

Plant Disease Control

Integrated Plant Disease Management

Cereal Leaf Diseases

Cereal leaf diseases affect both the yield and quality of cereals. The following management practices are recommended for effective control of leaf diseases in all cereal crops.

- **Scouting:** Scout fields prior to, during, and following flag leaf emergence to check for disease levels. Flag and upper leaves are responsible for 50 per cent or more of grain-fill.
- **Crop Rotation:** Rotate crop types [e.g. cereal (wheat)/oilseed/cereal(barley)/pulse] to reduce the build-up of disease inoculum in crop residue. If at all possible, DO NOT seed the same crop in back to back years. When a short rotation is absolutely necessary, seed in the second year a variety that is more resistant to an anticipated disease problem.
- **Resistant Varieties:** Provincial crop/seed guides provide a comprehensive listing of the performance of adapted varieties, including their resistance status to specific diseases.
- **Foliar Fungicides:** Foliar fungicides, applied at the proper time in accordance with manufacturers' Pesticide Product labels, can control cereal leaf diseases and help to attain target yields. The greatest benefit occurs when disease pressure is high or with varieties that have poor resistance.
- **Spraying Practices:** Foliar fungicides should be applied preventively, before disease is well-established in a crop and already causing crop loss. Good spray coverage with minimal drift is essential. Ideally, the best time to spray is when the wind is light, humidity is above 60 per cent and air temperature is between 10 and 25°C.

Ergot of Cereals

Ergot is a fungal disease that affects most cereals and grasses in Canada. Ergot bodies contain toxic alkaloids; they should never be consumed by humans or fed to animals. Ergot is a particularly damaging disease of rye, and has also been observed sporadically over the years on cereals and grasses in the prairie provinces. After an ergot outbreak, crop residue and soil become contaminated with a higher load of ergot bodies, placing nearby grasses and cereal crops at greater risk of infection in the following seasons. This risk increases further when cool, moist weather conditions promote ergot spore production and/or when cereals experience an extended period of flowering or an induction of floret sterility due to any of a variety of agronomic or environmental factors. Once ergot is present, little can be done to control the disease in the field, so prevention is important. Planting seed contaminated with ergot bodies can potentially spread disease to previously clean fields and there are no seed treatments registered; therefore only clean, healthy seed should be used. During the field season, nearby grasses may be mowed to remove additional hosts. Prior to harvest, fields should be scouted to determine where ergot has developed, such as headlands, and those areas should be harvested separately. Viability of ergot bodies decreases after one to two years.

Fusarium Head Blight of Cereals

Fusarium head blight (FHB) causes a reduction in yield as a result of floret sterility and the loss of light weight cereal kernels during combining. More important is the effect on grain quality and food safety due to production of mycotoxins, including deoxynivalenol (DON) and vomitoxins. In Manitoba, FHB occurs throughout all crop regions and will damage wheat crops whenever environmental conditions favour the disease. In Saskatchewan, FHB has been established in eastern regions for several years, but occurs across the province, particularly in wet years.

- **Field Management of FHB:** Weather is by far the greatest factor in development of FHB. The disease is most likely to develop when the plants are flowering, temperatures range from 15 to 30°C and high moisture is continuous for 48 to 60 hours. If conditions remain warm and moist, the pathogen can continue to sporulate and spread to other kernels or heads. Under these optimum conditions, crop management has little impact on FHB outbreaks. Production practices, which lead to reduced tillering and shortened flowering duration, could reduce the risk period of FHB infection.
- **Crop Rotation and Crop Selection:** A break of at least one year – preferably two years – is advised between cereal, grass and corn production. In fields of wheat on wheat stubble, the incidence of FHB was about one and a half times higher than in fields of wheat planted into pulse crop residue. Regardless of the rotation, producers should consider planting cereals that are less susceptible to FHB. Results from previous years show that durum and soft white wheat varieties are more susceptible than hard red spring wheat varieties. Barley is more resistant than wheat, and oat is more resistant than either wheat or barley. Refer to provincial seed guides for FHB disease ratings for each variety. Planting two or more varieties of wheat with differing flowering times or varying planting dates will help reduce the risk of infection. Susceptible crops should not be planted on infected corn stubble. Corn trash is slower to decompose than cereal trash, and acts as a source of inoculum for a much longer time period.

Late Blight of Potatoes

One of the major threats to Manitoba and Saskatchewan's potato industry is the fungal disease late blight. At present, there is no fungicide registered for use on potatoes that is capable of eradicating the fungus from infected plants. As a result, producers are forced to adopt preventive management to control this disease. One of the main components of this strategy is the application of fungicides at specified spray intervals. This interval varies with the type of fungicide used. Shortening or lengthening of this interval should be based on current weather conditions and the status of the disease in the crop.

In Manitoba, potato producers can make use of a weather-based late blight risk forecasting program. The purpose of this program is to predict when environmental conditions are most conducive to disease development and issue warnings based on those parameters.

Accurate weather monitoring and scouting techniques are very important for achieving the most effective use of fungicides. Combining precise weather forecasting with spray interval scheduling may lower input costs for the farmer and lead to a more productive, higher quality crop. These weather monitoring systems monitor key environmental variables, such as relative humidity, temperature, leaf wetness and precipitation.

The following practices are recommended for effective disease management:

- **Scouting:** To effectively schedule preventative fungicide applications and eliminate unnecessary fungicide use, local weather forecasts should be used to identify conditions conducive to disease development. Scout fields regularly to identify diseases and pests that may be developing. Low areas in rolling or hilly fields and in wind-protected areas near trees lines should be specially checked.
- **Crop Varieties:** (*There are no known commercial resistant varieties currently available in Canada*). Where practical, the use of short season varieties may help reduce the period of use for fungicides.
- **Healthy Seed:** Obtain seed from sources with effective disease management practices. The use of certified seed is legislated in Manitoba and Saskatchewan. Grade seed carefully while cutting and discard suspicious looking tubers and seed pieces.
- **Cull Clean-up:** Avoid leaving tubers, including debris or slivers from seed cutting, in cull piles for any length of time. Follow a program of sanitation for storage facilities and equipment to eliminate sources of the disease. Dispose of cull piles in an approved manner so they DO NOT serve as a source of disease inoculum for future infections. Dispose by burying, using a cover, spreading out on the field over winter, or feeding to livestock.
- **Sanitation:** Follow a program of sanitation for storage facilities and equipment to eliminate sources of disease. Sanitation consists of cleaning and disinfecting all equipment, storage, and tools that contact potatoes from seeding through harvest and storage. Since most disinfectants are inactivated by soil and plant debris, it is essential that equipment and storage is thoroughly cleaned with a pressure washer or steam cleaner with detergent before disinfectant is applied. Treated surfaces should remain wet for at least 20 minutes for the disinfectant to destroy disease organisms.
- **Cultural Practices and Rotation:** Use proper cultural practices including a one in four-year potato crop rotation; proper hilling to reduce disease and greening in tubers; manage irrigation to avoid an excess or deficit of soil moisture; schedule irrigation throughout the day so it is not extending the natural dew period and prolonging leaf wetness; if late blight is discovered destroy hot spots of infected fields; control weed hosts (especially nightshades) and remove and destroy volunteer potatoes. Use appropriate weed control practices in rotational crops to control those weeds that may be hosts of diseases in potatoes.
- **Foliar Fungicides:** Preventative fungicide applications are most effective in controlling late blight. Follow product label guidelines for most efficient and safe use of products. Labels of newly registered products also provide information on resistance management. In this context – medium to high

risk of resistance fungicides (e.g. Group 7 – boscalid and Group 11 – strobilurins) should be rotated or mixed with low risk fungicides (e.g. mancozeb (M3) and chlorothalonil (M5)).

- **Farm Visits:** The following recommendations are provided to prevent the spread of potato diseases from field to field or between farms. All people serving the potato industry should use these sanitary practices.
 1. Contact the grower for permission to enter fields and other facilities on the farm.
 2. Keep your vehicle clean and whenever possible, avoid driving your vehicle into fields or potato handling areas.
 3. Carry a boot brush and a supply of disinfectant in your vehicle at all times. Quaternary ammonia (General Storage Disinfectant) is recommended as it is also registered for bacterial ring rot disinfection.
 4. Wear coveralls or other protective outerwear that can be discarded or disinfected regularly.
 5. Clean, washable, footwear is recommended and rubber boots are preferred.
 6. Clean, wash, and disinfect your boots thoroughly on arrival at each field/farm/storage shed and before leaving.
 7. Remove dirty outerwear, including boots before entering your vehicle.
 8. Any tools to be used during the farm call (potato forks, shovels, soil probes, knives, etc.) should be cleaned and disinfected before and after use.
 9. Maintain a detailed logbook of field/farm/storage shed visits.

