GROUP 7 FUNGICIDE

# ELATUS® B Fungicide SOLATENOL® technology

**FUNGICIDE** 

**EMULSIFIABLE CONCENTRATE** 

COMMERCIAL - AGRICULTURAL

For broad-spectrum disease control or suppression of diseases in labelled crops.

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



POISON
DANGER: CORROSIVE TO EYES & SKIN

REGISTRATION NO: **31977**PEST CONTROL PRODUCTS ACT

NET CONTENTS: 0.5 - 1000 L

Syngenta Canada Inc.

140 Research Lane, Research Park Guelph, Ontario N1G 4Z3 Telephone: 1-877-964-3682

Label

#### 1.0 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.

#### 2.0 FIRST AID

**IN CASE OF POISONING,** contact a physician or a poison control centre **IMMEDIATELY**. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

**If swallowed**, call a poison control centre or doctor **IMMEDIATELY** for treatment advice. 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 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.

#### 3.0 TOXICOLOGICAL INFORMATION

There is no specific antidote. Treat symptomatically. Contains petroleum distillates. Vomiting may cause aspiration pneumonia.

#### 4.0 PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN AND ANIMALS. Keep unused product in original container tightly closed, locked up and away from food and feed.

CORROSIVE to the eye. DO NOT get in eyes. Causes irreversible eye damage. Harmful or fatal if swallowed. Harmful if inhaled. Avoid inhaling/breathing sprays. Severely irritating to the skin. DO NOT get on skin.

**DO NOT** re-enter treated fields for 12 hours after application (12 hr REI).

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

If this pest control product is to be used on a commodity that may be exported to other countries in the world and you require information on acceptable residue levels in these countries, please contact Syngenta Canada Inc. at 1-87-SYNGENTA / 1-877-964-3682.

# 5.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Wear coveralls over a long-sleeved shirt, long pants, chemical resistant gloves, socks, chemical-resistant footwear and protective eyewear (goggles or face shield) during mixing, loading, application, clean up and repair. Protective eyewear, chemical resistant gloves and coveralls are not required during application within a closed cab and/or cockpit.

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.

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.

All users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

#### 6.0 ENVIRONMENTAL PRECAUTIONS

TOXIC to aquatic organisms and non-target terrestrial plants. Observe spray buffer zones specified under DIRECTIONS FOR USE.

Benzovindiflupyr is persistent and may carryover. It is recommended that this product not be used in areas treated with any products containing benzovindiflupyr during the previous season.

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 filter strip between the treated area and the edge of the water body.

#### 7.0 STORAGE

Store this product away from food or feed. Keep in original container, tightly closed, during storage. Store in a cool, dry, well-ventilated area out of the reach of children and animals. This product does not require heated storage.

#### 8.0 DISPOSAL

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.

#### For returnable containers:

Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

#### For refillable containers:

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

# For recyclable containers:

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.

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

ELATUS® and SOLATENOL® are trademarks of a Syngenta Group Company.

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Pamphlet

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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 filter strip between the treated area and the edge of the water body.

#### 7.0 STORAGE

Store this product away from food or feed. Keep in original container, tightly closed, during storage. Store in a cool, dry, well-ventilated area out of the reach of children and animals. This product does not require heated storage.

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

#### 9.0 PRODUCT INFORMATION

ELATUS® B is a broad-spectrum product and is recommended for the control or suppression of many important plant diseases. ELATUS B provides disease control of many rust, leaf spots and powdery mildews. ELATUS B is primarily applied as a foliar spray and can be used in block, or alternating spray programs with other crop protection products. All applications should be made according to the use directions listed in the label.

#### 9.1 General Use Precautions

Do not apply ELATUS B through any type of irrigation equipment.

DO NOT USE IN GREENHOUSES (ALONE OR IN TANK MIXTURES).

FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, AND/OR ILLEGAL RESIDUES.

Apply the higher rate and shorter interval under conditions of high disease pressures.

Unless indicated otherwise in the use directions for specific crops, make no more than two sequential application of ELATUS B before alternating with a non-Group 7 fungicide registered for the same disease.

