



GROUP	11	FUNGICIDE
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**NET CONTENTS:
2, 4 or 10 LITRES**

**REASON™ 500SC FUNGICIDE
SUSPENSION CONCENTRATE**

**For Control of Early and Late Blight in Potatoes
Control of Downy Mildew in Cucurbit Vegetables,
Suppression of Downy Mildew in Bulb Vegetables**

COMMERCIAL



**CAUTION – POISON
CAUTION - EYE IRRITANT**

REGISTRATION NUMBER: **27462**
PEST CONTROL PRODUCTS ACT

GUARANTEE:
Fenamidone 500 g/L

Contains 1,2-benzisothiazolin-3-one at 0.017% as a preservative

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

Notification Change

Bayer CropScience Inc.
~~Suite 100, 3131-114th Avenue SE~~ Suite 200, 160 Quarry Park Blvd. S.E.
~~Calgary, AB~~ Calgary, Alberta T2C 3G3
~~T2Z 3X2~~

For product information call 1-888-283-6847

**In case of spills, poisoning, fire or other emergencies,
call 1-888-283-6847 (24 hours a day)**

PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN. Avoid contact with eyes and skin. May irritate eyes. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, or smoking. If product comes in contact with clothing, remove all contaminated clothing, wash skin with soap and water and dress in clean clothing. Launder applicator clothing separate from other laundry. **DO NOT** re-enter treated fields until residues have dried.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at: www.croplife.ca.

PROTECTIVE CLOTHING AND EQUIPMENT:

During mixing, loading, clean-up and repair activities, workers must wear long pants, long-sleeved shirts, boots, chemical resistant gloves and safety goggles or a face shield.

First Aid and Toxicological Information

FIRST AID: If swallowed: Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.

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

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

If in eyes: Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

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

TOXICOLOGICAL INFORMATION: Treat symptomatically. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia. Medical Personnel should contact Bayer's Medical Information Services, Toll-Free: 1-800-334-7577.

STORAGE:

Do not contaminate water, food, or feed by storage or disposal. Keep away from fire or open flame or other sources of heat. **CANNOT** be stored below freezing. If stored for 1 year or longer, shake well before using. Store the tightly closed container away from feeds, seeds, fertiliser, plants and foodstuffs. Do not use or store in or around the home. Keep in original container during storage. In case of fire, leaking or damaged containers, call toll free 1-800-334-7577.

DISPOSAL:

Recyclable Container Disposal:

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

Disposal of Unused, Unwanted Product:

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for cleanup of spills.

Disposal of Unused Spray Solution:

If any spray solution remains in the tank after spraying is finished, it should be sprayed on the perimeter of the area just sprayed, away from water supplies, ditches, and irrigation canals.

Notice to User:


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

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REASON 500SC Fungicide

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GENERAL INFORMATION

Section 1: The Product

The Product:

For control of early and late blight in potatoes, Control of Downy Mildew in Cucurbit Vegetables, Suppression of Downy Mildew in Bulb Vegetables, REASON 500SC Fungicide is a preventative, protectant fungicide, which inhibits spore germination and acts as an anti-sporulant.

SAFETY AND HANDLING

Section 2: Precautions, Protective Clothing and Equipment, and Re-entry Restriction.

PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN. Avoid contact with eyes and skin. May irritate eyes. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, or smoking. If product comes in contact with clothing, remove all contaminated clothing, wash skin with soap and water and dress in clean clothing. Launder applicator clothing separate from other laundry. **DO NOT** re-enter treated fields until residues have dried.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit Croplife Canada's web site at: www.croplife.ca.

PROTECTIVE CLOTHING AND EQUIPMENT:

During mixing, loading, clean-up and repair activities, workers must wear long pants, long-sleeved shirts, boots, chemical resistant gloves and safety goggles or a face shield.

Section 3: First Aid and Toxicological Information

FIRST AID:

If swallowed: Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.

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

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

If in eyes: Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

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

TOXICOLOGICAL INFORMATION:

- This product contains petroleum distillates. Vomiting may cause aspiration pneumonia.
- Treat symptomatically.
- Medical Personnel should contact Bayer's Medical Information Services, Toll-Free: 1-800-334-7577.

Section 4: Environmental Hazards:

- TOXIC to aquatic organisms. Observe buffer zones specified under the DIRECTIONS FOR USE. This product may be harmful to beneficial predatory or parasitic arthropods. The best available application technique, which minimizes off target drift, should be used to reduce effects on beneficial arthropods in the field boundary.
- To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.
- Avoid application when heavy rain is forecast.
- Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Section 5: STORAGE

Storage:

- Do not contaminate water, food, or feed by storage or disposal.
- Keep away from fire or open flame or other sources of heat
- CANNOT be stored below freezing.
- If stored for 1 year or longer, shake well before using.
- Store the tightly closed container away from feeds, seeds, fertiliser, plants and foodstuffs.
- Do not use or store in or around the home.
- Keep in original container during storage.
- In case of fire, leaking or damaged containers, call toll free 1-800-334-7577.