Canola Diseases

Sclerotinia stem rot has been one of the most prominent diseases affecting canola in Manitoba and Saskatchewan for the past 25 years. An important factor for disease development is environmental conditions. The disease is much more widespread and severe during wet years. Fungicide applications are an important element in controlling the development and spread of sclerotinia stem rot. Fungicide spray decisions are based on soil moisture, weather conditions, crop stage and density, and disease history. The Sclerotinia resting bodies (sclerotia) require moist soil conditions for up to 10 days for germination to occur and the spore-bearing structures (apothecia) to form. Usually these conditions DO NOT occur until the crop canopy closes. The spores released from the apothecia utilize the canola petals as a food source and fall into the canola canopy where they infect plants. Lesions form up and down the stem, wilting leaves and eventually killing the plant. Fungicide should be applied between the 20 to 50 per cent flower stages to protect the petals from being colonized by the spores.

Blackleg caused by *Leptosphaeria maculans* affects canola and most crucifer field and vegetable crops. After many years of low incidences, due to resistant canola varieties grown in the prairie provinces, the disease is gaining importance again. High frequency of canola in crop rotations, accompanied by changes in the pathogen populations, has led to higher incidences and severities in some fields. For an effective control, a four-year crop rotation is highly recommended.

Clubroot is a soil-borne disease caused by a microbe, *Plasmodiophora brassicae*. Clubroot affects the roots of cruciferous field crops such as canola, mustard, and camelina, as well as

cruciferous vegetables and weeds. Clubroot has become a significant problem for canola growers in some areas of Alberta and the pathogen has been detected in Saskatchewan and Manitoba. Clubroot is a regulated pest in Saskatchewan under *The Pest Control Act*. Currently there is no provincial legislation that regulates clubroot in Manitoba.

Invasion of the interior of the host roots alters hormone balance and leads to increased cell division and growth, resulting in clubroot galls. These deformed roots have a reduced ability to absorb water and nutrients leading to stunting, wilting, yellowing, premature ripening and shrivelling of seeds. The cause of these above-ground symptoms can be confirmed by digging up suspect plants to check roots for gall formation. Clubroot affects canola yield and quality to a similar degree as other diseases affecting water and nutrient uptake, and its impact depends on soil conditions and the growth stage of the crop when infection occurs. Spore germination, infection and disease development are favoured by warm soils, high soil moisture and low soil pH; however, the disease can still occur under conditions outside of the optimum parameters. Infected roots will eventually disintegrate, releasing resting spores into the soil, which may then be transported by wind, water erosion, animals/manure, shoes/clothing, vehicles/tires or earth tag on agricultural or industrial field equipment. Resting spore numbers will decline over time when non-host crops are grown, but a small proportion can survive in soil for up to 20 years. Clubroot is primarily a soil-borne disease; it does not infect seed but it may be found in soil attached to seed or other plant parts. There are currently no seed treatments or foliar fungicides registered for control of clubroot on canola. The following best practices are recommended for prevention and management of clubroot:

1. Plant susceptible crops, including resistant varieties, no more than once every four years. Although crop rotation will not prevent the introduction of clubroot to fields that are free of the pathogen, it will restrict clubroot development by limiting the increase of clubroot resting spores and preventing the increase of clubroot inoculum, as well as help alleviate the impact of other plant pathogens.
2. Scout crops regularly and carefully.
 - Identify suspicious above-ground symptoms including wilting, stunting, yellowing and premature ripening of canola or other susceptible crops.
 - Field entrances and approaches are likely to be contaminated with clubroot spores first. Therefore, symptoms will often appear there first.
 - Confirm cause of above ground symptoms by checking the roots for galls.
 - Send sample of symptomatic plants into a commercial lab for confirmation of diagnosis.
3. Practice good sanitation by restricting movement of potentially contaminated soil to non-contaminated regions.
 - For Saskatchewan and Manitoba producers, this means restricting entry into their fields of vehicles, field machinery or oil rig equipment with earth tag from infested regions unless it has been properly sanitized. Ask questions about where the equipment is from and what sanitation measures have been used before the equipment left the infested area, dealer or auction site.
 - Cleaning steps may include: removal of crop debris and soil, washing of equipment with a power washer using

hot water or steam and misting with disinfectant (1 to 2 per cent bleach solution), followed by an additional rinse with water.

- Other agricultural products, which could carry soil, should be carefully checked for excess soil and if possible be from clubroot free areas.

For more information on clubroot, visit www.clubroot.ca, www.saskatchewan.ca, or www.gov.mb.ca/agriculture.

Pulse Crop Diseases

There are a variety of pulse crops produced in Manitoba and Saskatchewan including field pea, field bean, lentil, chickpea and soybean. Pulse crops are adapted to different regions and will require unique agronomic and disease management practices. Some diseases will attack all pulse crops, e.g. sclerotinia (white mould) and seedling/root rots caused by *Aphanomyces euteiches*, *Pythium*, *Rhizoctonia*, *Fusarium* and *Botrytis* species. Some diseases may occur on more than one type of pulse crop, but the pathogen species infecting each is often specific to that crop. This is the case for the ascochyta blights, powdery mildews and anthracnose. It is important to source information on pulse disease control from grower organizations such as the Saskatchewan Pulse Growers (www.saskpulse.com), Manitoba Pulse & Soybean Growers (www.manitobapulse.ca), provincial specialists, and field diagnostic guides. Most foliar diseases are favoured by warm, moist conditions and lush crop canopies, but root rots and powdery mildew can be present in dry years as well. In general, pulse disease management will need to include the following practices:

- **Use of clean seed and seed treatments:** Plant certified seed or seed that has been tested at an accredited lab and known to have high germination and zero or acceptable levels of seed-borne disease. Seed treatments will help protect seed and seedlings from low levels of seed-borne and soil-borne pathogens.
- **Crop Rotation:** It is important to keep at least three years between the same type of pulse crop to allow for the breakdown of crop residue on which disease pathogens survive. Longer rotations may be required for *Aphanomyces euteiches*, due to long-lived resting spores in the soil. Since there are diseases that affect more than one type of pulse crop, it is still important to maintain at least two years between different pulse crops.
- **Crop Varieties with Disease Resistance:** Refer to provincial seed guides for varieties adapted to your region. When available, choose varieties with disease resistance.
- **Scouting and Foliar Fungicide Application:** Begin crop scouting at the vegetative stages for aggressive diseases such as ascochyta blight in chickpea. Scout for other foliar diseases at early bloom, e.g. ascochyta blight and anthracnose in lentil. It is too late to apply fungicide to control sclerotinia (white mould) once symptoms are observed, and/or the canopy has closed, so forecasting to determine risk is necessary.
 - Use foliar fungicides only when disease risk and potential loss are significant. Rotate fungicides or use tank mixes from different fungicide groups to prevent development of resistant pathogen populations.

Effects of Weather

DO NOT apply foliar fungicides during periods of dead calm or when winds are gusty. Avoid application immediately after a rainfall and delay spraying if rainfall is imminent. Contact fungicides are always more sensitive to wash-off by rainfall than systemic fungicides, because their mode of action relies on drying on the leaf surface. Failure of a contact fungicide to dry on the leaf surface may result in a loss in efficacy. Systemic fungicides are less sensitive than contact fungicides, but still need sufficient drying time and be fully absorbed by plants prior to rainfall. Consult the label or product manufacturers for rainfall period for individual products.

Pathogen Resistance (Insensitivity) Management

Any fungal pathogen population may contain strains naturally insensitive to a fungicide and other fungicides within the same Group. A gradual or total loss of disease 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.

To delay fungicide resistance/insensitivity:

- Where possible, rotate the use of a fungicide, (and others within the same Group) with different Groups that control the same pathogens.
- Where possible, tank mix fungicides with a high risk of developing insensitivity with other fungicides from a different Group.
- DO NOT apply more than the maximum number of applications listed on the label. Avoid consecutive sprays of a fungicide, or other fungicides in the same Group, in a season.
- Fungicide use should be based on an integrated pest management (IPM) program that includes scouting and accurate recording related to pesticide use and crop rotation. An IPM program also considers cultural, biological and other chemical control practices.
- Monitor treated fungal populations for signs of fungicide insensitivity. If disease continues to progress after treatment with a product, DO NOT increase the use rate. Discontinue use of the product and switch to another fungicide with a different target site of action.
- Contact your local regional crops specialist or certified crop advisor for any additional pesticide management and/or IPM recommendations for specific crops and disease problems in your area.

Fungicide Modes of Action

Why are fungicides needed?

- Control of disease during crop establishment.
- Increase productivity of crop (photosynthesis) and/or reduce blemishes.
 - Maintain yield and/or market value.
- Improve storage life and quality of harvested plants / grain / produce.
 - Prevent spoilage and/or production of mycotoxins.

How do fungicides work?

