through sprinkler irrigation systems including center-pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, or hand move irrigations systems. Do not apply product through any other type of irrigation system.
- Lack of fungicidal effectiveness or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
- If you have questions about calibration, you should contact State Extension Service specialist, equipment manufacturers or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water system are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

**Specific Chemigation Equipment Requirements**

Before applying Dithane DF through sprinkler irrigation equipment, the chemigation system must meet the following specifications:

- Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone (RPZ), backflow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- Systems not connected to a public water supply must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located in the irrigation pipeline to prevent water source contamination from back flow.
- 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 shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- The irrigation line or water pump must include a functional pressure switch that 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.

**Center-Pivot, Lateral Move, End Tow, and Traveler Irrigation Equipment** (Use only with electric or oil hydraulic drive systems which provide a uniform water distribution):

- Determine the size of the area to be treated.
- Determine the time required to apply no more than 1/4 inch water (6,750 gallons water per acre) over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer. Run system at 80 to 95% of manufacturer's rated capacity.
- Using only water, determine the injection pump output when operated at normal line pressure.

- Determine the amount of Dithane DF required for the treatment area.
- Add the required amount of Dithane DF and sufficient water to meet the injection time requirements of the solution tank.
- Maintain constant solution tank agitation during the injection period.
- Stop injection equipment after treatment is completed. Continue to operate the system until Dithane DF solution has cleared the sprinkler head.

**Solid-Set, Side (Wheel) Roll, and Hand Move Irrigation Equipment:**

- Determine acreage covered by sprinkler.
- Fill injector solution tank with water and adjust flow rate to use contents over a 10 to 30-minute interval.
- Determine the amount of Dithane DF required for the treatment area.
- Add the required amount of Dithane DF into the same quantity of water used to calibrate the injection equipment.
- Maintain constant solution tank agitation during the injection period.
- Operate system at normal pressures recommended by the manufacturer of the injection equipment and used for the time interval established during calibration.
- Inject Dithane DF at the end of the irrigation cycle or as a separate application to maximize foliar fungicide retention.
- Stop injection equipment after treatment is completed. Continue to operate the system until Dithane DF solution has cleared the last sprinkler head.

**Disease Monitoring**

Dithane DF is a broad-spectrum, protectant fungicide. If not applied on a routine protectant spray schedule, crops should be scouted on a weekly basis. Fungicide application should be made, at the required label use rate and spray schedule, at the first sign of disease, report of disease in the area, or during environmental conditions favorable for disease development.

**Restrictions**

Users should carefully read, understand, and follow all use restrictions prior to using Dithane DF.

**Foliar Applications**

**Where EBDC Products Used Allow the Same Maximum Poundage of Active Ingredient Per Acre Per Season:** If more than one product containing an EBDC active ingredient (maneb, mancozeb, or metiram) is used on a crop during the same growing season and the EBDC products used allow the same maximum poundage of active ingredient per acre per season, then the total poundage of all such EBDC products used must not exceed any one of the specified individual EBDC product maximum seasonal poundage of active ingredient allowed per acre.

**Where EBDC Products Used Allow Different Maximum Poundage of Active Ingredient Per Acre Per Season:** If more than one product containing an EBDC active ingredient is used on a crop during the same growing season and the EBDC products used allow different maximum poundage of active ingredient per acre per season, then the total poundage of all such EBDC products used must not exceed the lowest specified individual EBDC product maximum seasonal poundage of active ingredient allowed per acre.

**Seed Treatment**

In addition to the maximum number of foliar applications permitted by the formula stated above, a single application for seed treatment may be made on crops, which have registered seed treatment uses.

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**Pome Fruits**

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Use either the Pre-Bloom/Bloom Use or Extended Application schedule.

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**Do not combine or integrate the two treatment schedules.** It is recommended that this product be used in an Integrated Pest Management Program (IPM).

Crop	Diseases Controlled	Dithane DF Rate per Application (lb/acre)	Remarks (Also Refer to Directions for Use)	Restrictions
apples crabapples pears quince	fabrea leaf spot rusts scab	6.0 <sup>†</sup>	<b>Pre-Bloom/Bloom Use:</b> Begin applications at 1/4- to 1/2-inch green tip and continue on a 7- to 10-day schedule through bloom.	Do not apply more than 6 lb (4.5 lb active ingredient) per acre per application. Do not apply after bloom. Do not apply more than 24 lb (18 lb active ingredient) per acre per year. Do not graze livestock in treated areas.
		3.0 <sup>†</sup>	<b>Extended Application Schedule for Use in Tank Mixtures with systemic fungicides:</b> For implementation of IPM programs, applications based on tree-row volume, or for use as a resistance management tool, begin applications at 1/4 to 1/2 inch green tip and continue applications on a 7- to 10-day schedule through the second cover spray or to within 77 days of harvest.	Do not apply more than 3. lb (2.25 lb active ingredient) per acre per application. Do not apply within 77 days of harvest. Do not apply more than 21 lb (15.75 lb active ingredient) per acre per year. Do not graze livestock in treated areas.

<sup>†</sup> Maximum per acre use rate based on thorough coverage dilute sprays.

**Fruits**

Crop	Diseases Controlled	Dithane DF Rate per Application (lb/acre)	Remarks (Also Refer to Directions for Use)	Restrictions
bananas (including plantain)	sigatoka	2 to 3	Apply when leaves first appear and repeat every 14- to 21-days or as required. Use sufficient water to provide adequate coverage. The addition of a Latron surfactant to spray solutions will improve performance.	Do not apply more than 30 lb (22.5 lb active ingredient) per acre per growing cycle. Applications can be made up to the day of harvest.
cranberries	fruit rot	3 to 6	Start applications at early-bloom and repeat at 7- to 10-day intervals as required.	Do not apply within 30 days of harvest. Do not apply more than 18 lb (13.5 lb active ingredient) per acre per season.

