

GROUP	7	FUNGICIDE
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VIBRANCE® 500FS Seed Treatment

SEED TREATMENT FUNGICIDE

COMMERCIAL - AGRICULTURAL

SUSPENSION

Broad-spectrum seed treatment fungicide for control of seed- and soil-borne diseases of certain crops.

ACTIVE INGREDIENT:

Sedaxane..... 500 g/L

Contains 1,2-benzisothiazolin-3-one at 0.006% OR 5-chloro-2-methyl-4-isothiazolin-3-one at 0.0006% and 2-methyl-4-isothiazolin-3-one at 0.00019% as preservatives.

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

REGISTRATION NO: **30438**
PEST CONTROL PRODUCTS ACT

NET CONTENTS: **1 L to 1050 L**

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

Special Use Restrictions:

This product contains no colourant. All seed treated with this product must be conspicuously coloured at the time of treatment. Regulations pertaining to the "Seeds Act" must be strictly adhered to when using this product.

No open transfer is permitted for commercial seed treatment of barley, wheat, oats, rye, triticale, millet [pearl and proso], teosinte, wild rice, cucurbits (Crop Group 9) and bulb onions (Crop Subgroup 3-07A).

No open transfer is permitted for treatment of potato seed pieces.

No on-farm seed treatment is permitted for corn, sorghum, and members of Crop Subgroup 20A (Canola/Rapeseed Subgroup).

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

If on skin or clothing, take off contaminated clothing. Rinse skin **IMMEDIATELY** with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

If in eyes, hold eyes 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

Treat symptomatically.

4.0 PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN AND DOMESTIC ANIMALS.

Do not contaminate food, feed, or domestic water supplies.

DO NOT plant treated seed by hand.

Apply this product to the seed only in a way that it will not contact workers or other persons, either directly or through drift. Only workers wearing personal protective equipment may be in the area when seed is being treated or bagged.

VIBRANCE® 500FS Seed Treatment is for on-farm treatment (using an open pour system) and closed transfer commercial seed treatment (in facilities or with mobile treaters) only on barley, wheat, oats, rye, triticale, millet [pearl and proso], teosinte, wild rice, cucurbits (Crop Group 9) and bulb onions (Crop subgroup 3-07A). Closed transfer includes closed mixing, loading, calibrating and closed treatment equipment. It is also for commercial seed treatment (in facilities or with

mobile treaters) only on corn, sorghum, and members of Crop Subgroup 20A.

For legumes (Crop Group 6), on-farm and commercial seed treatment (using either an open or closed transfer application system, in facilities or with mobile treaters) is permitted.

DO NOT use open treating equipment when treating potato seed pieces. This product must be applied using a closed treatment system for this use.

Treat seed in a well-ventilated area. Keep treated seeds out of reach of children and animals. 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) AND ENGINEERING CONTROLS

For Commercial Seed Treatment (including facility workers and mobile treaters):

Seed type:

- Barley, wheat, oats, rye, triticale, millet [pearl and proso], teosinte, wild rice, Crop Group 9 (cucurbits) and Crop Subgroup 3-07A (bulb onions),

Engineering Controls:

- Closed transfer system only. Closed transfer includes closed mixing, loading, calibrating and closed treatment. No open transfer is permitted.

Tasks/PPE:

- Cleaners: Wear chemical-resistant coveralls over a long-sleeved shirt and long pants, socks, chemical-resistant footwear and chemical-resistant gloves.
- Treaters, baggers, sewers, stackers, forklift operators, and others: Wear cotton coveralls over a long sleeved shirt and long pants, socks, shoes and chemical-resistant gloves
- All activities: For good hygiene practice, it is also recommended to wear a NIOSH approved N95 filtering facepiece respirator (dust mask) that is properly fit tested.

Seed type:

- Corn, sorghum, Crop Subgroup 20A (Canola/rapeseed) and Crop Group 6 (legumes)

Engineering Controls:

- Open or closed transfer system

Tasks/PPE:

- Cleaners: Wear chemical-resistant coveralls over a long-sleeved shirt and long pants, socks, chemical-resistant footwear and chemical-resistant gloves.
- Treaters, baggers, sewers, stackers, forklift operators, and others: Wear cotton coveralls over a long sleeved shirt and long pants, socks, shoes and chemical-resistant gloves
- All activities: For good hygiene practice, it is also recommended to wear a NIOSH approved N95 filtering facepiece respirator (dust mask) that is properly fit tested.