Section 6: DISPOSAL

Recyclable Container Disposal:

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

Disposal of Unused, Unwanted Product:

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for cleanup of spills.

Disposal of Unused Spray Solution:

If any spray solution remains in the tank after spraying is finished, it should be sprayed on the perimeter of the area just sprayed, away from water supplies, ditches, and irrigation canals.

DIRECTIONS FOR USE

Section 7: Crop, Disease, Rate, Timing

CROP	DISEASE	RATE	TIMING
Potato	Early Blight (<i>Alternaria solani</i>) Late blight (<i>Phytophthora infestans</i>)	REASON 500SC Fungicide applied as a tank mix with Dithane DG* . Apply REASON 500SC Fungicide at 200 mL/ha plus Dithane DG* at 1.25 kg/ha REASON 500SC Fungicide applied as a tank mix with BRAVO 500. Apply REASON 500SC Fungicide at 200 mL/ha plus BRAVO 500 at 1.25 L/ha. Apply by ground or air.	Application of Reason 500SC Fungicide should begin when plants are 15-20 cm high or when disease threatens (whichever comes first). Apply a fungicide having a different mode of action within 7-10 days after each application. Use the shorter spray interval when conditions favour disease development. Follow the recommended spray interval for each fungicide application before proceeding with the next application. Ensure that the area to be treated is covered uniformly. Do not apply Reason 500SC Fungicide more than 6 times in a year. For aerial application, apply Reason 500SC Fungicide in no less than 35 L of water per ha at a pressure no less than 300 kPa.

* When using other formulations of mancozeb, adjust application rates accordingly to apply 935 grams active ingredient per ha.

NOTE:

Consult the label of the tank mix partner for further instructions regarding directions for use, restrictions and precautions.

Do not tank mix REASON 500SC Fungicide with pesticides, fertilizers or any other chemical additives unless recommended on this label.

Rotational crop restrictions: Potatoes and all other crops may be rotated following a minimum plantback interval of 30 days.

NOTE TO USER: The DIRECTIONS FOR USE for this product for use on Bulb Vegetables (Crop Group 3) were developed by persons other than Bayer CropScience and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Bayer CropScience itself makes no representation or warranty with respect to performance (efficacy) or crop tolerance (phytotoxicity) claims for this product when used on Bulb Vegetables. Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold Bayer CropScience harmless from any claims based on efficacy or phytotoxicity in connection with the use on Bulb Vegetables.

Crop Group 3

Garlic, great-headed garlic, leek, onion (dry bulb and green), Welch onion, shallot, chive (fresh leaves), chive (Chinese, fresh leaves), daylily (bulb), Hosta, elegans, Fritillaria (bulb and leaves), garlic (serpent), kurrat, lady's leek, Lily (bulb), wild leek, onion (Beltsville bunching), onion (Chinese bulb), onion (fresh), onion (macrostem), onion (pearl), onion (potato bulb), onion (tree tops)

CROP	DISEASE	RATE	TIMING
Bulb Vegetables (Crop Group 3)	Suppression of Downy Mildew (<i>Peronospora destructor</i>)	400 mL/ha	For optimum results, begin applications as soon as crop and/or environmental conditions become favourable for disease development. Applications should be made on a 5-10 day interval depending upon disease conditions. Apply on the shorter application interval under conditions of high disease pressure.

RESTRICTIONS: DO NOT apply more than 1600 mL/ha per growing season of Reason 500 SC Fungicide on Bulb Vegetables, a maximum of 4 applications per growing season. DO NOT apply within 7 days of harvest.

Apply by ground equipment only.

To limit the potential for resistance to develop, DO NOT apply more than 2 sequential applications of Reason 500SC or other Group 11 fungicides. If two sequential applications are made, switch to a labelled non-Group 11 fungicide for at least 2 applications before applying a Group 11 fungicide again.

NOTE TO USER: The DIRECTIONS FOR USE for this product for the use on cucurbits were developed by persons other than Bayer CropScience and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Bayer CropScience itself makes no representation or warranty with respect to performance (efficacy) or crop tolerance (phytotoxicity) claims for this product when used on cucurbits. Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold Bayer CropScience harmless from any claims based on efficacy or phytotoxicity in connection with the use on cucurbits.