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grapes	black rot bunch rot phomopsis downy mildew	1.5 to 2.5 West of the Rocky Mountains  1.5 to 4 East of the Rocky Mountains	Apply in sufficient water to provide thorough coverage starting when new shoots are 1/2 to 1 1/2 inches long. Repeat when shoots are 3- to 5- inches long, when shoots are 8- to 10-inches long, and then at 7- to 10-day intervals until fruit is set. For late season control of black rot, phomopsis and downy mildew, the use of other approved and recommended fungicides is suggested.	In California, do not apply after bloom. In other areas, do not apply within 66 days of harvest. West of the Rocky Mountains, do not apply more than 7.5 lb (5.6 lb active ingredient) per acre per season. East of the Rocky Mountains, do not apply more than 24 lb (18 lb active ingredient) per acre per season.
papayas	anthracnose phytophthora fruit rot	2 to 2.5	Use minimum 50 gallons water per acre. Start applications at flowering and continue at 14- to 21-day intervals. Direct spray to crown and blossom area.	Do not apply more than 37 lb (28 lb active ingredient) per acre per year. Applications may be made up to the day of harvest.
plantain	Refer to bananas			

**Vegetables**

Crop	Diseases Controlled	Dithane DF Rate per Application (lb/acre)	Remarks (Also Refer to Directions for Use)	Restrictions
asparagus	cercospora leaf spot rust	2	Start applications when rust first appears and repeat at 10-day intervals. Four applications are usually sufficient.	Apply only on asparagus ferns after spears have been harvested. Do not apply more than 8 lb (6 lb active ingredient) per acre per season. Do not apply within 120 days of harvest in California and Arizona, or within 180 days in all other states.



<p>corn (sweet corn for fresh use or processing; popcorn; and sweet corn for seed production, including hybrid seed)</p>	<p>common rust helminthosporium leaf blight</p>	<p>1.5</p>	<p>Use sufficient water for thorough coverage. Start applications when disease first appears and repeat at 4- to 7-day intervals.</p>	<p>Do not apply within 7 days of harvest. Do not feed treated forage to livestock. East of the Mississippi River, Arkansas and Louisiana, do not apply more than 22.5 lb (17 lb active ingredient) per acre per crop. West of the Mississippi River, (except Arkansas and Louisiana), do not apply more than 7.5 lb (5.6 lb active ingredient) per acre per crop. Field and Field Corn for Hybrid Seed Production: Do not apply within 40 days of harvest. Do not apply more than 15 lbs (11.25 lbs active) per acre per crop.</p>
<p>cucumbers</p>	<p>anthracnose cercospora leaf spot downy mildew gummy stem blight microdochium blight † scab</p>	<p>2 to 3</p>	<p>Start applications when plants are in the two-leaf stage and repeat at 7- to 10-day intervals. Use sufficient water and direct spray to provide thorough coverage of both upper and lower leaf surfaces.</p>	<p>Do not apply within 5 days of harvest. Do not apply more than 24 lb (18 lb active ingredient) per acre per crop.</p>
<p>gourds, edible</p>	<p>Refer to summer squash</p>			
<p>melons cantaloupes casaba crenshaw honeydew</p>	<p>alternaria leaf spot anthracnose downy mildew gummy stem blight microdochium blight †</p>	<p>2 to 3</p>	<p>Start applications when plants are in the two-leaf stage and repeat at 7- to 10-day intervals. Use sufficient water and direct spray to provide thorough coverage of both upper and lower leaf surfaces. Some cantaloupe varieties (i.e.: Harvest Queen, Gold Star, Super Star, Sweet and Early, and Saticoy) are sensitive to Dithane DF. Consult State Cooperative Extension Service Specialist prior to use.</p>	<p>Do not apply within 5 days of harvest. Do not apply more than 24 lb (18 lb active ingredient) per acre per crop.</p>
<p>onions (dry bulb) garlic shallots</p>	<p>botrytis leaf blight downy mildew neck rot purple blotch rust</p>	<p>3</p>	<p>Follow a protective spray schedule starting when diseases are first reported in the area and repeat at 7-day intervals throughout the season. Do not allow spray or drift to contact bulbs after lifting from soil.</p>	<p>Do not apply within 7 days of harvest. Do not apply more than 30 lb (22.5 lb active ingredient) per acre per crop. Do not apply to exposed bulb</p>

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onions (furrow drench)	damping-off seed rots seedling blights smut		Apply 3 lb per acre as a furrow drench at time of planting onion seeds. Use 75 to 125 gallons water per acre.	Do not use more than 3 lb (2.25 lb active ingredient) per acre (29,000 linear feet of furrow) with an 18 inch row spacing. Do not use in California.
potatoes	early blight late blight	1 to 2	Begin applications when plants are 4 to 6 inches high by applying 0.5 to 1.0 lb/acre. As the vines increase in size, apply 1.5 to 2.0 lb/acre at 5- to 10-day intervals or apply 0.75 to 1.0 lb/acre at 3- to 5-day intervals. It is recommended that this product be used within an Integrated Pest Management Program. Also, vine-kill should occur 14 days before harvest.	Do not apply more than 15 lb (11.2 lb active ingredient) per acre per crop. Do not apply within 3 days of harvest in Connecticut, Delaware, Florida, Maine, Massachusetts, Michigan, New Hampshire, New York, Ohio, Pennsylvania, Rhode Island, Vermont, and Wisconsin and at least 14 days elsewhere.