For Planting and Handling Commercially-Treated Seed:

Seed type:

- Barley, wheat, oats, rye, triticale, millet [pearl and proso], teosinte, wild rice, corn, sorghum, Crop Subgroup 20A (Canola/rapeseed), Crop Group 6 (legumes), Crop Group 9 (cucurbits), Crop Subgroup 3-07A (bulb onions) and sugar beet

Engineering Controls:

- Use an open or closed cab tractor when planting. Gloves are not required within a closed cab.

Tasks/PPE:

- Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seed.
- For good hygiene practice, it is also recommended to wear a NIOSH approved N95 filtering facepiece respirator (dust mask) that is properly fit tested.

For On-Farm Seed Treatment and Planting:

Seed type:

- Barley, wheat, oats, rye, triticale, millet [pearl and pros], teosinte, wild rice, Crop Group 9 (cucurbits), Crop Group (3-07A) (bulb onions) and Crop Group 6 (legumes)

Engineering Controls:

- Open or closed transfer system.
- Use an open or closed cab tractor when planting. Gloves are not required within a closed cab.

Tasks/PPE:

- Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and work boots when mixing, loading, treating, calibrating, cleaning and repairing.
- For good hygiene practice, it is also recommended to wear a NIOSH approved N95 filtering facepiece respirator (dust mask) that is properly fit tested during all job activities.

For Potato Seed Piece Treatment and Planting

Seed type:

- Potato seed pieces

Engineering Controls:

- Closed treatment system only.
- Use an open or closed cab tractor when planting. Gloves are not required within a closed cab.

Tasks/PPE:

- Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and work boots when handling treated potato seed pieces or when working with or around equipment used to transport or plant treated potato seed pieces.
- For good hygiene practice, it is also recommended to wear a NIOSH-approved N95 (minimum) filtering facepiece respirator (dust mask) that is properly fit tested during all job activities.

For All Activities:

Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Wash splashes from skin IMMEDIATELY with plenty of water. Remove PPE immediately after handling this product. Wash the outside of gloves with soap and water before removing. As soon as possible, wash thoroughly and change into clean clothing. After treating, wash hands and shower thoroughly with soap and water.

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.

Wear freshly laundered clothes daily.

Do not wear contaminated shoes.

Users should wash hands and exposed skin before eating, drinking, chewing gum, using tobacco, applying cosmetics or using the toilet.

While using product, do not eat, drink or use tobacco (including smoking).

6.0 ENVIRONMENTAL PRECAUTIONS

Toxic to aquatic organisms.

Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.

7.0 USE RESTRICTIONS

1. Treated seed must not be used for food, feed or oil processing.
2. Store away from food, feed and out of the reach of children and animals.
3. For small-grain cereals, soybean and canola, rapeseed or mustard (Crop Subgroup 20A) seed treated with VIBRANCE 500FS Seed Treatment, do not graze or feed livestock on treated areas for 45 days after planting. Do not graze or feed livestock on treated area for 60 days after planting corn, sorghum or legume vegetables (Crop Group 6). Do not graze or feed livestock on sugar beet tops prior to harvest of mature roots.
4. Do not plant any crop other than those on the VIBRANCE 500FS Seed Treatment label within 60 days to fields in which seed treated with VIBRANCE 500FS Seed Treatment were planted.
5. All containers or packages containing treated seed for sale or use in Canada must be labeled or tagged as follows: **“This seed has been treated with sedaxane fungicide. Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seed. For good hygiene practice, it is also recommended to wear a NIOSH approved N95 filtering facepiece respirator (dust mask) that is properly fit tested. Do not graze or feed livestock on seeded area for 45 days after planting small grain cereals, soybean, canola, rapeseed or mustard (Crop Subgroup 20A) or 60 days after planting corn, sorghum or legume vegetables (Crop Group 6). Do not graze or feed livestock on sugar beet tops prior to harvest of mature roots. Do not use for food, feed or oil processing. Store away from food and feed. Keep out of reach of children and domestic animals. Do not contaminate food, feed or domestic water supplies. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.**

8.0 STORAGE

Keep in original container, tightly closed, during storage. Store in a cool, dry, well-ventilated area away from other pesticides, feed, food and out of the reach of children and animals. Store this product away from seed, food or feed.

