GROUP M FUNGICIDE

# Bravo Ultrex<sup>®</sup> 90 SDG Agricultural Fungicide

AGRICULTURAL

#### **GUARANTEE:**

# KEEP OUT OF REACH OF CHILDREN READ THE LABEL AND ATTACHED BROCHURE BEFORE USING

# **DANGER: Causes Severe Eye Damage**

REGISTRATION NO. 24793 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 4 kg, 10 kg

**Syngenta Canada, Inc.** 140 Research Lane, Research Park Guelph, Ontario N1G 4Z3

# 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.

# FIRST AID

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

**In case of eye contact,** 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.

**In case of skin or clothing contact**, 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. This product may produce temporary allergic side effects characterized by redness of the eyes, mild bronchial irritation and redness or rash on exposed skin areas. Persons having allergic reaction should contact a physician.

**In case of inhalation**, 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.

# TOXICOLOGICAL INFORMATION

Note to Physician: Persons having an allergic reaction respond to treatment with antihistamines or steroid creams and/or systemic steroids.

#### PRECAUTIONS

#### KEEP OUT OF REACH OF CHILDREN.

#### DANGER: Causes Severe Eye Damage. DO NOT get in eyes.

Wear coveralls over long pants, a long-sleeved shirt, goggles or a face shield, apron and chemical resistant gloves during mixing, loading, clean-up and repair activities. Wear long pants, a long-sleeved shirt and chemical resistant gloves during application.

DO NOT re-enter treated areas within 48 hours. If required, individuals may re-enter treated areas within 48 hours for short-term tasks not involving hand labour only if at least 4 hours has passed since application, and long pants, long-sleeved shirt, hat and chemical-resistant gloves are worn.

AVOID contact with skin or clothing. Wash exposed areas of skin with soap and warm water after handling or using. DO NOT take internally. AVOID breathing spray mist. This product may produce temporary allergic side effects, characterized by redness of the eyes, mild bronchial irritation and redness or rash on exposed skin areas. DO NOT store near feed or foodstuffs. Store in a cool place. Protect from excessive heat. Apply only to areas specified on label.

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.

#### ENVIRONMENTAL HAZARDS

This product is toxic to fish, aquatic invertebrates and marine/estuarine organisms. Runoff from treated areas may be hazardous to aquatic organisms in neighbouring areas. DO NOT apply directly to water.

Keep out of lakes, streams, and ponds. DO NOT contaminate water by cleaning of equipment, or disposal of wastes. DO NOT apply where runoff is likely to occur. DO NOT apply when weather conditions favour drift from areas being treated.

A buffer zone of 100 metres for aerial applications and 15 metres for ground applications to protect surface water bodies including lakes, streams, ponds or sloughs from drift should be observed. Provincial buffer zones that are greater than the above buffer zones should be respected.

# PRODUCT DECONTAMINATION AND DISPOSAL

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

# IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL, FIRE OR POISONING CALL 1-800-327-8633 (FASTMED)

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Keep out of lakes, streams, and ponds. DO NOT contaminate water by cleaning of equipment, or disposal of wastes. DO NOT apply where runoff is likely to occur. DO NOT apply when weather conditions favour drift from areas being treated.

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# **PRODUCT INFORMATION**

BRAVO ULTREX 90 SDG is an excellent fungicide when used according to label directions for control of a broad spectrum of plant diseases. BRAVO ULTREX 90 SDG can be used effectively in dilute or concentrate sprays. Thorough uniform coverage is essential for disease control. DO NOT combine BRAVO ULTREX 90 SDG in the spray tank with pesticides, surfactants or fertilizers, unless your prior use has shown the combination physically compatible and non-injurious under your conditions of use.

The required amount of BRAVO ULTREX 90 SDG should be added slowly into the spray tank during filling. With concentrate sprays, premix the required amount of BRAVO ULTREX 90 SDG in a clean container and add to the spray tank as it is being filled. Keep agitator running when filling

spray tank and during spray operations.

#### DIRECTIONS FOR USE

Dosage rates on this label indicate kilograms (Kg) of BRAVO ULTREX 90 SDG per hectare, unless otherwise stated. Applications should be made in sufficient water to obtain adequate coverage of foliage. Volume of water to be used will vary with crop and amount of plant growth. Spray volume usually will range from 225-1,600 litres per hectare for dilute sprays and 50-100 litres per hectare for concentrate ground sprays and aircraft applications. Both ground and aircraft methods of application are recommended unless specific directions are given for a crop.

#### Additional Guidance for Aerial Application

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label. Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment. Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

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

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

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

Operatory Precautions: Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a close system is permitted. It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

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

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

**Broccoli, Brussels Sprouts, Cabbage, Cauliflower:** Alternaria leaf spot, downy mildew - Use 1.4 - 2.7 kg per hectare in sufficient water to obtain adequate coverage. Begin BRAVO ULTREX 90 SDG applications after transplants are set in the field (or shortly after emergence of field seeded

crop) or when conditions favour disease development. Repeat applications at 7 - 10 day intervals or as necessary to maintain disease control. DO NOT apply within 7 days of harvest. DO NOT use more than 5 applications per season.

**Carrot:** Early Blight (Cercospora) and late blight (Alternaria) - Use 1.3 - 1.8 kg per hectare in sufficient water to obtain adequate coverage. Start applications when disease threatens and repeat at 7 - 10 day intervals or as necessary to maintain control. DO NOT apply within one day of harvest. DO NOT use more than 7 applications per season.