<p>potato (seedpiece treatment)</p>	<p>fusarium decay late blight seedborne common scab rhizoctonia shoot blight sliver scurf</p>	<p>See Remarks</p>	<p>Dip whole or cut potato tubers in 1.25 lb Dithane DF per 50 gallons of water. Place treated tubers in a clean container following treatment and plant as soon as possible. Spread treated seedpieces in a cool place if held before planting.</p>	<p>Do not use treated seed potatoes for food or feed purposes. Seed-pieces that have been treated with this product that are then packaged or bagged for future use must contain the following labeling on the outside of the seed-piece package or bag: "When opening this bag or loading/ pouring the treated seed-pieces, wear long-sleeved shirt, long pants, shoes, socks, chemical resistant gloves, and a NIOSH-approved respirator with a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C or any R, P, or HE filter. Treated Seed-Pieces - Do Not Use for Food, Feed, or Oil Purposes." After the seed pieces have been planted, do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours. Exception: Once the seed pieces are planted in soil or other planting media, the Worker Protection Standard allows workers to enter the treated area without restriction if there will be no worker contact with the soil/media subsurface.</p>
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squash, summer (including edible gourd)	anthracnose downy mildew microdochium blight †	2 to 3	Start applications when plants are in the two-leaf stage and repeat at 7- to 10-day intervals. Use sufficient water and direct spray to provide thorough coverage of both upper and lower leaf surfaces.	Do not apply within 5 days of harvest. Do not apply more than 24 lb (18 lb active ingredient) per acre per crop.
tomatoes	anthracnose early blight gray leaf spot late blight leaf mold septoria leaf spot	0.75-1.0 West of the Mississippi River  0.75 to 1.5 East of the Mississippi River	Start application when seedlings emerge or transplants are set. Repeat at 3 to 7day intervals throughout the season.	Do not apply within 5 days of harvest. West of the Mississippi River, do not apply more than 8.5 lb (6.4 lb active ingredient) per acre per crop. East of the Mississippi River, do not apply more than 22.4 lb (16.8 lb active ingredient) per acre per crop.
	bacterial speck and spot	1.5 to 2 West of the Mississippi River  1.5 to 3 East of the Mississippi River	Start application when seedlings emerge or transplants are set, Repeat at 7- to 10-day intervals throughout the season.	East of the Mississippi River, do not apply more than 22.4 lb (16.8 lb active ingredient) per acre per crop. West of the Mississippi River, do not apply more than 8.5 lb (6.4 lb active ingredient) per acre per crop.
watermelons	alternaria leaf spot anthracnose cercoospora leaf spot downy mildew gummy stem blight microdochium blight † scab	2 to 3	Start applications when plants are in the two-leaf stage and repeat at 7- to 10-day intervals. Use sufficient water and direct spray to provide thorough coverage of both upper and lower leaf surfaces.	Do not apply within 5 days of harvest. Do not apply more than 24 lb (18 lb active ingredient) per acre per crop.

† Not approved for use on this pest species in California.

**Field Crops**

Crop	Diseases Controlled	Dithane DF Rate per Application (lb/acre)	Remarks (Also Refer To Directions For Use)	Restrictions
barley	Refer to wheat			PHI: Do not apply after Feekes Growth Stage 10.5 (typically 35-45 days), but no less than 26 days of harvest
corn, field and hybrid seed corn	common corn rust helminthosporium leaf blight	1.5	Start applications when disease symptoms first appear and, depending on severity of infection, continue on a 4- to 7-day interval.	Do not apply more than 15 lb (11.25 lb active ingredient) per acre per crop. Do not feed treated forage for livestock Do not apply within 40 days of harvest.

oats	Refer to wheat			
peanuts	cercospora leaf spot rust	1 to 2	Start applications when disease first appears or is reported in area. Repeat sprays at 7- to 14-day intervals. Reduce sprays to a 7 day interval during humid weather.	Do not apply within 14 days of harvest. Do not use more than 16 lb (12 lb active ingredient) per acre per crop. Do not feed treated vines to livestock.
rye	Refer to wheat			PHI: Do not apply after Feekes Growth Stage 10.5 (typically 35-45 days), but no less than 26 days of harvest
sugar beets	cercospora leaf spot	1.5 to 2	Start applications when disease first threatens and repeat every 7- to 10-days as needed. The addition of a Latron surfactant to spray solutions will improve performance.	Do not apply within 14 days of harvest. Do not apply more than 14 lb (10.5 lb active ingredient) per season. Do not feed treated sugar beet tops to livestock.
wheat	helminthosporium leaf spot leaf rust septoria glume blotch septoria leaf spot tan spot	2	Start applications at onset of disease or when plants are in the tillering to jointing stage and repeat at 7- to 10-day intervals.	Do not make more than three applications during the season. PHI: Do not apply after Feekes growth stage 10.5 (typically 35-45 days) but no less than 26 days of harvest. Do not graze livestock in treated areas prior to harvest. Do not apply more than 6 lbs (4.5 lbs active) per acre per crop.
triticale	Refer to wheat			

**Miscellaneous**

Crop	Diseases Controlled	Dithane DF Rate per Application	Remarks (Also Refer to Directions for Use)
asparagus crowns	crown rot	1 lb per 100 gal	Place loosely packed crowns into a burlap bag and soak, with gentle agitation, in the fungicide solution for 5 minutes. Remove bag, drain well, and plant crowns as soon as possible. A tank large enough to hold a single burlap bag will treat 2 bags of crowns. Clean dipping suspension should then be prepared in a clean tank. Dirty crowns should be pre-washed to remove excess soil.

caprifig	assorted molds endosepsis (fusarium)	4 lbs/100 gal	Prepare mamme figs by making a shallow cut through the eye and then hand dividing to avoid wasp injury. Submerge mamme figs in the fungicide suspension for a minimum of 15 minutes. The fungicide suspension should be stirred frequently to prevent settling out. Fresh dipping solution should be used after treating 4 or 5 batches of figs. After treatment, figs should be drained prior to placement in trees.
Christmas trees (conifer)	lophodermium needle cast pine gall rust scirrhia brown spot	1 to 2 lb per acre or 1 to 2 lb per 100 gal	Begin application in spring or early summer before infection occurs. Repeat after heavy rains. Make applications at 7 to 10 day intervals.
Douglas fir	Swiss needle cast		

**Turf**

For use on sod farms, golf courses, industrial and commercial lawns and other similar nonresidential areas.