Not all members of the crop groups have been tested for efficacy and phytotoxicity at the recommended label rates, and should be used at the discretion of the user.

#### 10.0 DIRECTIONS FOR USE

#### 10.1 General Information

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Thorough coverage is necessary to provide good disease control. Applications using nozzles, sufficient water volume and pressure to provide thorough and uniform coverage generally provide the most effective disease control.

To avoid spray drift, do not apply when conditions favor drift beyond the target area. Avoid spray overlap, as crop injury may occur.

For more information on spray equipment and calibration, consult sprayer manufacturers and provincial recommendations.

Do not apply through any ultra-low volume (ULV) spray system.

It is important to check the physical compatibility of tank mixed pesticide products in a small volume prior to filling the sprayer. Check the compatibility of tank mixes containing A15457 Fungicide using a jar test with proportionate amounts of mix partners, and water, before mixing in the spray tank.

In some cases, tank mixing a pest control product with another pest control product or a fertilizer can result in biological effects that could include, but are not limited to: reduced pest efficacy or increased host crop injury. The user should contact Syngenta Canada Inc. for information before mixing any pesticide or fertilizer that is not specifically recommended on this label.

All directions for use, crops/sites, use rates, dilution rates, precautions, and limitations which appear on the tank-mix product label must be observed. The label dosage for the tank-mix partner is not to be exceeded, and the most restrictive label precautions and limitations are to be followed.

#### 10.2 Ground Application

- Apply in a minimum of 150 L of water per hectare, unless specified otherwise.
- Do not apply through any ultra-low volume (ULV) spray system.
- Thorough coverage is necessary to provide good disease control.

<u>Field sprayer application</u>: **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 S572.1) medium classification. Boom height must be 60 cm or less above the crop or ground.

# **10.2.1 Mixing Instructions**

Prepare only the amount of spray mixture that is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area.

- ELATUS B is an emulsifiable concentrate (EC) formulation.
- Prepare no more spray mixture than is required for the immediate operation.
- Thoroughly clean spray equipment before using this product.
- Agitate the spray solution before and during application.
- Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area.

# **ELATUS B Alone (No Tank Mix)**

- Add  $\frac{1}{2}$ - $\frac{2}{3}$  of the required amount of water to the spray or mixing tank.
- With the agitator running, add ELATUS B to the tank.
- Continue agitation while adding the remainder of the water.
- Begin application of the spray solution after ELATUS B has completely dispersed into the mix water.
- Maintain agitation until all of the mixture has been sprayed.

**ELATUS B + Tank Mixtures:** ELATUS B is usually compatible with all tank-mix partners listed on this label. To determine the physical compatibility of ELATUS B with other products, use a jar test. Using a jar, add the products to water in the same ratio and order as planned in the spray tank. Add wettable powders and water dispersible granular products first, then liquid flowables, then emulsifiable concentrates and solutions last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same order of addition required ingredients to the spray tank.

**Tank Mixtures**: All directions for use, crops/sites, use rates, dilution rates, precautions, and limitations which appear on the tank-mix product label must be observed. The label dosage for the tank-mix partner is not to be exceeded, and the most restrictive label precautions and limitations are to be followed.

In some cases, tank mixing a pest control product with another pest control product or a fertilizer can result in biological effects that could include, but are not limited to: reduced pest efficacy or increased host crop injury. The user should contact Syngenta Canada Inc. for information before mixing any pesticide or fertilizer that is not specifically recommended on this label. The user assumes the risk of losses that result from the use of tank mixes that do not appear on this label or that are not specifically recommended by Syngenta Canada Inc.

- 1. Ensure that the sprayer interior is clean, then fill the spray tank with  $\frac{1}{2}$  the required amount of water and engage gentle agitation. Good agitation is indicated by a rippling or rolling action on the surface of the water.
- 2. Add any WG or DF formulation mix partners and agitate to ensure complete mixing.
- 3. Add any additional SC formulation mix partners and agitate to ensure complete mixing.
- 4. Add ELATUS B and agitate to ensure complete mixing.
- 5. Add any other EC formulation mix partners and agitate to ensure complete mixing.
- 6. Fill the tank to  $\frac{3}{4}$  the required amount of water.