Ideal storage temperature is above freezing and below 30°C. Repeated freeze-thawing of VIBRANCE 500FS Seed Treatment will not affect the physical integrity of the product. If the product should freeze, bring the product back to room temperature and ensure the contents are mixed well prior to application.

9.0 DISPOSAL

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

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 treatment 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/territorial requirements.

For Returnable Containers:

DO NOT reuse this container for any purpose. For disposal, the 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.

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

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No open transfer is permitted for commercial seed treatment of barley, wheat, oats, rye, triticale, millet [pearl and proso], teosinte, wild rice, cucurbits (Crop Group 9) and bulb onions (Crop Subgroup 3-07A).

No open transfer is permitted for treatment of potato seed pieces.

No on-farm seed treatment is permitted for corn, sorghum, and members of Crop Subgroup 20A (Canola/Rapeseed Subgroup).

Pamphlet

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1.0 NOTICE TO USER

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2.0 FIRST AID

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

If on skin or clothing, take off contaminated clothing. Rinse skin **IMMEDIATELY** with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

If in eyes, hold eyes 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

Treat symptomatically.

4.0 PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN AND DOMESTIC ANIMALS.

Do not contaminate food, feed, or domestic water supplies.

DO NOT plant treated seed by hand.

Apply this product to the seed only in a way that it will not contact workers or other persons, either directly or through drift. Only workers wearing personal protective equipment may be in the area when seed is being treated or bagged.

VIBRANCE® 500FS Seed Treatment is for on-farm treatment (using an open pour system) and closed transfer commercial seed treatment (in facilities or with mobile treaters) only on barley, wheat, oats, rye, triticale, millet [pearl and proso], teosinte, wild rice, cucurbits (Crop Group 9) and bulb onions (Crop subgroup 3-07A). Closed transfer includes closed mixing, loading, calibrating and closed treatment equipment. It is also for commercial seed treatment (in facilities or with

mobile treaters) only on corn, sorghum, and members of Crop Subgroup 20A.

For legumes (Crop Group 6), on-farm and commercial seed treatment (using either an open or closed transfer application system, in facilities or with mobile treaters) is permitted.

DO NOT use open treating equipment when treating potato seed pieces. This product must be applied using a closed treatment system for this use.

Treat seed in a well-ventilated area. Keep treated seeds out of reach of children and animals.

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) AND ENGINEERING CONTROLS

Seed Type	Engineering Controls	Tasks/PPE
For Commercial Seed Treatment (including facility workers and mobile treaters)		
Barley, wheat, oats, rye, triticale, millet [pearl and proso], teosinte, wild rice, Crop Group 9 (cucurbits) and Crop Subgroup 3-07A (bulb onions)	Closed transfer system only. Closed transfer includes closed mixing, loading, calibrating and closed treatment. No open transfer is permitted.	Cleaners: Wear chemical-resistant coveralls over a long-sleeved shirt and long pants, socks, chemical-resistant footwear and chemical-resistant gloves Treaters, baggers, sewers, stackers, forklift operators, and others: Wear cotton coveralls over a long sleeved shirt and long pants, socks, shoes and chemical-resistant gloves All activities: For good hygiene practice, it is also recommended to wear a NIOSH approved N95 filtering facepiece respirator (dust mask) that is properly fit tested.
Corn, sorghum, Crop Subgroup 20A (Canola/rapeseed) and Crop Group 6 (legumes)	Open or closed transfer system	
For Planting and Handling Commercially-Treated Seed		
Barley, wheat, oats, rye, triticale, millet [pearl and proso], teosinte, wild rice, corn, sorghum, Crop Subgroup 20A (Canola/rapeseed), Crop Group 6 (legumes), Crop Group 9 (cucurbits), Crop	Use an open or closed cab tractor when planting. Gloves are not required within a closed cab.	Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seed. For good hygiene practice, it is also recommended to wear a NIOSH approved N95 filtering facepiece