**Restrictions:**

**Sod Farm Turf:**

- Harvesting of treated turf is prohibited until 5 days following application.
- Limit to a maximum of 4 applications per year and a maximum rate of 23.2 lb of product per acre (17.4 lb ai/A) per application.
- Require a minimum of a 10 day interval between applications

**Golf Courses:**

- For cool season grasses; greens, tees and aprons - limit to a maximum of 5 applications per year at a maximum application rate of 23.2 lb of product per acre (17.4 lb ai/A) per application
- For cool season grasses; fairways - limit to a maximum of 4 applications per year at a maximum application rate of 23.2 lb of product per acre (17.4 lb ai/A) per application
- For warm season grasses; greens, tees and aprons - limit to a maximum of 4 applications per year at a maximum application rate of 23.2 lb of product per acre (17.4 lb ai/A) per application
- For warm season grasses; fairways - limit to a maximum of 3 applications per year at a maximum application rate of 23.2 lb of product per acre (17.4 lb ai/A) per application
- Require a minimum of a 10 day interval between applications

**All Other Turf:**

- Limit to a maximum of 4 applications per year and a maximum application rate of 23.2 lb of product per acre (17.4 lb ai/A) per application
- Require a minimum of a 10 day interval between applications

Start application when grass greens-up in spring or when disease first appears and repeat at 10 to 14 day intervals or until disease threat is past. When conditions are especially favorable for disease development, apply maximum fungicide use rate on a 10-day spray schedule. Apply in sufficient water to provide adequate coverage.

**Turf Tolerance**

Treated turfgrass should be maintained in a vigorous growing condition. Turfgrass under stress will not respond to fungicide treatments as well as well-maintained turfgrass. Turfgrass tolerance to this product has been found to be acceptable, however, this product and tank mixtures with other products have not been tested on all varieties of every turfgrass species or under all possible growing conditions. If user is unfamiliar with the performance of Dithane DF or tank mixtures, under user growing conditions, a limited

area of turfgrass should be treated prior to initiating large-scale applications. The user should always exercise reasonable judgment and caution when using this product.

Crop	Diseases Controlled	Dithane DF Rate per Application (oz/1000 sq ft)	Remarks (Also Refer to Directions for Use)	Restrictions
assorted grasses	helminthosporium melting-out rust (leaf, stem, stripe)	4		Do not graze treated areas.
	copper spot fusarium blight red thread slime mold	4 to 8		Do not use on grasses intended for grazing, such as range or pasture grasses.
	algae	6		
	dollar spot	6 to 8		
	rhizoctonia brown patch	4	Apply on a 10 day spray schedule.	Do not feed clippings to livestock.
	pythium blight	8	Apply at 10-day intervals	
	fusarium snow mold	6 to 8	Apply at 2 to 6 week intervals during winter.	Do not use on grasses grown for seed.
	gray leaf spot	8	Apply on a 14-day spray schedule when conditions are favorable for disease development.	

**ATTENTION: This product contains mancozeb and ETU, chemicals known to the State of California to cause cancer. ETU is also known to the State of California to cause birth defects or other reproductive harm.**

**Terms and Conditions of Use**

If terms of the following Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. To the extent permitted by law, otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

**Warranty Disclaimer**

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. To the extent permitted by law, Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

**Inherent Risks of Use**

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. To the extent permitted by law, all such risks shall be assumed by buyer.

**Limitation of Remedies**

To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used.

To the extent permitted by law, Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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[Sub-Label B: Turf and Ornamental Uses, Alternate Brand Name: Dithane 75DF Rainshield]

(Base label):

# Dithane<sup>®</sup> 75 DF Rainshield<sup>®</sup> Specialty Fungicide

<b>Group</b>	<b>M3</b>	<b>FUNGICIDE</b>
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**Active Ingredients**

mancozeb: A coordination product of zinc ion and manganese ethylene bisdithiocarbamate .. 75.0%

In which the ingredients are:

Manganese<sup>++</sup> ..... 15.00%

Zinc<sup>++</sup> ..... 1.9%

Ethylene bisdithiocarbamate ion (C<sub>4</sub>H<sub>6</sub>N<sub>2</sub>S<sub>4</sub>)<sup>-</sup> ..... 58.1%

Other Ingredients ..... 25.0%

Total ..... 100.0%

**Keep Out of Reach of Children**

## CAUTION

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### Precautionary Statements

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#### Hazards to Humans and Domestic Animals

**Harmful If Absorbed Through Skin • Causes Moderate Eye Irritation • Prolonged or Frequently Repeated Skin Contact May Cause Allergic Reactions in Some Individuals**

**Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.**

#### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are nitrile rubber, natural rubber, or butyl rubber. If you want more options, follow the instructions for Category A on an EPA chemical resistance category selection chart.