- 7. Add any solution (SN or SL) formulation mix partners and agitate to ensure complete mixing.
- 8. Finish filling the sprayer with water, maintaining good agitation.
- 9. After any break in spraying operations, agitate thoroughly before spraying again.
- 10. Spray the pesticide suspension the same day as mixing.
- 11. **DO NOT** mix, load or clean spray equipment where there is a potential to contaminate wells or aquatic systems.

When using chemical handling equipment to fill the sprayer, the following additional recommendations apply:

- WG and DF formulations are preferentially batch mixed.
- SC, SN, and SL formulations may be inducted or batch mixed.
- EC formulations are preferentially batch mixed.

# Mixing in the Spray Tank

- Add  $\frac{1}{2}$ - $\frac{2}{3}$  of the required amount of water to the spray or mixing tank.
- With the agitator running, add the tank-mix partner(s) into the tank in the same order as described above.
- Allow the material to completely dissolve and disperse into the mix water. Continue agitation while adding the remainder of the water and ELATUS B to the spray tank.
- Allow ELATUS B to completely disperse.
- Spray the mixture with the agitator running.

# 10.2.2 Spraying Instructions

- 1. <u>Water Volume:</u> Apply in a minimum spray volume of 150 L/ha OR the volume given in the crop and pest specific instructions tabulated below, whichever is LARGER.
- 2. <u>Sprayer Agitation</u>: Use a jet agitator or liquid sparge tub which recirculates 10% or more of the tank per minute. **DO NOT** use an air sparger.
- 3. <u>Pump:</u> Screens should be used to protect the pump and prevent clogging. Use 16 mesh or *coarser* screens on the suction side of the pump. **DO NOT** place a screen in the recirculation line. Use 50 mesh or *coarser* screens between the pump and boom.
- 4. <u>Spray Nozzles:</u> 80° or 110° drift reducing flat fan (e.g. those with a pre-orifice or turbulence chamber) or air induction nozzles are recommended. Use 50 mesh nozzle screens. **DO NOT** use flood type nozzles, controlled droplet application equipment, spray foils or hollow cone nozzles.
- 5. <u>Pressure:</u> As recommended by the nozzle manufacturer to achieve ASAE medium sized droplets.
- 6. Apply at uniform speed and avoid overlapping. Shut off spray boom while starting, turning, slowing or stopping to avoid potential crop injury from over application.

# 10.2.3 Equipment Clean-Up

# Before Spraying:

Prior to using ELATUS B, ensure that the spray tank, chem handling equipment, lines and filter are thoroughly cleaned.

# After Spraying:

Thoroughly clean application equipment immediately after spraying. **DO NOT** let ELATUS B residue to dry within application equipment.

When using tank mixes, consult the tank-mix partner label for additional clean-up instructions.

The following recommendations are provided:

- Drain and flush tank walls, boom and all hoses for ten minutes with a clean water/detergent mixture. Rinse with clean water. **DO NOT** clean application equipment near desirable vegetation, wells or other water sources.
- 2. Remove all nozzles and screens and wash separately.
- 3. Dispose of all rinsate in accordance with provincial regulations.

#### 10.3 Aerial Application

<u>Aerial application</u>: **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 flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

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. When no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

#### **10.3.1 Operator Precautions**

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

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

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

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

#### 10.3.2 Pilot Precautions

Read and understand the entire label before using this product. 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. Light winds at altitude of 3-16 km/h are preferred, with 3-9 km/h considered optimal. Ensure uniform application and a uniform spray with minimum potential for drift. To avoid streaked, uneven or overlapped application, use appropriate marking technology. GPS based marking is preferred.

# 10.3.3 Mixing Instructions

Mixing this product directly in the aircraft hopper **IS NOT** recommended. The use of chemical handling or managing equipment to load the hopper **IS** recommended. This product **MAY BE** inducted into a hopper which is prefilled with water or when the product and water are mixed prior to entering the hopper. This product **MAY BE** batch mixed and pumped into the hopper. In all cases the chemical handling equipment and hopper interior must be clean prior to use.