Subgroup (3-07A) (bulb onions) and sugar beet		respirator (dust mask) that is properly fit tested during all job activities.
For On-Farm Seed Treatment and Planting		
Barley, wheat, oats, rye, triticale, millet [pearl and pros], teosinte, wild rice, Crop Group 9 (cucurbits), Crop Group (3-07A) (bulb onions) and Crop Group 6 (legumes)	Open or closed transfer system Use an open or closed cab tractor when planting. Gloves are not required within a closed cab.	Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and work boots when mixing, loading treating, calibrating, cleaning and repairing. For good hygiene practice, it is also recommended to wear a NIOSH approved N95 filtering facepiece respirator (dust mask) that is properly fit tested during all job activities.
For Potato Seed Piece Treatment and Planting		
Potato seed pieces	Closed treatment system only Use an open or closed cab tractor when planting. Gloves are not required within a closed cab.	Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and work boots when handling treated potato seed pieces or when working with or around equipment used to transport or plant treated potato seed pieces. For good hygiene practice, it is also recommended to wear a NIOSH-approved N95 (minimum) filtering facepiece respirator (dust mask) that is properly fit tested during all job activities.

For All Activities:

Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Wash splashes from skin IMMEDIATELY with plenty of water. Remove PPE immediately after handling this product. Wash the outside of gloves with soap and water before removing. As soon as possible, wash thoroughly and change into clean clothing. After treating, wash hands and shower thoroughly with soap and water.

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.

Wear freshly laundered clothes daily.

Do not wear contaminated shoes.

Users should wash hands and exposed skin before eating, drinking, chewing gum, using tobacco, applying cosmetics or using the toilet.

While using product, do not eat, drink or use tobacco (including smoking).

6.0 ENVIRONMENTAL PRECAUTIONS

Toxic to aquatic organisms.

Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.

7.0 USE RESTRICTIONS

1. Treated seed must not be used for food, feed or oil processing.
2. Store away from food, feed and out of the reach of children and animals.
3. For small-grain cereals, soybean and canola, rapeseed or mustard (Crop Subgroup 20A) seed treated with VIBRANCE 500FS Seed Treatment, do not graze or feed livestock on treated areas for 45 days after planting. Do not graze or feed livestock on treated area for 60 days after planting corn, sorghum or legume vegetables (Crop Group 6). Do not graze or feed livestock on sugar beet tops prior to harvest of mature roots.
4. Do not plant any crop other than those on the VIBRANCE 500FS Seed Treatment label within 60 days to fields in which seed treated with VIBRANCE 500FS Seed Treatment were planted.
5. All containers or packages containing treated seed for sale or use in Canada must be labeled or tagged as follows: **“This seed has been treated with sedaxane fungicide. Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seed. For good hygiene practice, it is also recommended to wear a NIOSH approved N95 filtering facepiece respirator (dust mask) that is properly fit tested. Do not graze or feed livestock on seeded area for 45 days after planting small grain cereals, soybean, canola, rapeseed or mustard (Crop Subgroup 20A) or 60 days after planting corn, sorghum or legume vegetables (Crop Group 6). Do not graze or feed livestock on sugar beet tops prior to harvest of mature roots. Do not use for food, feed or oil processing. Store away from food and feed. Keep out of reach of children and domestic animals. Do not contaminate food, feed or domestic water supplies. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.”**

8.0 STORAGE

Keep in original container, tightly closed, during storage. Store in a cool, dry, well-ventilated area away from other pesticides, feed, food, and out of the reach of children and animals. Store this product away from seed, food or feed.

Ideal storage temperature is above freezing and below 30°C. Repeated freeze-thawing of VIBRANCE 500FS Seed Treatment will not affect the physical integrity of the product. If the product should freeze, bring the product back to room temperature and ensure the contents are mixed well prior to application.

9.0 DISPOSAL

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

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 treatment 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/territorial requirements.

For Returnable Containers:

DO NOT reuse this container for any purpose. For disposal, the 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.