#### Mixers, loaders, applicators and other handlers must wear:

- long-sleeved shirt
- long pants
- shoes and socks
- chemical-resistant gloves made of any waterproof material (except pilots, groundboom applicators, and airblast applicators)

See engineering controls for additional requirements

<b>User Safety Requirements</b>
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Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

### Engineering Controls

**Enclosed Cockpits:** Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)].

**Mechanical Flagging Engineering Controls:** Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE 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.

### First Aid

**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 to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

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

**If 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. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 day or night, for emergency treatment information.

### Environmental Hazards

This pesticide is toxic to aquatic organisms. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

### Nonrefillable rigid containers 50 lb or less:

#### Storage and Disposal

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

**Pesticide Storage:** Keep away from fire and sparks. Store in a cool, dry, well-ventilated area. Do not allow stored product to become wet or overheated in storage; decomposition, impaired activity, or fire may result. Keep container closed when not in use.

Decomposition produces a foul odor; if observed, check for hot containers and immediately remove to open areas for 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 Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or 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.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**Nonrefillable nonrigid containers:**

**Storage and Disposal**

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

**Pesticide Storage:** Keep away from fire and sparks. Store in a cool, dry, well-ventilated area. Do not allow stored product to become wet or overheated in storage; decomposition, impaired activity, or fire may result. Keep container closed when not in use.

Decomposition produces a foul odor; if observed, check for hot containers and immediately remove to open areas for 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 Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Refillable rigid containers larger than 5 gal:**

**Storage and Disposal**

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

**Pesticide Storage:** Keep away from fire and sparks. Store in a cool, dry, well-ventilated area. Do not allow stored product to become wet or overheated in storage; decomposition, impaired activity, or fire may result. Keep container closed when not in use.

Decomposition produces a foul odor; if observed, check for hot containers and immediately remove to open areas for 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 Handling:** Refillable container. Refill this container with pesticide 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**Nonrefillable rigid containers larger than 50 lb:**

**Storage and Disposal**

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

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**Pesticide Storage:** Keep away from fire and sparks. Store in a cool, dry, well-ventilated area. Do not allow stored product to become wet or overheated in storage; decomposition, impaired activity, or fire may result. Keep container closed when not in use. Decomposition produces a foul odor; if observed, check for hot containers and immediately remove to open areas for 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 Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or 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.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**Refer to label booklet for Directions for Use.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at [www.dowagro.com](http://www.dowagro.com).

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

EPA Reg. No. 62719-402

EPA Est. \_\_\_\_\_

®Trademark of Dow AgroSciences LLC

**Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268**

**Net Weight** \_\_\_\_\_

(cover)

# Dithane<sup>®</sup> 75 DF Rainshield<sup>®</sup> Specialty Fungicide

Group	M3	FUNGICIDE
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### Active Ingredients

mancozeb: A coordination product of zinc ion and manganese ethylene bisdithiocarbamate .. 75.0%

In which the ingredients are:

Manganese <sup>++</sup> .....	15.00%
Zinc <sup>++</sup> .....	1.9%
Ethylene bisdithiocarbamate ion (C <sub>4</sub> H <sub>6</sub> N <sub>2</sub> S <sub>4</sub> ) <sup>--</sup> .....	58.1%
Other Ingredients .....	25.0%
Total .....	100.0%

**Keep Out of Reach of Children**

## CAUTION

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**Refer to inside of label booklet for Directions for Use.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at [www.dowagro.com](http://www.dowagro.com).

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(Page 1 through end):

**Precautionary Statements**

**Hazards to Humans and Domestic Animals**

**CAUTION**

**Harmful If Absorbed Through Skin • Causes Moderate Eye Irritation • Prolonged or Frequently Repeated Skin Contact May Cause Allergic Reactions in Some Individuals**

**Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.**

**Personal Protective Equipment (PPE)**

Some materials that are chemical-resistant to this product are nitrile rubber, natural rubber, or butyl rubber. If you want more options, follow the instructions for Category A on an EPA chemical resistance category selection chart.

**Mixers, loaders, applicators and other handlers must wear:**

- long-sleeved shirt
- long pants
- shoes and socks
- chemical-resistant gloves made of any waterproof material (except pilots, groundboom applicators, and airblast applicators)

See engineering controls for additional requirements

**User Safety Requirements**

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

**Engineering Controls**

**Enclosed Cockpits:** Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)].

**Mechanical Flagging Engineering Controls:** Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

**User Safety Recommendations**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE 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.

**First Aid**

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**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 to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

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

**If 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 day or night, for emergency treatment information.

**Environmental Hazards**

This pesticide is toxic to aquatic organisms. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

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**Directions for Use**

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It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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 (REI) of 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 made of any waterproof material
- Shoes plus socks

**Non-Agricultural Use Requirements**

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Professional applications to golf courses, industrial (office park), and municipal lawns are not within the scope of the Worker Protection Standard.

- Keep unprotected persons out of treated area until sprays have dried.

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**Storage and Disposal**

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

**Pesticide Storage:** Keep away from fire and sparks. Store in a cool, dry, well-ventilated area. Do not allow stored product to become wet or overheated in storage; decomposition, impaired activity, or fire may result. Keep container closed when not in use.

Decomposition produces a foul odor; if observed, check for hot containers and immediately remove to open areas for disposal.

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

**Nonrefillable rigid containers 5 gallons or less:**

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or 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.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**Nonrefillable nonrigid containers:**

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Refillable rigid containers larger than 5 gal:**

**Container Handling:** Refillable container. Refill this container with pesticide 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**Nonrefillable rigid containers larger than 5 gal:**

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or 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.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.



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## General Use Information

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Dithane® 75DF Rainshield® specialty fungicide is a broad-spectrum protectant fungicide recommended for outdoor or greenhouse grown crops. Optimum disease control is achieved when the fungicide is applied in a regularly scheduled preventative spray program. The addition of a surfactant will improve fungicide performance by providing a more uniform spray deposit, increased foliar redistribution, and improved fungicide retention during periods of wet weather.