**NOTE:** WG and DF formulations are preferentially batch mixed.

**NOTE:** SC, SN, and SL formulations may be inducted or batch mixed.

**NOTE:** EC formulations are preferentially batch mixed.

It is **NOT** recommended to combine solid (WG or DF) formulations with liquid tank mix partners within a single batch. Batch mix WG or DF formulations first, pump into the hopper, and then add liquid tank mix partners by induction or as an additional batch mix. When tank mixing multiple products, follow the mixing order outlined below:

- Pump water into the hopper to at least ½ to ½ of the desired spray volume. Engage hopper circulation, if possible.
- Thoroughly batch mix any WG or DF formulation mix partners and agitate to ensure complete mixing. Pump into the hopper
- Induct or thoroughly batch mix any SE or SC formulations.
- Thoroughly batch mix A15457 Fungicide and any EC formulation mix partners. EC formulations may be added to the batch from Step 3, if desired.
- Induct or thoroughly batch mix any solution (SN or SL) formulation mix partners. SN/SL formulations may be added to the batch from Step 3, if desired.
- Pump batch mixed SC, EC, and/or SN/SL products into the hopper.
- Finish filling the hopper with water.
- If it was not possible to engage hopper agitation in Step 1, do so as soon as possible once airborne.
- Spray the pesticide suspension the same day as mixing.
- **DO NOT** mix, load or clean equipment where there is a potential to contaminate wells or aquatic systems.

# **10.3.4 Spraying Instructions**

- 1. <u>Water Volume:</u> Apply in a minimum spray volume of 45 L/ha OR the volume given in the crop and pest specific instructions tabulated below, whichever is LARGER.
- 2. <u>Spray Nozzles:</u> Use only ASAE medium or coarse nozzles rated as delivering droplets of volume median diameter of 300 microns or greater.
- 3. <u>Pressure:</u> As recommended by the nozzle manufacturer to achieve ASAE medium sized droplets.

4. Ensure hopper agitation is engaged whenever possible during flight.

#### 10.3.5 Equipment Clean-Up

#### Before Spraying:

Prior to using ELATUS B, ensure that the hopper, chem handling equipment, lines and filter are thoroughly cleaned.

# After Spraying:

Thoroughly clean application equipment immediately after spraying. **DO NOT** let ELATUS B residue to dry within application equipment.

When using tank mixes, consult the tank-mix partner label for additional clean-up instructions.

The following recommendations are provided:

- Drain and flush tank walls, boom and all hoses for ten minutes with a clean water/detergent mixture. Rinse with clean water. **DO NOT** clean application equipment near desirable vegetation, wells or other water sources.
- 2. Remove all nozzles and screens and wash separately.
- 3. Dispose of all rinsate in accordance with provincial regulations.

# **10.3.6 Product Specific Precautions**

Follow recommendations provided by local disease monitoring services or provincial spray calendars regarding the appropriate application timing for protectant fungicides in your area. Cultural practices such as canopy management and removal of overwintered plant debris should be integrated with the use of fungicides to reduce disease incidence. Use the higher rate, and the shorter application interval under conditions of heavy infection pressure, on highly susceptible varieties, or when environmental conditions are favourable for disease development.

ELATUS B treatments should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, plant residue management, crop rotation, and proper timing and placement of fertilizer and irrigation. Fungicide applications should begin prior to disease infection and continue throughout the season following a resistance management strategy (see **Resistance Management Recommendations**).

Read and understand the entire label before opening this product. If you have questions, call Syngenta Canada Inc. at 1-877-964-3682 or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

Volume: Apply the recommended rate in a minimum spray volume of 45 litres per hectare.

#### 10.4 Spray Buffer Zones

A spray buffer zone is NOT required for uses with hand-held application equipment permitted on this label.

Use of a low-clearance hooded or shielded sprayers that prevent contact with crop, fruit, or foliage, soil drench or soil incorporation do not require a spray buffer zone.