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

10.0 PRODUCT INFORMATION

VIBRANCE 500FS Seed Treatment is preventative seed treatment fungicide with systemic properties recommended for the control of labeled diseases of certain crops

Note for all uses except potatoes: Treatment of scarred or damaged seed or seed known to be of low vigour and poor quality may result in reduced germination and/or reduction of seed and seedling vigour. Treat a small quantity of seed using equipment similar to that planned for treating the total seed lot. Conduct germination tests on a small portion of the seed before committing the total seed lot to a selected seed treatment. Due to seed quality and seed storage conditions beyond the control of Syngenta Canada Inc., no claims are made to guarantee the germination of carry-over seed or propagating material for all crop seed.

Note for potato use: Treatment of highly damaged or bruised potato seed, or seed known to be of low vigor and poor quality, or potato seed that is deemed “physiologically old” may result in reduced germination and/or reduction of seed and seedling vigor and multiple stems from germination of the seed. When in doubt, or if the status/condition of the potato seed tubers is unknown, then treat a small sample batch of the same potato seed load with VIBRANCE 500FS Seed Treatment using recommended rates, equipment and application procedures; before treating the total seed lot. Conduct this test on a small batch of the potato seed and observe the germination, emergence, stem count from the germinating seed. Consult the data with local experts in the region or conduct the test with university or area experts. Only if the data confirms that the seed treated with VIBRANCE 500FS Seed Treatment is acceptable then proceed treating the rest of the seed load from which the sample was taken. **Due to seed quality, seed condition and seed storage conditions beyond the control of Syngenta Canada, no claims are made to guarantee the germination and or performance the potato seed tuber from treatment with VIBRANCE 500FS Seed Treatment.**

11.0 DIRECTIONS FOR USE

11.1 General Information

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

VIBRANCE 500FS Seed Treatment is a seed treatment formulation for use in commercial seed treatment (in facilities or with mobile treaters) and for on-farm treatment using seed treatment equipment that accurately meters, mixes, and applies a flowable seed treatment. The equipment must provide uniform coverage of VIBRANCE 500FS Seed Treatment on the seed. Uneven seed coverage may not give the desired level of disease control.

Thoroughly mix the recommended amount of VIBRANCE 500FS Seed Treatment with the required amount of water for the slurry treater and dilution rate to be used. Slurry volumes will vary depending on seed size. Follow the manufacturer’s application instructions for the seed treatment equipment being used. Maintain constant agitation of the slurry during the treatment. Allow the seed to dry before bagging, storing or seeding.

VIBRANCE 500FS Seed Treatment mixes easily with water. When mixing with products from other manufacturers, the compatibility should be tested prior to use by conducting a jar test; mixing all intended seed treatments with the appropriate amount of water in a clear glass container, mix well, and allow to sit for one hour. Remix and observe for incompatibility.

This product contains no colourant. An appropriate colourant must be added when this product is applied to seed. Users are responsible for ensuring that the treated seed, when dried and ready for bagging, has an unnatural colour. Regulations pertaining to the "Seeds

Act" must be strictly adhered to when using this product.

11.2 Application on Potato

For protection against soil-borne diseases, application of a registered, in-furrow fungicide, in addition to the seed-piece application of VIBRANCE 500FS Seed Treatment is recommended.

VIBRANCE 500FS Seed Treatment does not control bacterial pathogens that may be present in potato seed pieces.

Apply only in areas with adequate ventilation or in areas that are equipped to remove mist or dust.

Cut seed is particularly vulnerable to excess moisture. Too much moisture will induce seed decay. VIBRANCE 500FS Seed Treatment has been designed to be delivered in very low volumes of liquid to ensure good coverage without increasing tuber decay. Do not add excess water to the cut seed.

DO NOT bag potato seed that is treated with any liquid seed treatments.

If soil conditions are ideal, plant the treated potatoes immediately after application; however, if soil is predicted to be cold and wet, either a) wait to cut, treat, plant until conditions are favorable or b) cut, treat and store. If cutting, treating and storing, potatoes can be treated with an inert dust to improve wound healing. Store properly until conditions improve by making sure that there is adequate cool air (7-10 °C) movement through the pile of cut seed potatoes and a relative humidity of 85-90%. Cut and treated seed should not be piled above 1.8 m in height. When transporting cut and treated seed make sure the seed is covered.