There are several ways to define 'mode of action':

- **Timing:**
 - Preventative: fungicide must be present on plant surface before the pathogen and repeated applications are required to protect new growth.
 - Curative: pathogen may already be present (post-infection, pre-symptom kick-back activity).
 - Eradicant: (post-symptomatic activity).
 - Inhibitive: prevents spore germination or sporulation.
- **Placement:**
 - Contact (AKA protectant): immobile – must come in direct contact with the pathogen.
 - Systemic (AKA penetrant): mobile – can move within plant.
- **Movement:**
 - Intra-plant Movement: within crop via vapour phase or redistribution by rain.
 - Passive Absorption – by diffusion.
 - Apoplastic Movement: xylem-mobile; move within free space and cell walls, upward through the transpiration stream (with water).
 - Symplastic Movement: phloem-mobile (common characteristic of herbicides and insecticides but very few fungicides).
- **Spectrum:**
 - General, Non-specific, or Broad Spectrum: fungicide affects pathogen in multiple ways.
 - Specific or Narrow Spectrum: fungicide targets a specific metabolic site in pathogen or against critical enzyme or protein. Genetic changes or naturally insensitive fungi have a greater chance to overcome the fungicidal effect (resistance/insensitivity).
- **Composition:**
 - Inorganic Fungicides: sulfur or metal ions such as copper.
 - Organic Fungicides: contain carbon atoms.
 - Biopesticides: suppressing pest populations using naturally occurring organisms or natural products derived from plants.
- **Biochemistry:**
 - Primary basis to classify fungicides, developed by Fungicide Resistance Action Committee (FRAC) using their general Mode of Action on fungi, and their chemistry.
 - All fungicides within a group share a common mode of action and resistance mechanism.
 - Fungicides within a group may have different chemical structures.
 - Resistance management strategies required wherever resistance is known or there is a risk of resistance development
 - See Table 1.

Table 1. Fungicide Groups Based on Biochemical Mode of Action (FRAC)

Mode of Action Target	Chemical Group & Chemical Name	Resistance Risk	Foliar Fungicide Products Registered in Saskatchewan/Manitoba	Seed Treatment Products Registered in Saskatchewan/Manitoba
A. Nucleic Acid Synthesis	4. Phenyl Amides	High	<i>Ridomil Gold/Bravo*</i> , <i>Ridomil Gold SL/Bravo*</i> , <i>Ridomil Gold 480EC, Ridomil Gold 480SL</i>	<i>Allegiance FL, Apron Advance*</i> , <i>Apron Maxx RTA*</i> , <i>Avoda PRO*</i> , <i>Belmont 2.7FS</i> , <i>Cruiser Maxx Corn*</i> , <i>Cruiser Vibrance Quattro*</i> , <i>EverGol Energy*</i> , <i>Evergol RISE*</i> , <i>Helix Vibrance*</i> , <i>Insure Cereal FX4*</i> , <i>Insure Pulse*</i> , <i>Interest Forte*</i> , <i>Lixar PRO*</i> , <i>Maxim Quattro*</i> , <i>Obex*</i> , <i>Prosper EverGol*</i> , <i>Rancona Trio*</i> , <i>Raxil PRO*</i> , <i>Raxil PRO SHIELD*</i> , <i>Raxil RISE*</i> , <i>Sharda METEB 11ST*</i> , <i>Staxan*</i> , <i>Tarian MD*</i> , <i>Telex Fungicide, Teraxxa F4*</i> , <i>Trilex Component B, Trilex EverGol*</i> , <i>Trilex EverGol SHIELD*</i> , <i>Vibrance Maxx RFC/RTA*</i> , <i>Vibrance Maxx RFC with INTEGO Solo</i> , <i>Vibrance Quattro*</i> , <i>Vibrance Total*</i> , <i>Vayantis IV*</i> , <i>VIKING Grimstad, Zeltera Cereals Seed Treatment Fungicide*</i>
B. Cytoskeleton and motor proteins	1. Methyl Benzimidazole Carbamates	High	None	<i>Apron Advance*</i> , <i>Cruiser Maxx Corn*</i> , <i>Maxim Quattro*</i> , <i>Mertect SC, Senator PSPT, Tibet 50 SC, Vibrance Total*</i> , <i>Zeltera Cereals Seed Treatment Fungicide*</i>
	22. Benzamide	Low to Medium	<i>Gavel 75DF*</i>	<i>INTEGO Solo Fungicide, Vibrance Maxx RFC with INTEGO Solo*</i>
C. Respiration	7. Carboxamides	Medium	<i>Aprovia Top*</i> , <i>Cabil, Cantus WDG Fungicide, Cotegra*</i> , <i>Delaro Complete*</i> , <i>Dyax*</i> , <i>Elatus*</i> , <i>Elatus Era*</i> , <i>Fontelis, Kenja 400SC, Lance AG*</i> , <i>Lance WDG Fungicide, Maxunitech Boscalid 70% WG, MIRAVIS Ace*</i> , <i>MIRAVIS Bold, MIRAVIS Duo*</i> , <i>Miravis Era*</i> , <i>MIRAVIS Neo 300SE*</i> , <i>Miravis Star*</i> , <i>Nexicor, Priaxor*</i> , <i>Prosaro PRO*</i> , <i>Sercadis, Shaft Fungicide, Terra Gurd, Trivapro*</i> , <i>Velum Rise</i>	<i>Cruiser Vibrance Quattro*</i> , <i>Emesto Silver*</i> , <i>EverGol Energy*</i> , <i>Evergol RISE*</i> , <i>Helix Vibrance*</i> , <i>Insure Cereal FX4*</i> , <i>Insure Pulse*</i> , <i>Prosper EverGol*</i> , <i>Rancona V RS, Rancona Trio*</i> , <i>Raxil RISE*</i> , <i>Teraxxa F4*</i> , <i>Trilex Component A, Trilex EverGol*</i> , <i>Trilex EverGol Shield*</i> , <i>Vayantis IV*</i> , <i>Vibrance 500FS, Vibrance Maxx RFC/RTA*</i> , <i>Vibrance Maxx RFC with INTEGO Solo*</i> , <i>Vibrance Quattro*</i> , <i>Vibrance Total*</i> , <i>Vibrance Ultra Potato*</i> , <i>Vitaflo 280*</i> , <i>Vitaflo Fungicide*</i> , <i>Vitaflo SP Fungicide*</i> , <i>Zeltera Cereals Seed Treatment Fungicide*</i>
	7. Pyridinyl Ethylbenzamide		<i>Luna Tranquility*</i> , <i>Proline Gold*</i> , <i>Velum Prime</i>	
	11 Strobilurins	High	<i>Acapela, Azoxystrobin, Azoshy 250 SC, AZteroid FC, Cerefit A, Custodia*</i> , <i>Delaro 325 SC*</i> , <i>Delaro Complete*</i> , <i>Dyax*</i> , <i>Elatus*</i> , <i>Emissarius, Evito 480, Fungtion SC*</i> , <i>Gauntlet, Headline EC, Spade, Lance AG*</i> , <i>Maxentis*</i> , <i>MIRAVIS Neo*</i> , <i>Nexicor*</i> , <i>Preach, Priaxor*</i> , <i>Pyraclostrobin, Pyraline 250, Quadris, Quadris Top*</i> , <i>Quasi, Quasimodo*</i> , <i>Quilt*</i> , <i>Raclos, Rambler Pro*</i> , <i>Razor, Reason 500SC, Spaxor, Tanos*</i> , <i>Tide Pyraclostrobin Shield, TopNotch*</i> , <i>Tornado PRO*</i> , <i>Trivapro*</i> , <i>Twinline*</i> , <i>Veltyma*</i> , <i>Viatude*</i> , <i>VIKING Azoxystrobin, Viking Kannus, VIKING Pyraclostrobin, VIKING Vaasa, Zetigo PRM*</i> , <i>Zolera FX*</i>	<i>AZteroid FC, Cruiser Maxx Corn*</i> , <i>Evergol RISE*</i> , <i>Insure Cereal FX4*</i> , <i>Insure Pulse*</i> , <i>Maxim Quattro*</i> , <i>Obex*</i> , <i>Prosper EverGol*</i> , <i>Stadium*</i> , <i>Teraxxa F4*</i> , <i>Trilex Component A, Trilex EverGol*</i> , <i>Trilex EverGol SHIELD*</i> , <i>VIKING Grimstad*</i>
	21. Cyano-imidazole	Medium to High	<i>Ranman 400SC, Zetigo PRM*</i>	None
	29. 2,6-Dinitroanilines	Low	<i>Allegro 500F, Downforce AG, Fluazinam, Vantana</i>	None
45. Triazolopyrimidyl- amine	Medium to High	<i>Zapro*</i>	None	