The spray buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of application	Butter Zones (metres) Redu				s) Required	red for the Protection of:			
			1	er Habitat of oths:	Estuarii Habitats	Terrestrial habitat			
			Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m			
Field sprayer	Potatoes		15	2	1	1	1		
Field sprayer	Dried shelled pea and bean subgroup (legumes), soybeans		10	1	1	1	1		
Aerial	pea and bean		675	15	5	1	15		
subgroup (legumes), soybeans		Rotary wing	325	10	2	1	10		

When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

The spray buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

#### 10.5 Rotational Crop Restrictions

Please see the following table for the crop rotational restrictions:

Rotational Crops	Planting Time From Last ELATUS B Application
Potatoes and tuberous and corm vegetable subgroup (CG 1C) Dried shelled pea and bean subgroup (CG 6C) Soybeans Fruiting vegetables crop group (CG 8-09) Cucurbit vegetables crop group (CG 9) Cereals (wheat, barley, oats, rye, triticale) Grasses grown for seed (timothy, annual and perennial ryegrass) Corn (field, sweet, pop and specialty) Rapeseed subgroup (CG 20A) Onions (Crop Subgroups 3-07A and 3-07B) Sugar Beets	0 days
All other crops Intended for Food and Feed	6 months/180 days

#### 11.0 CROP USE DIRECTIONS

Apply the higher rate and shorter interval under conditions of high disease pressures.

Diseases are controlled unless otherwise indicated as suppressed.

# 11.1 Potatoes – In Furrow Application

**Application Timing/Instructions:** Make an in-furrow application in a water volume of 50-150 L per hectare at planting. Mount the spray nozzle so the spray is directed into the furrow as a 15-20 cm band just before the seed is covered. Apply the spray in a narrow band over the seed piece. Do not apply by air.

# **Specific Use Restrictions:**

Do not apply more than 100 g a.i./ha of foliar benzovindiflupyr-containing products on potato crops per season if an in-furrow application was made.

Diseases suppressed at 500-750 mL product/ha. See	Stem and stolon canker and black scurf
Rate Conversion Chart – Potatoes for rates per 100 m	(Rhizoctonia solani)
row	
Diseases suppressed at 750 mL product/ha. See	Verticillium wilt (Verticillium dahliae)
Rate Conversion Chart – Potatoes for rates per 100 m	
row	
Diseases suppressed at 500-750 mL product/ha. See	Silver scurf (Helminthosporium solani)
Rate Conversion Chart – Potatoes for rates per 100 m	
row.	

# **RATE CONVERSION CHART - POTATOES**

	Rate in mL product /100 m row for specified row spacing									
Rate mL product /ha	Row Spacing (cm)									
	75	80	85	90	95	100	105	110	115	120
500	3.8	4.0	4.3	4.5	4.8	5.0	5.3	5.5	5.8	6.0
750	5.6	6.0	6.4	6.8	7.1	7.5	7.9	8.3	8.6	9.0

#### 11.2 Sugar Beets

**Application Timing/Instructions:** Apply once in-furrow at seeding with a minimum water volume of 50 L/ha or a banded application with a minimum water volume of 100 L/ha over the row soon after emergence but before the 6th leaf stage. If cool soil conditions are expected after planting which could result in an extended period of plant emergence, do not apply ELATUS B in-furrow.

Diseases suppressed at 500-750 mL product/ha.	Rhizoctonia root and crown rot (Rhizoctonia
	solani)

# 11.3 Dried Shelled Pea and Bean (except Soybean) (Crop Subgoup 6C)

Crops	Dried shelled pea and beans (Crop Subgroup 6C) Any dried cultivar of bean ( <i>Phaseolus</i> spp.); and dried cultivar of pea ( <i>Pisum</i> spp.): dried cultivars of bean ( <i>Lupinus</i> spp.) (includes grain lupin, sweet lupin, white lupin, and sweet white lupin); ( <i>Vigna</i> spp.) (includes adzuki beans); ( <i>Phaseolus</i> spp.) (includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean, mung bean, rice bean, southern bean, urd bean); broad bean (dry, faba bean); chickpea; guar; lablab bean; lentil; pea ( <i>Pisum</i> spp.) (includes field
Diseases Controlled	pea); and pigeon pea  Ascochyta blight (Ascochyta spp.)  Asian soybean rust (Phakopsora pachyrhizi)  Anthracnose (Colletotrichum spp.)
Use rate (mL product/ha)	500-750
Application Timing/Instructions	Make the first application prior to disease development. A second application can be made 14 days after the first application, when disease pressure is severe or when agronomic or weather conditions are conducive to disease development or movement. If disease pressure is high, use the highest rate and shortest interval. For best results, sufficient water volume must be used to provide thorough coverage. A minimum of 100-200 L/ha for ground applications is recommended. For aerial applications, a minimum of 45 L/ha of water is recommended.