### Use Rate Determination

- Carefully read, understand, and follow label use rates and restrictions.
- When two pesticides are tank mixed, the more restrictive label conditions apply.
- Under low disease conditions, minimum label rates per application can be used while maximum label rates and the minimum interval may be used for severe or threatening disease conditions.
- **For proper application, determine the number of sq ft to be treated, the required label use rate and the volume of spray mixture to be applied per 1000 square feet. Prepare only the amount of spray solution required to treat the measured area. Careful calibration of spray equipment is recommended prior to use.**
- **When preparing small quantities, 1 level tablespoon per gallon is equivalent to a 1 lb per 100 gallons of spray solution.**

### Mixing Procedures

Be sure sprayer is clean and not contaminated with other materials prior to use. When using an agitated spray tank fill tank 1/2 to 3/4 full with clean water and start agitation. Be certain that the agitation system is working properly and creates a rolling rippling on the liquid surface. With the agitator running, add the required amount of Dithane 75DF to the tank. Continue filling tank with the remainder of the water.

When using a hand sprayer, premix Dithane 75DF as a slurry in a small container before adding to the spray tank. Slowly pour the appropriate amount of Dithane 75DF into a small container containing an equal volume of water while mixing. Mix until the Dithane 75DF is thoroughly wetted. Add additional water if necessary to make solution flowable. Add the contents of the slurry tank to a 1/2 filled sprayer, continue filling tank with remainder of water and mix well. Always add Dithane 75DF into solution prior to adding any additional materials to the tank.

### Compatibility

Dithane 75DF is compatible with most commonly used fungicides, insecticides and growth regulators. When preparing tank mixes, user should consult spray compatibility charts or State Cooperative Extension Service Specialists prior to actual use.

### Spray Drift Management

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

#### Wind Speed

Do not apply at wind speeds greater than 15 mph.

#### Temperature Inversions

If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

**Other State and Local Requirements**

Applicators must follow all state and local pesticide drift requirements regarding application of mancozeb. Where states have more stringent regulations, they must be observed.

**Equipment**

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

*Additional requirements for aerial applications:*

1. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
2. Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.
3. When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

*Additional requirements for ground boom application:*

1. Do not apply with a nozzle height greater than 4 feet above the crop canopy.

**Application**

**Ground:** Thorough coverage foliar sprays generally result in optimum disease control. To achieve good coverage use proper spray pressure, volume of spray mixture per acre, nozzles (generally hollow cone), disc (generally D-5 to D-7), nozzle spacing, and tractor speed. Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration.

**Hand Sprayers:** Thoroughly spray plant foliage until runoff.

**Aerial:** A uniform initial spray deposit generally results in optimum disease control. Each aircraft should be prechecked for droplet size, uniformity of spray pattern, swath width, and spray volume. During aerial application, human flaggers are prohibited.

**Nozzle selection:** Hollow cone brass nozzles with a D-series orifice disc and core (whirlplate) are recommended. Nozzles should point straight down or slightly backward.

**Swath width:** For most crops, swaths just beyond the wingspan of 36 to 40 feet for light aircraft and up to 45 feet for heavier aircraft are suggested. Optimum swath for helicopters is usually 5 to 10 feet beyond normal boom length.

**Spray volume:** Aerial applications are to be made in a minimum of two (2) gallons of water per acre. On most crops, 2 to 3 gallons of spray per acre are generally optimum. Some tall or dense foliage crops requiring greater penetration to the lower leaf surface will require higher spray volumes. **Do not use less than 5 gallons per acre in California.**

**Altitude:** For most crops, the spray boom should be positioned in 5 to 10 feet above the crop canopy.

**Flagging:** Swaths should be marked at the end of the field with permanent. Swaths should be measured accurately with a chain or other device except when rows can be accurately counted.

**Chemigation Use Directions**

**Sprinkler Irrigation:** Dithane 75DF must be applied on a regular protectant fungicide schedule, **not an irrigation schedule.** If irrigation cycles are less frequent than recommended application intervals for Dithane 75DF, ground or aerial applications must supplement chemigation applications to achieve adequate disease control.

**General Requirements**

- Apply Dithane 75DF only through sprinkler irrigation systems including center-pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, or hand move irrigations systems. Do not apply product through any other type of irrigation system.
- Lack of fungicidal effectiveness or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
- If you have questions about calibration, you should contact State Extension Service specialist, equipment manufacturers or other experts:
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water system are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

**Specific Chemigation Equipment Requirements**

Before applying Dithane 75DF through sprinkler irrigation equipment, the chemigation system must meet the following specifications:

- Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone (RPZ), backflow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- Systems not connected to a public water supply must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located in the irrigation pipeline to prevent water source contamination from back flow.
- 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 shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

**Center-Pivot, Lateral Move, End Tow, and Traveler Irrigation Equipment (use only with electric or oil hydraulic drive systems that provide a uniform water distribution):**

- Determine size of area to be treated.
- Determine the time required to apply no more than 1/4 inch water (6,750 gallons water per acre) over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer. Run system at 80 to 95% of manufacturer's rated capacity.
- Using only water, determine the injection pump output when operated at normal line pressure.

- Determine the amount of Dithane 75DF required for treatment area.
- Add the required amount of Dithane 75DF and sufficient water to meet the injection time requirements of the solution tank.
- Maintain constant solution tank agitation during the injection period.
- Stop injection equipment after treatment is completed. Continue to operate the system until Dithane 75DF solution has cleared the sprinkler head.