Table 1. Fungicide Groups Based on Biochemical Mode of Action (FRAC) *continued*

Mode of Action Target	Chemical Group & Chemical Name	Resistance Risk	Foliar Fungicide Products Registered in Saskatchewan/Manitoba	Seed Treatment Products Registered in Saskatchewan/Manitoba
D. Amino Acid & Protein Synthesis	9. Anilino-pyrimidine	Medium	<i>Luna Tranquility*</i> , <i>Scala SC</i>	None
E. Signal Transduction	12. Phenylpyrroles	Low to Medium	<i>Miravis Star*</i>	<i>Apron Advance*</i> , <i>Apron Maxx RTA*</i> , <i>Cruiser Maxx Corn*</i> , <i>Cruiser Maxx Potato Extreme*</i> , <i>Cruiser Vibrance Quattro*</i> , <i>Helix Vibrance*</i> , <i>Maxim D*</i> , <i>Maxim MZ PSP*</i> , <i>Maxim PSP</i> , <i>Maxim Quattro*</i> , <i>Stadium*</i> , <i>Vayantis IV*</i> , <i>Vibrance Maxx RFC/RTA*</i> , <i>Vibrance Maxx RFC with INTEGO Solo*</i> , <i>Vibrance Quattro*</i> , <i>Vibrance Total*</i>
F. Lipid / Membrane Synthesis & Cell Wall Degradation	BM 02 (44). <i>Bacillus amyloliquefacien</i> , synonyms for <i>Bacillus amyloliquefaciens</i> are <i>Bacillus subtilis</i> and <i>B. subtilis</i> var. <i>amyloliquefaciens</i> (previous taxonomic classification)	Low	<i>Serenade OPTI</i> , <i>Double Nickel LC</i> , <i>Double Nickel 55</i> , <i>SERIFEL</i>	None
	49. Oxysterol binding protein homologue inhibitors (OSBPI)	Medium to High	<i>Orondis Ultra*</i>	<i>Lumisena</i>
G. Sterol Biosynthesis	3. Demethylation Inhibitors	Medium	<i>Advantage Prothioconazole 480 SC</i> , <i>Advantage Prothio + Teb 250 EC</i> , <i>Advantage Tebuconazole 250</i> , <i>Aprovia Top*</i> , <i>Bumper 432 EC</i> , <i>Caramba</i> , <i>Cerefit B</i> , <i>Cevya</i> , <i>Custodia*</i> , <i>CO-OP Pivot</i> , <i>Cotegra*</i> , <i>Delaro Complete*</i> , <i>Delaro 325 SC*</i> , <i>Duplex</i> , <i>Elatus Era*</i> , <i>Fitness</i> , <i>Fullback 125SC</i> , <i>Fungtion SC*</i> , <i>Fusaro</i> , <i>Gauntlet</i> , <i>Holdfast</i> , <i>Hornet 432 F</i> , <i>Joust</i> , <i>Maxentis*</i> , <i>Maxunitech Prothioconazole 480SC</i> , <i>Maxunitech Prothio + Teb EC</i> , <i>MIRAVIS Ace*</i> , <i>MIRAVIS Duo*</i> , <i>Miravis Era*</i> , <i>MIRAVIS Neo*</i> , <i>Modo</i> , <i>Nexicor*</i> , <i>Orius 430 SC</i> , <i>Palliser</i> , <i>Pavise 480SC</i> , <i>Pivot 418EC</i> , <i>Princeton</i> , <i>Proline 480SC</i> , <i>Proline GOLD*</i> , <i>Propel</i> , <i>Propi Super 25 EC</i> , <i>Prosaro PRO*</i> , <i>Prosaro XTR</i> , <i>Quadris Top*</i> , <i>Quash SC</i> , <i>Quasimodo*</i> , <i>Quilt*</i> , <i>Rambler</i> , <i>Rambler Pro*</i> , <i>RevyPro</i> , <i>Roxar</i> , <i>Shalimar</i> , <i>Soraduo</i> , <i>Soratel</i> , <i>Spaxor</i> , <i>Sphaerex</i> , <i>StarPro</i> , <i>Taj</i> , <i>Tebbie</i> , <i>TILMOR 240 EC</i> , <i>Tilt 250E</i> , <i>Toledo 250EW</i> , <i>TopNotch*</i> , <i>Tornado</i> , <i>Tornado PRO*</i> , <i>Trivapro*</i> , <i>Twinline*</i> , <i>Veltyma*</i> , <i>Viatude*</i> , <i>Viking Kannus*</i> , <i>VIKING Propiconazole</i> , <i>VIKING Prothioconazole</i> , <i>VIKING Tebuconazole</i> , <i>VIKING Tromso</i> , <i>VIKING Vaasa</i> , <i>Zolera FX*</i>	<i>Avoda PRO*</i> , <i>Cruiser Maxx Potato Extreme*</i> , <i>Cruiser Vibrance Quattro*</i> , <i>Emesto Silver*</i> , <i>EverGol Energy*</i> , <i>Evergol RISE*</i> , <i>Helix Vibrance*</i> , <i>Insure Cereal FX4*</i> , <i>Interest Forte*</i> , <i>Lixar PRO*</i> , <i>Maxim D*</i> , <i>Rancona V RS</i> , <i>Rancona Trio*</i> , <i>Raxil PRO*</i> , <i>Raxil PRO Shield*</i> , <i>Raxil RISE*</i> , <i>Sharda METEB 11 ST*</i> , <i>Stadium*</i> , <i>Staxan*</i> , <i>Tarian MD*</i> , <i>Teraxxa F4*</i> , <i>Vibrance Quattro*</i> , <i>Vibrance Ultra Potato*</i> , <i>Zelera Cereals Seed Treatment Fungicide</i>
H. Cell Wall Biosynthesis	40. Carboxylic Acid Amides (CAA)	Low to Medium	<i>Forum</i> , <i>Orondis Ultra*</i> , <i>Revus</i> , <i>Zampro*</i>	<i>Vibrance Ultra Potato*</i>
U. Unknown	17. Tetrazolyloximes	Not known		<i>Vayantis IV*</i> , <i>Vibrance Total*</i>
	27. Cyanoacetamide- oximes	Low to Medium	<i>Curzate</i> , <i>Tanos*</i>	None
	33. Phosphonates	Low	<i>Confine Extra</i> , <i>Phostrol</i> , <i>Rampart</i>	<i>Confine Extra</i> , <i>Rampart</i>
	NC. (Not classified) and diverse	Not known	<i>Contans WG</i> , <i>OxiDate FC</i> , <i>Regalia Maxx</i>	<i>Heads Up Plant Protectant</i> , <i>StorOx</i>

Table 1. Fungicide Groups Based on Biochemical Mode of Action (FRAC) continued

Mode of Action Target	Chemical Group & Chemical Name	Resistance Risk	Foliar Fungicide Products Registered in Saskatchewan/Manitoba	Seed Treatment Products Registered in Saskatchewan/Manitoba
M. Multi-Site Contact Activity	M1. Inorganic copper	Low	<i>Copper products, Corbanza, Cueva, HyCop, Parasol FL, Parasol WG</i>	None
	M3. Dithiocarbamates		<i>Rainshield, Gavel 75DF*, Mancozeb, Manzate Pro-Stick, Manzate Max, Penncozeb 75DF, Penncozeb 80WP</i>	<i>Maxim MZ PSP*, ST16, Vitaflo 280*, Vitaflo Fungicide*, Vitaflo SP Fungicide*</i>
	M4. Phthalimides		None	<i>Agrox FL</i>
	M5. Chloronitriles		<i>Bravo 500, Bravo Zn, Chlorothalonil, Echo 720, Echo 90DF, Echo NP, Ridomil Gold/Bravo*, Ridomil Gold SL/Bravo*</i>	None

*Products contain more than one active ingredient and appear in more than one group.

Foliar Fungicide Tables*

* All foliar fungicide tables should be used only in consultation with the product labels. In case of any conflict, instructions on the label prevail.