**Celery:** Early blight, late blight - Use 0.9 - 1.3 kg per hectare on a 3 - 5 day spray schedule, or use 1.3 - 2.3 kg per hectare on an 8 - 10 day schedule. Start applications when transplants are set in the field. Apply BRAVO ULTREX 90 SDG in sufficient water to obtain adequate coverage. DO NOT apply within 7 days of harvest. For control of early blight and late blight in celery seedbeds, use 1.1 - 1.6 kg BRAVO ULTREX 90 SDG per 1,000 litres of water and apply 1,400 litres per hectare twice weekly or as needed to maintain control. Start applications shortly after crop emergence. Use the higher rate under severe disease conditions. DO NOT use more than 9 applications per season.

**Cucumber:** Anthracnose, powdery mildew, and scab - Use 2.7 kg per hectare. Apply BRAVO ULTREX 90 SDG in sufficient water to obtain adequate coverage. Begin applications when plants are in first true leaf stage or when conditions are favourable for disease development. Repeat applications at 7 day intervals. Under severe conditions, shorten spray interval. DO NOT use within 1 day of harvest. DO NOT use more than 8 applications per season.

**Cantaloupe, Muskmelon, Honeydew:** Anthracnose, powdery mildew and scab - Use 2.7 kg per hectare. Apply BRAVO ULTREX 90 SDG in sufficient water to obtain adequate coverage. Begin applications when plants are in the first true leaf stage or when conditions are favourable for disease development. Repeat applications at 7 day intervals. Under severe disease conditions, shorten spray interval. DO NOT apply within 1 day of harvest. DO NOT use more than 8 applications per season.

**Watermelon, Squash, Pumpkin:** Anthracnose - Use 1.8 kg per hectare. Scab - Use 2.7 kg per hectare. Apply BRAVO ULTREX 90 SDG in sufficient water to obtain adequate coverage. Begin applications when plants are in the first true leaf stage or when conditions are favourable for disease development. Repeat applications at 7 day intervals. Under severe disease conditions, shorten spray interval. DO NOT apply within 1 day of harvest. DO NOT use more than 8 applications per season.

**Potato:** Late blight - Use 0.7 - 1.3 kg per hectare. Early blight and Botrytis vine rot - Use 0.9 - 1.3 kg per hectare. Use sufficient water to obtain adequate spray coverage. Begin applications when plants are 15 - 20 cm high, or when disease threatens. Repeat applications at 7 to 10 day intervals, or as necessary to maintain disease control. Under severe disease conditions, use the higher rates at 7 day intervals. DO NOT apply to potato plants later than 1 day before harvest. DO NOT use more than 12 applications per season.

**Tomato:** Early blight, late blight, Septoria leaf spot and Anthracnose - Use 1.3 - 2.2 kg per hectare. Apply BRAVO ULTREX 90 SDG in sufficient water to obtain adequate coverage. Begin applications when disease threatens, and spray on an 8 - 10 day schedule at the lower rate, or a 14 day schedule at the 2.7 kg per hectare rate. Under severe disease conditions, shorten the spray interval. DO NOT use more than 9 applications per season. Botrytis gray mould - Use 2.7 kg per hectare on an 8 - 10 day schedule. DO NOT apply within 1 day of harvest.

#### CONIFERS

| Diseases Controlled                                                                             | BRAVO 90DG<br>Rate/Hectare | Application Directions                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scleroderris Canker (pines),<br>Swiss Needlecast and<br>Rhabdocline Needlecast<br>(Douglas-fir) | 1.3 to 2.7 kg              | Apply in 100 to 1,000 litres of water per hectare.<br>Make first application in spring when new shoot<br>growth is 1 to 2 cm in length. Make additional<br>applications at 3 to 4 week intervals until<br>conditions no longer favour disease development.<br>For use in nursery beds, apply the highest rate<br>specified on a 3 week schedule. |
| Sirococcus Tip Blight                                                                           | 2.0 to 3.3 kg              |                                                                                                                                                                                                                                                                                                                                                  |
| Rhizosphaera Needlecast<br>(spruces), Scirrhia brown spot<br>(pines)                            | 5.2 kg                     |                                                                                                                                                                                                                                                                                                                                                  |
| Lophodermium Needlecast                                                                         | 1.3 to 2.7 kg              | Apply in 100 to 1,000 litres of water per hectare.<br>Begin applications in mid-July to early August<br>before infection occurs. Make additional<br>applications at 3 to 4 week intervals until<br>conditions no longer favour disease development.<br>For use in nursery beds, apply 2,7 kg/ha on a 3<br>week schedule.                         |
| Botrytis seedling blight, Phoma<br>twig blight                                                  | 1.3 to 2.7 kg              | Apply in 100 to 1,000 litres of water per hectare.<br>Begin applications in nursery beds when seedlings<br>are 10 cm tall and when cool, moist conditions<br>favour disease development. Make additional<br>applications at 7 to 14 day intervals as long as<br>disease favourable conditions persist.                                           |

# **Resistance-Management Recommendations**

For resistance management, BRAVO ULTREX 90SDG Fungicide contains a Group 3 fungicide. Any fungal population may contain individuals naturally resistant to BRAVO ULTREX 90SDG Fungicide and other Group 3 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:

- Where possible, rotate the use of BRAVO ULTREX 90SDG Fungicide or other Group 3 fungicides with different groups that control the same pathogens.
- Avoid application of more than the maximum number listed in the label and consecutive sprays of BRAVO ULTREX 90SDG Fungicide or other fungicides in the same group in a season.
- Fungicide use should be based on an IPM program that includes scouting, historical information related to pesticide use and crop rotation and considers cultural, biological and other chemical control practices.
- Monitor treated fungal populations for sign of resistance 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 disease problems in your area.

For further information and to report suspected resistance, contact company representatives at 1-800-459-2422 (in Eastern Canada) or 1-800-665-9250 (in Western Canada) or at <u>www.syngenta.ca</u>.

BRAVO ULTREX<sup>®</sup> is a registered trademark of a Syngenta group company

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