Cucurbit crops including: Chinese cucumbers, cucumbers, gourds, pumpkin, summer squash, winter squash, citron melon, muskmelon, watermelon, cantaloupes

CROP	DISEASE	RATE	TIMING
cucurbits	Downy Mildew (<i>Pseudoperonospora cubensis</i>)	400 mL/ha	Begin applications as soon as crop and/or environmental conditions become favourable for disease development. Apply in a spray volume of 300-600 L/ha. Applications should be made on a 5-10 day interval depending upon disease conditions. Apply on the shorter application interval under conditions of high disease pressure.

RESTRICTIONS: Do not apply more than 4 applications of Reason 500 SC Fungicide per growing season to cucurbits. Do not apply within 14 days of harvest.
Apply by ground equipment only.
To limit the potential for resistance to develop, DO NOT apply more than one application of REASON 500 SC or other Group 11 fungicide before alternating with a fungicide from a different resistance management group.

NOTE:

- Do not tank mix REASON 500 SC Fungicide with pesticides or any chemical additives unless recommended on this label.
- Rotational crop restrictions: Cucurbits and all other crops may be rotated following a minimum plantback interval of 30 days.

Section 8: Resistance Management Recommendations

Resistance Management Recommendations:

For resistance management, please note that Reason 500SC Fungicide (fenamidone) contains a Group 11 fungicide. Any fungal population may contain individuals naturally resistant to REASON 500SC Fungicide and other Group 11 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance:

- Alternate with fungicides having a different mode of action other than Group 11 every 7 to 10 days after each application of REASON 500SC Fungicide.
- A maximum of six applications per year.
- Fungicide use should be based on an integrated pest management (IPM) program that includes scouting, historical information related to pesticide use and crop rotation and record keeping and considers cultural, biological, and other chemical control practices.
- Monitor efficacy of all fungicides used in the disease management program against the target pathogen and record other factors that may influence fungicide performance and/or disease development.
- If disease continues to progress after treatment with this product, do not increase the use rate. discontinue use of this product, and switch to another fungicide with a different target site of action, if available.
Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information and to report suspected resistance, contact a Bayer CropScience representative at 1-888-283-6847 or at www.bayercropscience.ca.

Section 9: Application Precautions

General Application Precautions:

- DO NOT apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands), estuarine/ marine habitats.
- DO NOT contaminate aquatic habitats when cleaning and rinsing spray equipment or containers.
- DO NOT apply more than 1.6 L/ha of REASON 500SC Fungicide in a year. When using REASON 500SC Fungicide, do not apply more than six times in a year to support sound resistance management strategies.
- If spray mixture remains in the tank overnight, or for long periods during the day, agitate thoroughly prior to application.

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American

Society of Agricultural Engineers (ASAE) medium classification. Boom height must be 60 cm or less above the crop or ground.

Aerial application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 16 km/h at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Apply REASON 500 SC Fungicide only by rotary or fixed-wing aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

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

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

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

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature, application equipment and sprayer settings.

Operator Precautions for Aerial Applications:

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

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

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

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

Product Specific Precautions:

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-888-283-6847 or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

Volume: Apply REASON 500SC Fungicide in no less than 35 litres of water per hectare at a pressure no less than 300 kPa.

Buffer zones:

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer and spot treatment.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of application	Crop	Buffer Zones (metres) Required for the Protection of Aquatic Habitat of Depths:	
		Less than 1 m	Greater than 1 m
Field sprayer*	Potatoes, bulb vegetables, cucurbits	1	1
Aerial - fixed and rotary wing	Potatoes	5	1

*For field sprayer application, buffer zones can be reduced with the use of drift reducing spray shields. When using a spray boom fitted with a full shield (shroud, curtain) that extends to the crop canopy, the labelled buffer zone can be reduced by 70%. When using a spray boom where individual nozzles are fitted with cone-shaped shields that are no more than 30 cm above the crop canopy, the labelled buffer zone can be reduced by 30%.

When a tank mixture is used, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture.

Section 10: Mixing Instructions

Mixing Instructions:

REASON 500SC Fungicide must be applied with properly calibrated, clean equipment. Prior to adding REASON 500SC Fungicide to the spray tank, ensure that the spray tank is thoroughly clean.

REASON 500SC Fungicide applied in tank mixes:

- Add one-half of the required amount of water to the spray or mixing tank and start agitation.
- Add the tank mix partner to the tank first and agitate thoroughly.

- Add the required quantity of REASON 500SC Fungicide to the water and complete filling with water to the required total volume.
- Maintain agitation throughout mixing and spraying.

Section 11: Pre-harvest Interval

Do not apply within 14 days of harvest.

Section 12: Notice

NOTICE TO USER:

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

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