Table 2. Foliar Fungicides for Disease Control in Potatoes

FUNGICIDES	Page	Black Dot	Botrytis Grey Mould / Botrytis Vine Rot	Brown Leaf Spot	Early Blight	Late Blight	Late Blight Tuber Rot / Tuber Blight	Pythium Leak	Pink Rot	Rhizoctonia Canker, Black Scurf, Stolon Canker, and Stem Rot	Silver Scurf	Sclerotinia stem rot
<i>Acapela</i>	491				•	•						•
<i>Allegro 500F</i>	530					•						•
<i>Aprovia Top</i>	494			3	•							
<i>Azoshy 250 SC</i>	495	•			•	•				2	2	
<i>Azteroid</i>	498									2	•	
<i>Bravo 500</i>	507		•		•	•						
<i>Bravo Zn</i>	507		•		•	•						
<i>Cabil</i>	502				•							
<i>Cantus WDG Fungicide</i>	502				•							
<i>Cevya</i>	506	3		3	•							
<i>Copper (Copper 53W, Copper Spray)</i>	509				•	•						
<i>Corbanza</i>	509				•	•						
<i>Cueva</i>	509				•	•						
<i>Curzate</i>	512					1						
<i>Diplomat 55C</i>	520				4							
<i>Dithane Rainshield</i>	542				•	•						
<i>Double Nickel LC / Double Nickel 55</i>	521				•					•		•
<i>Downforce AG</i>	530					•						•
<i>Echo 90DF / Echo 720</i>	507		•		•	•						
<i>Elatus</i>	525									•	•	
<i>Emissarius</i>	495	•			•	•				2	2	
<i>Evito 480</i>	528	•			3	•				•	•	
<i>Forum</i>	532					•	•					
<i>Gavel 75 DF</i>	534				•	•						
<i>Headline EC</i>	576				•	•						
<i>HyCop</i>	509				•	•	•					
<i>Lance WDG</i>	499				•	•						
<i>LifeGard WG</i>	540				3	3						3
<i>Luna Tranquility</i>	541	4		•	•							•
<i>Manzate Pro-Stick</i>	542				•	•						
<i>Manzate Max</i>	542				•	•						
<i>Maxunitech Boscalid 70% WG</i>	499				•	•						
<i>MIRAVIS Duo</i>	547		3	•	•							3
<i>Orondis Ultra</i>	553					•						
<i>OxiDate FC</i>	554		3	•								•
<i>Parasol FL</i>	509				•	•	•					
<i>Parasol WG</i>	509				•	•	•					
<i>Penncozeb 75 DF</i>	542				•	•						
<i>Penncozeb 80WP</i>	542				•	•						
<i>Phosphorous acid (Confine Extra, Rampart)</i>	555					•			•			
<i>Phostrol</i>	556			3	3	•	•		2,3		•	
<i>Preach</i>	576				•	•						
<i>Proline GOLD</i>	560	4		•	•							•
<i>Pyraline 250</i>	576				•	•						
<i>Quadris</i>	495	•			•	•				2	2	
<i>Quadris Top</i>	582	4		4	•							4
<i>Quash SC</i>	583				•							3
<i>Quasi</i>	495	•			•	•				2	2	
<i>Ranman 400SC</i>	587					•	•					
<i>Reason 500SC</i>	588				1	1						
<i>Raclos</i>	576				•	•						
<i>Razor</i>	495	•			•	•				2	2	
<i>Revus</i>	590					•						
<i>Ridomil Gold/Bravo, Ridomil Gold SL/Bravo</i>	592		•		•	•	•	3	3			
<i>Ridomil Gold 480EC, Ridomil Gold 480SL</i>	592								2			
<i>Scala SC</i>	581				1							
<i>Sercadis</i>	595				•					•		•
<i>Serifel</i>	597				3					2		
<i>Serenade OPTI</i>	596				3						•	3
<i>Shaft Fungicide</i>	499				•	•						
<i>Shape</i>	581				1							
<i>Spade</i>	576				•	•						

Table 2. Foliar Fungicides for Disease Control in Potatoes *continued*

FUNGICIDES	Page	Black Dot	Botrytis Grey Mould / Botrytis Vine Rot	Brown Leaf Spot	Early Blight	Late Blight	Late Blight Tuber Rot / Tuber Blight	Pythium Leak	Pink Rot	Rhizoctonia Canker, Black Scurf, Stolon Canker, and Stem Rot	Silver Scurf	Sclerotinia stem rot
<i>Tanos</i>	599				•	•						
<i>Terra Guard</i>	499				•	•						
<i>Tide Pyraclostrobin Shield</i>	576				•	•						
<i>Vantana</i>	530					•						•
<i>Velum Prime</i>	609	•			•							
<i>Veltyma</i>	607	•		3	•							
<i>Velum Rise</i>	610	2			2					•		
<i>VIKING Pyraclostrobin Fungicide</i>	576				•	•						
<i>Zapro</i>	612					•	•					

Note: Before using any pesticide on potatoes, consult the list of Agricultural Pesticides Approved for Use, available from Simplot Canada and McCain Foods (Canada).

• Fungicide registered against the disease. Review and follow the label before application

1. Must not be used alone, only as a tank mix (consult individual labels). 2. In-furrow treatments (suppression only). 3. Suppression only (foliar application).

4. Suppression only.

Table 3. Foliar Fungicides for Disease Control in Wheat and Barley

FUNGICIDES	Page	WHEAT								BARLEY										
		Suppression of Fusarium Head Blight	Suppression of Ergot (<i>Claviceps purpurea</i>)	Powdery Mildew (<i>Blumeria graminis</i>)	Leaf Rust (<i>Puccinia recondita</i> f. sp. <i>tritici</i>)	Stem Rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i>)	Stripe Rust (<i>Puccinia striiformis</i>)	Septoria Leaf Blotch Complex	Spot Blotch	Tan Spot (<i>Pyrenophora tritici-repentis</i>)	Suppression of Fusarium Head Blight	Suppression of Ergot (<i>Claviceps purpurea</i>)	Net Blotch (<i>Pyrenophora teres</i>)	Powdery Mildew (<i>Blumeria graminis</i>)	Leaf Rust (<i>Puccinia hordei</i>)	Stem Rust (<i>Puccinia graminis</i> f. sp. <i>tritici/secalis</i>)	Stripe Rust (<i>Puccinia striiformis</i>)	Scald (<i>Rhynchosporium secalis</i>)	Septoria Leaf Blotch Complex	Spot Blotch (<i>Cochliobolus sativus</i>)
<i>Acapela</i>	491			*	*			*	*											
<i>Advantage Prothioconazole 480 SC</i>	570	*			*				1*	*	*							*		*
<i>Advantage Prothio + Teb 250 EC</i>	567	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Advantage Tebuconazole 250</i>	600	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Bravo ZN / Bravo ZNC</i>	507	*							1*	*										*
<i>Bumper 432 EC</i>	561			*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Caramba</i>	503	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Cerefit</i>	505			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>CO-OP Pivot</i>	561			*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Custodia</i>	513			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Delaro 325 SC</i>	515			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Delaro Complete</i>	517			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Duplex</i>	567	*								*										*
<i>Echo NP/Echo 90WSP/ Echo 720</i>	507	*							1*	*										*
<i>Evito 480</i>	528			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Fitness</i>	561			*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Folicur</i>	600	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Fungtion SC</i>	584			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Fusaro</i>	567	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Headline EC</i>	576			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Holdfast</i>	570	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Hornet 432 F</i>	600	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Joust</i>	570	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Maxunitech Prothioconazole 480SC</i>	570	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Maxunitech Prothio + Teb EC</i>	567	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>MIRAVIS Ace</i>	545	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Miravis Era</i>	548	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>MIRAVIS Neo 300SE</i>	549	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Modo</i>	561			*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Nexicor</i>	552			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Orius 430 SC</i>	600	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Palliser</i>	600	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Pavise 480SC</i>	570	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Pivot 418EC</i>	561			*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Priaxor</i>	557			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Preach</i>	576			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Princeton</i>	561			*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Proline 480SC</i>	570	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Propel</i>	561			*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Propi Super 25 EC</i>	561			*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Prosaro PRO</i>	566	*	*	*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Prosaro XTR</i>	567	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Pyraline 250</i>	576			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Quasimodo</i>	564			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Quilt</i>	584			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Raclos</i>	576			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Roxar</i>	594	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Regalia Maxx</i>	589			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Rambler</i>	570	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Shalimar</i>	567	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*
<i>Soraduo</i>	567	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Soratel</i>	570	*		*	*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*

Table 3. Foliar Fungicides for Disease Control in Wheat and Barley *continued*

FUNGICIDES	Page	WHEAT									BARLEY									
		Suppression of Fusarium Head Blight	Suppression of Ergot (<i>Claviceps purpurea</i>)	Powdery Mildew (<i>Blumeria graminis</i>)	Leaf Rust (<i>Puccinia recondita</i> f. sp. <i>tritici</i>)	Stem Rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i>)	Stripe Rust (<i>Puccinia striiformis</i>)	Septoria Leaf Blotch Complex	Spot Blotch	Tan Spot (<i>Pyrenophora tritici-repentis</i>)	Suppression of Fusarium Head Blight	Suppression of Ergot (<i>Claviceps purpurea</i>)	Net Blotch (<i>Pyrenophora teres</i>)	Powdery Mildew (<i>Blumeria graminis</i>)	Leaf Rust (<i>Puccinia hordei</i>)	Stem Rust (<i>Puccinia graminis</i> f. sp. <i>tritici/secalis</i>)	Stripe Rust (<i>Puccinia striiformis</i>)	Scald (<i>Rhynchosporium secalis</i>)	Septoria Leaf Blotch Complex	Spot Blotch (<i>Cochliobolus sativus</i>)
<i>Sphaerex</i>	598	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Spade</i>	576			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Spaxor</i>	574			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>StarPro</i>	567	*		*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Taj</i>	570	*		*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Tebbie</i>	600	*		*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Tide Pyraclostrobin Shield</i>	576			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>TILMOR 240 EC</i>	604	*		*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Tilt 250E</i>	561			*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Toledo 250EW</i>	600	*		*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*	*
<i>TopNotch</i>	564			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Tornado Pro</i>	580			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Trivapro</i>	605			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Twinline</i>	606	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>VIKING Drobak</i>	580			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>VIKING Propiconazole</i>	561			*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*	*
<i>VIKING Pyraclostrobin Fungicide</i>	600			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>VIKING Prothioconazole</i>	570	*		*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*	*
<i>VIKING Tebuconazole</i>	600	*		*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*	*
<i>VIKING Tromso</i>	567	*		*	*	*	*	1*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Viking Vaasa</i>	574			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<i>Zetigo PRM</i>	613			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Refer to product pages and labels for application information as well as expectations for control vs suppression.