11.3 Seed Treatment and Inoculants

VIBRANCE 500FS Seed Treatment is compatible with Rhizobium based inoculants. Please check with inoculant manufacturers for specific planting windows and methods of application prior to use. Consult the manufacturer of the application equipment planned to be used for suitability for this application and for instructions on operation and calibration of the equipment.

Seed treated with VIBRANCE 500FS Seed Treatment, or a combination of VIBRANCE 500FS Seed Treatment and seed inoculants, may not flow through a seed drill at the same rate as untreated seed. Recalibrate the seed drill before planting treated seed. Mixing with inoculants may increase drying time while treating, extending the processing time.

12.0 CROP USE DIRECTIONS

12.1 Crop Group 15 (Cereals)

CROP GROUP 15 (CEREALS)	
CROP	Barley
DISEASES CONTROLLED	True loose smut caused by <i>Ustilago nuda</i> Seed rot/pre-emergence damping-off, seedling blight and post-emergence damping-off caused by <i>Rhizoctonia solani</i>
RATE	5 – 10 mL/100 kg seed (2.5 – 5 g ai/100 kg seed)

APPLICATION METHOD	Seed Treatment
NOTES	Use the low rate (2.5 g ai/100 kg) for control of pre-emergent damping-off, seed rot, or seedling blight. For extended control of post-emergent damping-off and seedling blight or high disease pressure due to short cropping rotations, or high levels of seed borne infections like smuts, use the high rate (5 g ai/100 kg).
RESTRICTIONS	This product contains no colourant. An appropriate colourant must be added when this product is applied to the seed.
TCROP	Wheat
DISEASES CONTROLLED	Loose smut caused by <i>Ustilago tritici</i> Seed rot/pre-emergence damping-off, seedling blight and post-emergence damping-off caused by <i>Rhizoctonia solani</i>
RATE	5 – 10 mL/100 kg seed (2.5 – 5 g ai/100 kg seed)
APPLICATION METHOD	Seed Treatment
NOTES	Use the low rate (2.5 g ai/100 kg) for control of pre-emergent damping-off, seed rot, or seedling blight. For extended control of post-emergent damping-off and seedling blight or high disease pressure due to short cropping rotations, or high levels of seed borne infections like smuts, use the high rate (5 g ai/100 kg).
RESTRICTIONS	This product contains no colourant. An appropriate colourant must be added when this product is applied to the seed.
CROPS	Buckwheat Millet (Pearl and Proso) Oats Rye Sorghum Teosinte Triticale Wild Rice
DISEASES CONTROLLED	Seed rot/pre-emergence damping-off, seedling blight and post-emergence damping-off caused by <i>Rhizoctonia solani</i>
RATE	5 – 10 mL/100 kg seed (2.5 – 5 g ai/100 kg seed)
APPLICATION METHOD	Seed Treatment
NOTES	Use the low rate (2.5 g ai/100 kg) for control of pre-emergent damping-off, seed rot, or seedling blight. For extended control of post-emergent damping-off and seedling blight or high disease pressure due to short cropping rotations, use the high rate (5 g ai/100 kg).
RESTRICTIONS	This product contains no colourant. An appropriate colourant must be added when this product is applied to the seed.
CROP	Corn
DISEASES CONTROLLED	Seed rot/pre-emergence damping-off, seedling blight and post-emergence damping-off caused by <i>Rhizoctonia solani</i>
RATE	5 – 10 mL/100 kg seed (2.5 – 5 g ai/100 kg seed) This rate is equivalent to 0.0125 – 0.025 µL/seed (6.25 – 12.5 µg ai/seed) based on a seed weight of 4000 seeds/kg.
APPLICATION METHOD	Seed Treatment
NOTES	Use the low rate (6.25 µg ai/seed) for control of pre-emergent damping-off, seed rot, or seedling blight. For extended control of post-emergent damping-off and seedling blight or under high disease pressure due to short cropping rotations use the high rate (12.5 µg ai/seed).
RESTRICTIONS	This product contains no colourant. An appropriate colourant must be added when this product is applied to the seed.