#### **Specific Use Restrictions:**

- 1. Do not apply more than 1.5 L/ha/season of ELATUS B.
- 2. Do not apply within 15 days of harvest for dry shelled peas and beans (15-day PHI).
- 3. Dry pea hay and vines may be fed or harvested 15 days (15-day PHI) after last application.
- 4. Do not apply more than 2 consecutive applications before switching to a non-Group 7 fungicide. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program.
- 5. Not all members of the legume vegetable subgroup 6C have been tested for efficacy and phytotoxicity at the recommended label rates, and should be used at the discretion of the user.

# 11.4 Soybeans

Crops	Soybeans			
Diseases Controlled	Septoria brown spot (Septoria glycines)			
	Frogeye leaf spot (Cercospora sojina) (suppression)			
	Asian soybean rust (Phakopsora pachyrrhizi)			
	Pod and stem blight (Diaporthe phaseolorum) (suppression)			
Use rate (mL product/ha)	500-750			
Application Timing/Instructions	Make the first application prior to disease establishment. A second			
	application can be made 7-14 days after the first application, when			
	disease pressure is severe or when agronomic or weather conditions			
	are conducive to disease development or movement. If disease			
	pressure is high, use the highest rate and shortest interval. For best			
	results, sufficient water volume must be used to provide thorough			
	coverage. A minimum of 100-200 L/ha for ground applications is			
	recommended. For aerial applications, a minimum of 45 L/ha of water			
	is recommended.			

# **Specific Use Restrictions:**

- 1. Do not apply more than 1.5 L/ha/season of ELATUS B.
- 2. Do not apply within 14 days of harvest for soybean grain (14-day PHI).
- 3. Soybean forage and hay may be fed or harvested 1 day (1-day PHI) after last application.
- 4. Do not apply more than 2 consecutive applications before switching to a non-Group 7 fungicide. Follow all precautions, restrictions and directions on the labels of fungicide products used in an alternation program.

#### 12.0 RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, ELATUS B contains a Group 7 fungicide in the succinyl dehydrogenase inhibitor (SDHI) class. Any fungal population may contain individuals naturally resistant to benzovindiflupyr and other Group 7 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 benzovindiflupyr or other Group 7 fungicides with different groups that control the same pathogens.

Apply no more than 2 sequential applications unless otherwise stated in the crop section.

Use tank mixtures with fungicides from a different group that is effective on the target pathogen when such use is permitted.

Fungicide use should be based on an integrated disease management program that includes scouting, historical information related to pesticide use and crop rotation and considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.

Where possible, make use of predictive disease models to effectively time fungicide applications.

Monitor treated fungal populations for 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, to which pathogen resistance has not developed.

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 or to report suspected resistance, contact company representatives at 1-87-SYNGENTA (1-877-964-3682) or at <a href="https://www.syngenta.ca">www.syngenta.ca</a>.

**Application Limitations and Pre-harvest Intervals** 

Crop*	Maximum Product Rate/ha/application (mL/ha)	Maximum total (L/ha/ Season)	Pre-Harvest Interval (PHI) (days)	Minimum Re- treatment Interval (days)
Dried Shelled Pea and Bean (CG 6C)	750	1.5	15	14
Pea hay and vines	750	1.5	15	14
Soybeans	750	1.5	14	7
Soybean forage and hay	750	1.5	1	7
Potatoes	750 (soil)	0.75 (soil)	N/A	N/A
Sugarbeets	750 (soil)	0.75 (soil)	N/A	N/A

<sup>\*</sup>For specific crops in a group and use directions, refer to the Specific Directions For Use

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