¹ Septoria/Stagonospora leaf blotch complex: *some products include glume blotch in wheat.

Table 4. Foliar Fungicides for Disease Control in Oat, Rye and Triticale

FUNGICIDES	Page	OATS					RYE					TRITICALE							
		Suppression of Fusarium Head Blight	Suppression of Ergot (<i>Claviceps purpurea</i>)	Powdery Mildew (<i>Blumeria graminis</i>)	Crown Rust (<i>Puccinia coronata</i>)	Stem Rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i>)	Septoria Leaf Blotch Complex	Suppression of Fusarium Head Blight	Powdery Mildew (<i>Blumeria graminis</i>)	Leaf Rust (<i>Puccinia recondita</i> f. sp. <i>tritici</i>)	Scald (<i>Rhynchosporium secalis</i>)	Stripe Rust (<i>Puccinia striiformis</i>)	Septoria Leaf Blotch Complex	Suppression of Fusarium Head Blight	Powdery Mildew (<i>Blumeria graminis</i>)	Leaf Rust (<i>Puccinia recondita</i> f. sp. <i>tritici</i>)	Stem Rust (<i>Puccinia graminis</i> f. sp. <i>secalis</i>)	Stripe Rust (<i>Puccinia striiformis</i>)	Septoria Leaf Blotch Complex
Acapela	491			•	•			•	•	•	•	•		•	•	•	•	•	•
Advantage Prothioconazole 480 SC	570				•			•		•			•	•	•	•	•	•	•
Advantage Prothio +Teb 250 EC	567				•								•		•	•	•	•	
Advantage Tebuconazole 250	600				•	•	•												
Bumper 432 EC	561				•	•													
Caramba	503	•			•	•	•	•	•	•				•	•	•	•	•	•
Cerefit	505				•	•													
Co-Op Pivot	561				•	•													
Custodia	513				•	•	•												
Delaro Complete	517				•	•	•												
Delaro 325 SC	515				•	•	•										•		
Evito 480	528				•	•	•			•		•		•	•	•	•	•	•
Fitness	561				•	•													
Folicur	600				•	•	•												
Fungtion SC	584				•	•	•					•							•
Headline EC	576				•			•	•										
Holdfast	570							•		•			•		•	•	•	•	
Hornet 432 F	600				•	•													
Joust	570				•														
Maxunitech Prothioconazole 480SC	570				•			•		•			•	•	•	•	•	•	•
Maxunitech Prothio + Teb EC	567												•	•	•	•	•	•	•
MIRAVIS Ace	545	•	•		•	•													
Miravis Era	548	•						•					•						
MIRAVIS Neo 300SE	549				•	•				•		•	•						•
Modo	561				•	•													
Nexicor	552				•	•			•	•					•			•	•
Orius 430 SC	600				•	•													
Palliser	600				•	•												•	
Pavise 480SC	570				•			•		•			•		•	•	•	•	
Pivot 418EC	561					•													
Preach	576				•			•	•										
Priaxor	557				•			•	•				•		•			•	•
Princeton	561				•	•													
Proline 480SC	570				•			•		•			•		•	•	•	•	
Propel	561				•	•													
Propi Super 25 EC	561				•	•													
Prosaro PRO	566	•	•		•	•	•												
Prosaro XTR	567				•	•	•												
Pyraline 250	576				•			•	•										
Quasimodo	564				•	•				•		•							•
Quilt	584				•	•	•			•		•	•						•
Raclos	576							•	•										
Rambler	570				•														
Regalia Maxx	589																		
Soratel	570				•														
Spade	576																		
Spaxor	574				•				•	•									
Sphaerex	598	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Taj	570				•			•		•			•		•	•	•	•	•

Table 4. Foliar Fungicides for Disease Control in Oat, Rye and Triticale *continued*

FUNGICIDES	Page	OATS					RYE					TRITICALE							
		Suppression of Fusarium Head Blight	Suppression of Ergot (<i>Claviceps purpurea</i>)	Powdery Mildew (<i>Blumeria graminis</i>)	Crown Rust (<i>Puccinia coronata</i>)	Stem Rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i>)	Septoria Leaf Blotch Complex	Suppression of Fusarium Head Blight	Powdery Mildew (<i>Blumeria graminis</i>)	Leaf Rust (<i>Puccinia recondita</i> f. sp. <i>tritici</i>)	Scald (<i>Rhynchosporium secalis</i>)	Stripe Rust (<i>Puccinia striiformis</i>)	Septoria Leaf Blotch Complex	Suppression of Fusarium Head Blight	Powdery Mildew (<i>Blumeria graminis</i>)	Leaf Rust (<i>Puccinia recondita</i> f. sp. <i>tritici</i>)	Stem Rust (<i>Puccinia graminis</i> f. sp. <i>secalis</i>)	Stripe Rust (<i>Puccinia striiformis</i>)	Septoria Leaf Blotch Complex
<i>Tebbie</i>	600			•	•														
<i>Tide Pyraclostrobin Shield</i>	576			•			•	•											
<i>TILMOR 240 EC</i>	604			•	•	•													
<i>Tilt 250E</i>	561			•		•													
<i>Toledo 250EW</i>	600			•	•	•													
<i>TopNotch</i>	564			•		•			•		•								•
<i>Tornado</i>	600			•	•	•													
<i>Trivapro</i>	605			•	•	•					•					•			•
<i>Twinline</i>	606			•			•	•	•				•	•	•		•	•	•
<i>VIKING Prothioconazole</i>	570			•															
<i>VIKING Propiconazole</i>	561			•		•													
<i>VIKING Pyraclostrobin</i>	576						•	•											
<i>VIKING Tebuconazole</i>	600			•	•	•													
<i>Viking Vaasa</i>	574			•															

Refer to product pages and labels for application information as well as expectations for control vs suppression.

Table 5. Foliar fungicides for Disease Control in Millet, Corn and Canaryseed*

FUNGICIDES	Page	MILLET	CORN						CANARYSEED
		Suppression of Fusarium Head Blight	Ear rot (<i>Fusarium/Giberella</i> spp.)	Northern Leaf Blight (<i>Setosphaeria turcica</i>)	Common Rust (<i>Puccinia sorghi</i>)	Eye Spot (<i>Aureobasidium zeae</i>)	Grey Leaf Spot (<i>Cercospora zeae-maydis</i>)	Tar spot (<i>Phyllachora maydis</i>)	Suppression of Septoria Leaf Mottle (<i>Septoria triseti</i>)
<i>Acapela</i>	491			•					
<i>Advantage Prothioconazole 480 SC</i>	570	•	•	•	•	•	•		
<i>Azoshy 250 SC</i>	495				•				
<i>Bumper 432 EC</i>	561			•	•				•
<i>Caramba</i>	503		•						
<i>Co-Op Pivot</i>	561			•	•				•
<i>Delaro Complete</i>	517			•	•	•	•	•	
<i>Delaro 325 SC</i>	515			•	•	•	•		
<i>Emissarius</i>	495				•				
<i>Evito 480</i>	528			•	•		•		
<i>Fitness</i>	561			•	•				•
<i>Function SC</i>	584			•	•				
<i>Headline EC</i>	576				•		•		
<i>Holdfast</i>	570	•	•	•	•				
<i>Joust</i>	570		•	•	•	•	•		
<i>Maxunitech Prothioconazole 480SC</i>	570	•	•	•	•	•	•		
<i>MIRAVIS Neo 300SE</i>	549		•	•	•	•	•		
<i>Modo</i>	561			•	•				•
<i>Pavise 480SC</i>	570	•	•	•	•	•	•		
<i>PREACH</i>	576				•		•		
<i>Pivot 418 EC</i>	561			•	•				•
<i>Priaxor</i>	557			•	•	•	•		
<i>Princeton</i>	561			•	•				•
<i>Proline 480 SC</i>	570	•	•	•	•	•	•		
<i>Propel</i>	561			•	•				•
<i>Propi Super 25 EC</i>	561			•	•				•
<i>Pyraline 250</i>	576				•		•		
<i>Quadris</i>	495				•				
<i>Quasi</i>	495				•				
<i>Quilt</i>	584			•	•				
<i>Raclós</i>	576				•		•		
<i>Rambler</i>	570		•				•		
<i>Soratel</i>	570		•	•	•	•	•		
<i>Spade</i>	576				•		•		
<i>Taj</i>	570	•	•				•		
<i>Tide Pyraclostrobin Shield</i>	576				•		•		
<i>Tilt 250E</i>	561			•	•				•
<i>Trivapro</i>	605			•	•		•		
<i>Veltyma</i>	607			•	•	•	•	•	
<i>VIKING Prothioconazole</i>	570		•				•		
<i>VIKING Propiconazole</i>	561			•	•				•
<i>VIKING Pyraclostrobin</i>	576				•		•		
<i>Zolera FX</i>	615			•	•		•		

*Refer to product pages and labels for application information as well as expectations for control vs suppression.