12.2 Crop Subgroup 20A (Canola/ Rapeseed Subgroup)

CROP SUBGROUP 20A (CANOLA/RAPESEED SUBGROUP)	
CROPS	<p>Canola Borage Crambe Echium Flax seed Gold of pleasure Hare's ear mustard Lequerella</p> <p>Lunaria Meadowfoam Milkweed Mustard seed Oil radish Poppy seed Rapeseed</p> <p>As well as cultivars and hybrids of the above crops</p>
DISEASES CONTROLLED	Seed rot/pre-emergence damping-off, seedling blight and post-emergence damping-off caused by <i>Rhizoctonia solani</i>
RATE	<p>5 – 10 mL/100 kg seed (2.5 – 5 g ai/100 kg seed)</p> <p>For control of soil-borne diseases in canola based on 200,000 seeds per kg (5.0 g/1000 seeds) VIBRANCE 500 FS Seed Treatment delivers 0.025 g ai/kg or 0.1 µg active ingredient per seed to 0.05 g ai/kg or 0.2 µg active ingredient per seed.</p>
APPLICATION METHOD	Seed Treatment
NOTES	Use the low rate (2.5 g ai/100 kg) for control of pre-emergent damping-off, seed rot, or seedling blight. For extended control of post-emergent damping-off and seedling blight or under high disease pressure due to short cropping rotations use the high rate (5 g ai/100 kg).
RESTRICTIONS	This product contains no colourant. An appropriate colourant must be added when this product is applied to the seed.

12.3 Crop Group 6 (Legume Vegetables)

CROP GROUP 6 (LEGUME VEGETABLES)	
CROPS	<p>Soybean (Includes immature seed)</p> <p>Bean (<i>Lupinus</i> spp. – includes grain lupin, sweet lupin, white lupin and white sweet lupin)</p> <p>Bean (<i>Phaseolus</i> spp. – includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean and wax bean)</p> <p>Bean (<i>Vigna</i> spp. – includes includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean)</p> <p>Broad bean (fava bean)</p> <p>Chickpea (garbonzo bean)</p> <p>Guar</p> <p>Jackbean</p> <p>Lablab bean (hyacinth bean)</p> <p>Lentil</p> <p>Pea (<i>Pisum</i> spp. – includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea)</p> <p>Pigeon pea</p> <p>Sword bean</p>
DISEASES CONTROLLED	Seed rot/pre-emergence damping-off, seedling blight and post-emergence damping-off caused by <i>Rhizoctonia solani</i>
RATE	5 – 10 mL/100 kg seed (2.5 – 5 g ai/100 kg seed)
	For soybeans, this rate is equivalent to 0.0076 – 0.015 µL/seed (3.8 – 7.6 µg ai/seed) based on a seed weight of 6600 seeds/kg.
APPLICATION METHOD	Seed Treatment
NOTES	Use the low rate (2.5 g ai/100 kg seed) for control of pre-emergent damping-off, seed rot, or seedling blight. For extended control of post-emergent damping-off and seedling blight or under high disease pressure due to short cropping rotations use the high rate (5 g ai/100 kg seed).
RESTRICTIONS	This product contains no colourant. An appropriate colourant must be added when this product is applied to the seed.

12.4 Sugar Beet

CROPS	Sugar Beet
DISEASES CONTROLLED	Control of damping off and suppression of crown and root rot caused by <i>Rhizoctonia solani</i>
RATE	1 – 5 mL/100000 seeds (0.5 – 2.5 g ai/100000 seeds)
APPLICATION METHOD	Seed Treatment
RESTRICTIONS	DO NOT TREAT SEEDS IN CANADA. For import use only – not for domestic commercial or on-farm seed treatment. Treated seed must be conspicuously coloured.

12.5 Potatoes

CROPS	Potatoes
DISEASES CONTROLLED	Seed-borne black scurf and stem and stolon canker (<i>Rhizoctonia solani</i>)
RATE	3 – 5 mL/100 kg seed (1.5 – 2.5 g ai/100 kg seed)
DISEASES CONTROLLED	Seed-borne silver scurf (<i>Helminthosporium solani</i>)
RATE	5 mL/100 kg seed (2.5 g ai/100 kg seed)
APPLICATION METHOD	Seed Treatment
NOTES	Under high <i>Rhizoctonia solani</i> pressure or for optimal silver scurf control, use the high rate (5 mL product/100 kg seed).
RESTRICTIONS	This product contains no colourant. An appropriate colourant must be added when this product is applied to the seed.