**Solid-Set, Side (Wheel) Roll, and Hand Move Irrigation Equipment:**

- Determine acreage covered by sprinkler.
- Fill injector solution tank with water and adjust flow rate to use contents over a 10 to 30-minute interval.
- Determine the amount of Dithane 75DF required for treatment area.
- Add the required amount of Dithane 75DF into the same quantity of water used to calibrate the injection equipment.
- Maintain constant solution tank agitation during the injection period.
- Operate system at normal pressures recommended by the manufacturer of the injection equipment and used for the time interval established during calibration.
- Inject Dithane 75DF at the end of the irrigation cycle or as a separate application to maximize foliar fungicide retention.
- Stop injection equipment after treatment is completed. Continue to operate the system until Dithane 75DF solution has cleared the last sprinkler head.

**Disease Monitoring**

Dithane 75DF is a broad-spectrum, protectant fungicide. If not applied on a routine protectant spray schedule, crops should be scouted on a weekly basis. Fungicide application should be made, at the required label use rate and spray schedule, at the first sign of disease, report of disease in the area, or during environmental conditions favorable for disease development.

**Restrictions**

Users should carefully read, understand, and follow all use restrictions prior to using Dithane 75DF.

**Turf**

For use on sod farms, golf courses, industrial and commercial lawns and other similar nonresidential areas.

**Restrictions:**

**Sod Farm Turf:**

- Harvesting of treated turf is prohibited until 5 days following application.
- Limit to a maximum of 4 applications per year and a maximum rate of 23.2 lb of product per acre (17.4 lb ai/A) per application.
- Require a minimum of a 10 day interval between applications

**Golf Courses:**

- For cool season grasses; greens, tees and aprons - limit to a maximum of 5 applications per year at a maximum application rate of 23.2 lb of product per acre (17.4 lb ai/A) per application
- For cool season grasses; fairways - limit to a maximum of 4 applications per year at a maximum application rate of 23.2 lb of product per acre (17.4 lb ai/A) per application
- For warm season grasses; greens, tees and aprons - limit to a maximum of 4 applications per year at a maximum application rate of 23.2 lb of product per acre (17.4 lb ai/A) per application
- For warm season grasses; fairways - limit to a maximum of 3 applications per year at a maximum application rate of 23.2 lb of product per acre (17.4 lb ai/A) per application
- Require a minimum of a 10 day interval between applications

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**All Other Turf:**

- Limit to a maximum of 4 applications per year and a maximum application rate of 23.2 lb of product per acre (17.4 lb ai/A) per application
- Require a minimum of a 10 day interval between applications

Start application when grass greens-up in spring or when disease first appears and repeat at 7 to 14 day intervals or until disease threat is past. When conditions are especially favorable for disease development, apply maximum fungicide use rate on a 7-day spray schedule. Apply in sufficient water to provide adequate coverage.

**Turf Tolerance**

Treated turfgrass should be maintained in a vigorous growing condition. Turfgrass that is under stress will not respond to fungicide treatments as well as turfgrass that is well maintained. Turfgrass tolerance to this product has been found to be acceptable, however, this product and tank mixtures with other products have not been tested on all varieties of every turfgrass species or under all possible growing conditions. If user is unfamiliar with the performance of Dithane 75DF or tank mixtures, under user growing conditions, a limited area of turfgrass should be treated prior to initiating large-scale applications. The user should always exercise reasonable judgment and caution when using this product.

Crop	Diseases Controlled	Rate of Dithane 75DF per Application (oz/1000 sq ft)	Remarks (Also Refer To Directions For Use and Restrictions)	Restrictions
assorted grasses	helminthosporium melting-out rust (leaf, stem, stripe)	4	Apply when disease appears. Repeat at 10 day intervals as long as condition persists.	Do not graze treated areas.
	copper spot fusarium blight red thread slime mold	4 to 8	Apply when disease appears. Repeat at 10 day intervals as long as condition persists.	Do not use on grasses intended for grazing, such as range or pasture grasses.
	algae	6	Apply when algae appears. Repeat at 10 day intervals as long as condition persists.	Do not feed clippings to livestock.
	dollar spot	6 to 8	Apply when disease appears. Repeat at 10 day intervals as long as condition persists.	Do not use on grasses grown for seed.
	rhizoctonia brown patch	4	Apply when disease appears. Repeat at 10 day intervals as long as condition persists.	
	pythium blight	8	Apply when disease appears. Repeat at 10 day intervals as long as condition persists.	
	fusarium snow mold	6 to 8	Apply at 2- to 6-week intervals during winter.	
	gray leaf spot	8	Apply when disease appears. Repeat at 10 day intervals as long as condition persists.	

**Ornamentals**

**Restrictions:**

- Cut flowers and greenhouse grown ornamentals: Limit to 20 applications per year.
- Do not use for food or feed purposes.

Neither the manufacturer nor the seller has determined the effects of using Dithane 75DF on ornamentals not specified on this label.

Prior to any large-scale applications on such plants, the user should determine the effects of Dithane 75DF by testing a small section of the type of plants treated. User assumes all risk arising out of application to unlabeled plants. The Conditions of Sale and Warranty apply to all uses.

For outdoor (field nursery) or greenhouse use, apply the equivalent of 1-2 lb Dithane 75DF per 100 gallons of dilute spray (1.5 lb Dithane 75DF per acre). The addition of Latron B-1956 to spray solutions will improve performance.

Begin spraying when plants are well leaved out or at first sign of disease, in a full coverage spray at 7- to 10-day intervals throughout season or follow State Extension Service recommendations for disease control on the following ornamental plants.