Table 6. Foliar Fungicides for Disease Control in Pulse Crops* continued

FUNGICIDES	Page	CHICKPEA				FIELD PEA					LENTIL				FABA BEAN				DRY BEAN									
		Ascochyta Blight (<i>Ascochyta rabiel</i>)	Anthracnose (<i>Colletotrichum truncatum</i>)	Grey Mould (<i>Botrytis cinerea</i>)	Powdery Mildew (<i>Erysiphe</i> spp.)	White Mould (<i>Sclerotinia sclerotiorum</i>)	Ascochyta Complex (1)	Anthracnose (<i>Colletotrichum truncatum</i>)	Downy Mildew (<i>Peronospora viciae</i>)	Grey Mould (<i>Botrytis cinerea</i>)	Powdery Mildew (<i>Erysiphe pisi</i>)	White Mould (<i>Sclerotinia sclerotiorum</i>)	Early season root rot (<i>Aphanomyces euteiches</i> , <i>Pythium ultimum</i>)	Anthracnose (<i>Colletotrichum truncatum</i> , <i>C. lentis</i>)	Ascochyta Blight (<i>Ascochyta lentis</i>)	Grey Mould (<i>Botrytis cinerea</i>)	Powdery Mildew (<i>Microsphaera</i> spp.)	White Mould (<i>Sclerotinia sclerotiorum</i>)	Ascochyta Blight (<i>Ascochyta fabae</i>)	Anthracnose (<i>Colletotrichum truncatum</i>)	Botrytis Grey Mould (<i>Botrytis</i> spp.) / Chocolate Spot	Powdery Mildew (<i>Microsphaera</i> spp.)	White Mould (<i>Sclerotinia sclerotiorum</i>)	Anthracnose (<i>Colletotrichum truncatum</i> , <i>C. lindemuthianum</i>)	Botrytis Grey Mould (<i>Botrytis cinerea</i>)	Powdery Mildew (<i>Microsphaera</i> spp.)	Rust (<i>Uromyces appendiculatus</i>)	White Mould (<i>Sclerotinia sclerotiorum</i>)
<i>Shaft Fungicide</i>	499	•	•	•	•	•		•					•	•	•	•	•	•					•					•
<i>Spade</i>	576	•						•					•	•				•					•					•
<i>Spaxor</i>	574	•						•					•	•				•					•					•
<i>Soratel</i>	570	•						•					•	•				•					•					•
<i>Taj</i>	570	•						•					•	•				•					•					•
<i>Terra Guard</i>	499	•	•	•	•	•		•					•	•	•	•	•	•					•					•
<i>Tide Pyraclostrobin Shield</i>	576	•						•		•			•	•				•					•		•	•	•	•
<i>Tilt 250E</i>	561			•						•					•							•			•	•	•	•
<i>Topnotch</i>	564							•		•			•	•									•		•	•	•	•
<i>Vantana</i>	530									•			•	•									•		•	•	•	•
<i>Viking Kannus</i>	497	•											•	•														•
<i>VIKING Prothioconazole</i>	570	•	•										•	•	•	•	•											
<i>VIKING Propiconazole</i>	561			•						•												•			•	•		
<i>VIKING Pyraclostrobin</i>	576	•						•		•			•	•				•					•		•	•	•	•
<i>Viking Vaasa</i>	574	•						•		•			•	•				•					•		•	•	•	•
<i>Zetigo PRM</i>	613	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<i>Zolera FX</i>	615				•	•				•			•	•				•					•					•

* Refer to product pages and labels for application information as well as expectations for control vs suppression.

¹ *Ascochyta* Complex in field pea may include *Mycosphaerella pinodes*, *Ascochyta pisi*, and *Phoma medicaginis* var. *pinodella*. Refer to product page and label for more information.

Table 7. Foliar Fungicides for Disease Control in Oilseed Crops*

FUNGICIDES	Page	CANOLA			MUSTARD 1*			FLAX		SUNFLOWER		SOYBEAN						
		Alternaria Black Spot (<i>Alternaria</i> spp.)	Blackleg (<i>Leptosphaeria maculans</i>)	Sclerotinia Stem Rot (<i>Sclerotinia sclerotiorum</i>)	Alternaria Black Spot (<i>Alternaria</i> spp.)	Blackleg (<i>Leptosphaeria maculans</i>)	Sclerotinia Stem Rot (<i>Sclerotinia sclerotiorum</i>)	Pasmo (<i>Septoria linicola</i>)	Sclerotinia Stem Rot (<i>Sclerotinia sclerotiorum</i>)	Rust (<i>Puccinia helianthi</i>)	Sclerotinia Stem/Head Rot (<i>Sclerotinia sclerotiorum</i>)	Phomopsis stem blight (<i>Phomopsis/Diaparthe</i> spp.)	Anthraxnose (<i>Colletotrichum truncatum</i>)	Brown Spot (<i>Septoria glycines</i>)	Cercospora Leaf Spot (<i>Cercospora kikuchii</i>)	Powdery Mildew (<i>Microsphaera diffusa</i>)	White mould (<i>Sclerotinia sclerotiorum</i>)	Frogeye leaf spot (<i>Cercospora sojae</i>)
<i>Acapela</i>	491			*						*							*	*
<i>Advantage Prothioconazole 480 SC</i>	570			*		*		*		*								*
<i>Advantage Tebuconazole 250</i>	600																	*
<i>Allegro 500F</i>	530																*	*
<i>Azoshy250 SC</i>	495	*	*	*										*	*			*
<i>Bumper 432 EC</i>	561		*															*
<i>CO-OP Pivot</i>	561		*															*
<i>Cotegra</i>	511			*							*		*				*	*
<i>Cueva</i>	509														*		*	*
<i>Custodia</i>	513																*	*
<i>Delaro Complete</i>	517										*		*				*	*
<i>Delaro 325 SC</i>	515										*		*				*	*
<i>Double Nickel LC/Double Nickel 55</i>	521										*		*				*	*
<i>Downforce AG</i>	530																*	*
<i>Dyax</i>	523	*	*	*				*	*	*			*	*	*	*	*	*
<i>Elatus</i>	525										*		*	*	*	*	*	*
<i>Elatus Era</i>	527										*		*	*	*	*	*	*
<i>Evito 480</i>	528			*		*		*		*			*	*	*	*	*	*
<i>Emissarius</i>	495	*	*	*									*	*	*	*	*	*
<i>Fitness</i>	561		*														*	*
<i>Fullback 125SC</i>	533												*	*	*	*	*	*
<i>Function SC</i>	584		*									*	*	*	*	*	*	*
<i>Gauntlet</i>	535	*		*													*	*
<i>Holdfast</i>	570			*		*		*		*							*	*
<i>Headline EC</i>	576	*	*	*	*	*	*	*	*	*							*	*
<i>Joust</i>	570			*		*		*		*							*	*
<i>LALSTOP Contans WG</i>	537			*						*							*	*
<i>Lance AG (co-pack of Lance WDG and Headline EC)</i>	538	*	*	*	*	*	*	*	*	*							*	*
<i>Lance WDG</i>	499	*	*	*	*	*	*	*	*	*							*	*
<i>Maxentis</i>	543			*													*	*
<i>Maxuntech Boscalid 70% WG</i>	499	*	*	*	*	*	*	*	*	*							*	*
<i>Maxuntech Prothioconazole 480SC</i>	570		*	*		*		*	*	*							*	*
<i>MIRAVIS Bold</i>	546			*						*							*	*
<i>MIRAVIS Neo 300SE</i>	549			*						*		*		*	*	*	*	*
<i>Miravis Star</i>	551			*						*							*	*
<i>Modo</i>	561	*	*	*						*							*	*
<i>Nexicor</i>	552		*	*						*			*	*	*	*	*	*
<i>Pavise 480SC</i>	570		*	*		*		*		*							*	*
<i>Pivot 418 EC</i>	561		*	*						*							*	*
<i>Preach</i>	576	*	*	*	*	*	*	*	*	*							*	*
<i>Priaxor</i>	557	*	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*
<i>Princeton</i>	561		*	*		*		*		*							*	*
<i>Proline 480 SC</i>	570		*	*		*		*	*	*				*	*	*	*	*
<i>Proline Gold</i>	560		*	*		*		*	*	*				*	*	*	*	*
<i>Propel</i>	561		*	*		1*		*	*	*				*	*	*	*	*
<i>Propi Super 25 EC</i>	561		*	*		*		*	*	*				*	*	*	*	*
<i>Pyraline 250</i>	576	*	*	*	*	*	*	*	*	*				*	*	*	*	*
<i>Quadris</i>	495	*	*	*		*		*	*	*				*	*	*	*	*
<i>Quash SC</i>	583		*	*		*		*	*	*				*	*	*	*	*
<i>Quasi</i>	495	*	*	*		*		*	*	*				*	*	*	*	*
<i>Quilt</i>	584	*	*	*		*		*	*	*		*	*	*	*	*	*	*
<i>Raclos</i>	576	*	*	*	*	*	*	*	*	*				*	*	*	*	*
<i>Rambler</i>	570		*	*		*		*	*	*				*	*	*	*	*
<i>Rambler Pro</i>	497	*	*	*		*		*	*	*				*	*	*	*	*
<i>Razor</i>	495	*	*	*		*		*	*	*				*	*	*	*	*