12.6 Crop Subgroup 3-07A (Bulb Onions)

CROP SUBGROUP 3-07A (BULB ONIONS)			
CROPS	Includes bulbs of: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> Daylily Fritillaria Garlic Great-headed garlic Serpent garlic Lily </td> <td style="width: 50%; vertical-align: top;"> Onion Chinese onion Pearl onion Potato onion Shallot </td> </tr> </table>	Daylily Fritillaria Garlic Great-headed garlic Serpent garlic Lily	Onion Chinese onion Pearl onion Potato onion Shallot
Daylily Fritillaria Garlic Great-headed garlic Serpent garlic Lily	Onion Chinese onion Pearl onion Potato onion Shallot		
DISEASES CONTROLLED	Seed rot/pre-emergence damping-off, seedling blight and post-emergence damping-off caused by <i>Rhizoctonia solani</i>		
RATE	10 – 20 mL/100 kg seed (5 – 10 g ai/100 kg seed)		
APPLICATION METHOD	Seed Treatment		
NOTES	Use the low rate (5 g ai/100 kg seed) for control of pre-emergent damping-off, seed rot, or seedling blight. Under high disease pressure use the high rate (10 g ai/100 kg seed).		
RESTRICTIONS	This product contains no colourant. An appropriate colourant must be added when this product is applied to the seed.		

12.7 Crop Group 9 (Cucurbit Vegetables)

CROP GROUP 9 (CUCURBIT VEGETABLES)	
CROPS	Chayote (fruit) Chinese waxgourd (Chinese preserving melon) Citron melon Cucumber Gherkin Edible gourd (includes hyotan, cucuzza, hechima, Chinese okra) Momordica spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber) Muskmelon (hybrids and/or cultivars of <i>Cucumis melo</i> , including true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon and snake melon) Pumpkin Summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini) Winter squash (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash) Watermelon (includes hybrids and/or varieties of <i>Citrullus lanatus</i>)
DISEASES CONTROLLED	Seed rot/pre-emergence damping-off, seedling blight and post-emergence damping-off caused by <i>Rhizoctonia solani</i>
RATE	10 – 20 mL/100 kg seed (5 – 10 g ai/100 kg seed)
APPLICATION METHOD	Seed Treatment
NOTES	Use the low rate (5 g ai/100 kg seed) for control of pre-emergent damping-off, seed rot or seedling blight. Under high disease pressure use the high rate (10 g ai/100 kg seed).
RESTRICTIONS	This product contains no colourant. An appropriate colourant must be added when this product is applied to the seed.

12.8 Tank Mixes

This product may be tank mixed with a fertilizer, a supplement, or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Syngenta Canada Inc. at 1-87-SYNGENTA / 1-877-964-3682 for information before applying any tank mix that is not specifically recommended on this label.

Syngenta Canada Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) of all potential tank mixes under all environmental conditions or for all crop varieties. Tank mixes that are not specifically listed on this label should be tested on a small area first, under local conditions and using standard practices, to confirm the tank mix is suitable for widespread application.

To determine the physical compatibility of this product with other products, use a jar test.

Always read and follow label directions including WALES mixing order.

13.0 Resistance Management Recommendations

For resistance management, VIBRANCE 500FS Seed Treatment contains sedaxane, a Group 7 fungicide. Any fungal population may contain individuals naturally resistant to VIBRANCE 500FS Seed Treatment 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 VIBRANCE 500FS Seed Treatment or other Group 7 fungicides with different groups that control the same pathogens.

VIBRANCE 500FS Seed Treatment is a carboxamide fungicide; therefore, continuous or sequential use of carboxamide fungicides within or during successive growing seasons must be avoided or reduced. VIBRANCE 500FS Seed Treatment is not cross-resistant with other classes of fungicide that have different modes of action.

Seed treatment 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 or to report suspected resistance, contact Syngenta company representatives at 1-87-SYNGENTA (1-877-964-3682) or at www.syngenta.ca.

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