<b>Crop</b>	<b>Diseases Controlled</b>	<b>Remarks (Also Refer To Directions For Use - Restrictions)</b>
African violet	botrytis blight	
almond (ornamental)	leaf spot	
alyssum	leaf spot	
anthurium	anthracnose, spadix rot	
apple (ornamental)	fabraea leaf spot rust scab	
arborvitae	cercospora blight	
areca palm	leaf spot	
ageratum	botrytis blight rust	
ash, mountain	entomosporium leaf spot guignardia leaf blotch	
ash, white	anthracnose cylindrosporium leaf spot	
aster	leaf spot	
aster, perennial	puccinia rusts	
aucuba, japonica	alternaria leaf spot anthracnose	
azalea	cylindrocladium rot petal blight phytophthora twig and bud blight	Apply in a full coverage spray, 2 to 3 times a week, while flowers are opening. Direct spray into flowers and thoroughly spray ground under bushes.
bougainvillea	leaf spot	
begonia	botrytis blight	
boxwood	leaf spot	
buffaloberry	cylindrosporium leaf spot	
camellias	petal blight	Refer to Azalea.
carnation	rust septoria leaf spot	
cedar, red (juniper)	cercospora blight phomopsis blight	

chrysanthemum	ascochyta blight botrytis petal spot rust	Apply twice weekly during blooming period.
cockscomb (celosia)	alternaria leaf spot	
conifers (Christmas trees)	lophodermium needle cast pine gall rust scirrhia brown spot	Begin application in spring or early summer before infection occurs. Repeat after heavy rains and at two-week intervals as long as needed.
cordyline	cercospora leaf spot	
crabapple (ornamental)	cedar-apple rust scab sphaeropsis leaf spot	
cypress, Arizona ( <i>Cupressus</i> spp.)	cercospora blight monochaetia canker	
dahlia	botrytis blight	
delphinium	botrytis blight	
dieffenbachia	leptosphaeria brown spot	
dogwood, flowering	anthracnose elsinoe leaf spot septoria leaf spot	Apply when buds begin to open, when bracts have fallen, 4 weeks later and again in late summer after flower buds for next season have formed.
dracaena	fusarium leaf spot	
elm	black leaf spot	
euonymus	anthracnose	
fatsia	anthracnose	
fern	rhizoctonia blight	
fig	cercospora leaf spot	
fig	cyindrocladium leaf spot	
firethorn (pyracantha)	fusicladium scab	
fir, Douglas	Swiss needle cast	
fir, fraser	Swiss needle cast	
fuchsia	botrytis blight rust	
geranium	rust	
gladiolus	botrytis blossom blight curvularia leaf spot	Make regular weekly applications starting before diseases appear and increase to 2 or 3 applications per week during periods of heavy disease and during rainy weather. On flower spikes, reduce spray concentration to 3/4 lb per 100 gallons.
gloxinia	botrytis blight	
gypsophila	botrytis blight	
hawthorn	cedar-apple rust fabraea leaf spot frogeye leaf spot hawthorn rust scab	
hickory	gnomonium leaf spot	
holly	purple spot	
hollyhock	anthracnose cercospora leaf spot puccinia rust	
honeysuckle	herpobasidium blight	

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horsechestnut, buckeye	alternaria leaf spot guignardia leaf blotch	
hydrangea	botrytis blight cercospora leaf spot	
impatiens	botrytis blight	
iris	didymellina leaf spot mycosphaerella leaf spot mystrosporium ink spot	(formerly Didymellina)
juniper	phomopsis blight	
larkspur	rust	
laurel, mountain	cercospora leaf spot petal blight	Refer to azalea.
ligustrum	cercospora leaf spot	
lily	botrytis blight	
magnolia	gloeosporium leaf spot	
maple	alternaria leaf spot phyllosticta leaf spot	
marigold	botrytis blossom blight	Do not use on French dwarf double or Signet type marigold seedlings.
narcissus	botrytis blight (fire) smoulder	
oak	actinopelte leaf spot taphrina leaf blister	
orchid (Dendrobium)	botrytis blossom blight	
oxalis	rust	
pansy	anthracnose	
pears (ornamental)	fabraea leaf spot rust scab	
peony	botrytis blossom blight phytophthora blight	Apply in early spring and early fall, drenching soil around plants as well as the foliage. Promptly destroy all infected plant parts.
peperomia	cercospora leaf spot	
petunia	botrytis blight	
philodendron	dactylaria leaf spot phytophthora leaf spot	
phlox	leaf spot	
photinia	entomosporium leaf spot	
pine, Australia	cyclaneusma needle cast	
pine, Scotch	cyclaneusma needle cast gall rust	
pittosporum	alternaria leaf spot	
pleomele	fusarium leaf spot	
poinsettia	sphaceloma scab	
poplar	rust	
primrose	botrytis blight	
protea	botrytis blight	
quince (ornamental)	fabraea leaf spot rust scab	



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rhododendron	cercospora leaf spot discosia leaf spot petal blight	Refer to azalea.
rose	black spot cercospora leaf spot rust	
rosemary	rhizoctonia aerial blight	
schefflera	alternaria blight	
Scotts pine	needle cast	
skunkbush, sumac	cylindrosporium leaf spot	
snapdragon	rust	
spathiphyllum	myrothecium leaf spot	
statice	cercospora frogeye	
strawflower	rust	
syngonium	cephalosporium leaf spot	
thorn apple	rust	
tulip	botrytis blight (fire)	
venus, flytrap	anthracnose	
viburnum	downy mildew ramularia leaf spot	
walnut	anthracnose	
zinnia	alternaria leaf blight	

**ATTENTION:** This product contains mancozeb and ETU, chemicals known to the State of California to cause cancer. ETU is also known to the State of California to cause birth defects or other reproductive harm.

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