Table 7. Foliar Fungicides for Disease Control in Oilseed Crops* continued

FUNGICIDES	Page	CANOLA			MUSTARD 1*		FLAX		SUNFLOWER		SOYBEAN						
		Alternaria Black Spot (<i>Alternaria</i> spp.)	Blackleg (<i>Leptosphaeria maculans</i>)	Sclerotinia Stem Rot (<i>Sclerotinia sclerotiorum</i>)	Alternaria Black Spot (<i>Alternaria</i> spp.)	Blackleg (<i>Leptosphaeria maculans</i>)	Sclerotinia Stem Rot (<i>Sclerotinia sclerotiorum</i>)	Pasmo (<i>Septoria linicola</i>)	Sclerotinia Stem Rot (<i>Sclerotinia sclerotiorum</i>)	Rust (<i>Puccinia helianthi</i>)	Sclerotinia Stem/Head Rot (<i>Sclerotinia sclerotiorum</i>)	Phomopsis stem blight (<i>Phomopsis/Diaparthe</i> spp.)	Anthracnose (<i>Colletotrichum truncatum</i>)	Brown Spot (<i>Septoria glycines</i>)	Cercospora Leaf Spot (<i>Cercospora kikuchii</i>)	Powdery Mildew (<i>Microsphaera diffusa</i>)	White mould (<i>Sclerotinia sclerotiorum</i>)
<i>Serenade OPTI</i>	596			•			•									•	•
<i>Soratel</i>	570			•			•										•
<i>Shaft Fungicide</i>	499	•		•	•		•		•								
<i>Spade</i>	576																•
<i>Spaxor</i>	574																•
<i>Taj</i>	570			•			•		•								•
<i>Terra Guard</i>	499	•		•	•		•		•								
<i>Tebbie</i>	600																•
<i>Tide Pyraclostrobin Shield</i>	576	•	•		•	•		•		•							•
<i>Tilt 250E</i>	561		•												•		•
<i>Toledo 250EW</i>	600														•		•
<i>Topnotch</i>	564											•			•		•
<i>Tornado</i>	600											•			•		•
<i>Trivapro</i>	605											•			•		•
<i>Vantana</i>	530																•
<i>Veltyma</i>	607										•		•	•			•
<i>Viatude</i>	611			•									•				•
<i>Viking Kannus</i>	497	•	•	•									•				•
<i>VIKING Propiconazole</i>	561		•											•	•		•
<i>VIKING Prothioconazole</i>	570			•			•		•								•
<i>VIKING Pyraclostrobin</i>	576																•
<i>VIKING Tebuconazole</i>	600														•		•
<i>Viking Vaasa</i>	574																•
<i>Zetigo PRM</i>	613	•	•	•													•

* Refer to product pages and labels for application information as well as expectations for control vs suppression.

1* Some products are registered for use on only specific mustard types. Refer to label for details.

Table 8. Foliar Fungicides for Disease Control in Special Crops and Forages

Fungicides	Page	ALFALFA FOR SEED					NON-GRASS ANIMAL FEED	SEED GRASSES	TIMOTHY	CORIANDER	CARAWAY	HEMP			
		Blossom Blight (<i>Botrytis cinerea</i> / <i>Sclerotinia sclerotiorum</i>)	Common Leaf Spot (<i>Pseudopeziza medicaginis</i>)	Leaf Spot (<i>Leptosphaerulina trifolii</i> / <i>briosiani</i>)	Spring Black Stem (<i>Phoma medicaginis</i>)	Sclerotinia Stem Rot (<i>Sclerotinia trifolii-orum</i> /sclerotiorum)	Common Leaf Spot (<i>Pseudopeziza medicaginis</i>)	Blossom Blight (<i>Sclerotinia sclerotiorum</i>)	Leaf and Stem Rusts (<i>Puccinia</i> spp.)	Powdery Mildew (<i>Erysiphe graminis</i>)	Purple Eye Spot (<i>Cladosporium phlei</i>)	Blossom Blight	Ascochyta Blight (<i>Ascochyta</i> sp.)	Blossom Blight	White Mold (<i>Sclerotinia sclerotiorum</i>)
<i>Acapela</i>	491	•	•					•							
<i>Azoshy 250 SC</i>	495									•					
<i>CO-OP Pivot</i>	561									•					
<i>Delaro 325 SC</i>	515	•													
<i>Dyax</i>	523	•	•												
<i>Double Nickel LC/ Double Nickel 55</i>	521												•	•	
<i>Emissarius</i>	495									•					
<i>Fitness</i>	561									•					
<i>Fontelis</i>	531					•									
<i>Headline EC</i>	576		•					•	•	•					
<i>Lance AG (co-pack of Lance WDG and Headline EC)</i>	538	•	•	•	•										
<i>Lance WDG</i>	499	•	•	•	•							•	•		
<i>Lifeguard WG</i>	540													•	•
<i>Maxunitech Boscalid 70% WG</i>	499	•	•	•	•							•	•		
<i>Pivot 418 EC</i>	561									•					
<i>Preach</i>	576		•					•	•	•					
<i>Priaxor</i>	557	•	•					•	•	•					
<i>Propel</i>	561									•					
<i>Propi Super 25 EC</i>	561									•					
<i>Pyraline 250</i>	576		•					•	•	•					
<i>Quadris</i>	495										•		•		
<i>Quasi</i>	495										•				
<i>Raclos</i>	576		•					•	•	•					
<i>Razor</i>	495										•		•		
<i>Shaft Fungicide</i>	499	•	•	•	•										
<i>Spade</i>	576		•					•	•	•					
<i>Terra Guard</i>	499	•	•	•	•							•	•		
<i>Tide Pyraclostrobin Shield</i>	576		•					•	•	•					
<i>Tilt 250E</i>	561									•					
<i>VIKING Propiconazole</i>	561									•					
<i>VIKING Pyraclostrobin</i>	576		•					•	•						

Refer to product pages and labels for application information as well as expectations for control vs suppression.

Foliar Fungicide Product Pages

Acapela

Fungicide Group
11

Company:

Corteva Agriscience (PCP#30470)

Formulation:

250 g/L picoxystrobin formulated as a suspension concentrate.

- Container sizes – 115.2L drum

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Chickpea, dry bean, faba bean	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>) Control of anthracnose (<i>Colletotrichum lindemuthianum</i>) in dry bean	350 mL	Make initial application at early bloom and follow with second application 7 to 10 days later at full bloom.
Field pea	Suppression of mycosphaerella blight (<i>Mycosphaerella pinodes</i>)	240 to 350 mL	Begin applications prior to disease development and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high.
	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)	350 mL	Make initial application at early bloom and follow with second application 7 to 10 days later at full bloom.
Lentil	Control of anthracnose (<i>Colletotrichum truncatum</i>), ascochyta blight (<i>Ascochyta lentis</i>)	240 to 350 mL	Begin applications prior to disease development and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high.
	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)	350 mL	Make initial application at early bloom and follow with second application 7 to 10 days later at full bloom.
Wheat	Control of leaf rust (<i>Puccinia recondita</i>)	120 mL	Begin application prior to disease development. For early application apply at Zadok's stage 12-36.
	Suppression of tan spot (<i>Pyrenophora tritici-repentis</i>), Septoria leaf blotch (<i>Septoria tritici</i>)		
	Control of leaf rust (<i>Puccinia recondita</i>), stripe rust (<i>Puccinia striiformis</i>), septoria leaf blotch (<i>Septoria tritici</i>), powdery mildew (<i>Erysiphe graminis</i>), tan spot (<i>Pyrenophora tritici-repentis</i>)	175 to 350 mL	Begin applications prior to disease development and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high. For optimizing yield and flag leaf disease control, apply <i>Acapela</i> at Zadok's stage 39-41 (flag leaf out stage).
Barley	Control of scald (<i>Rhynchosporium secalis</i>)	120 mL	Begin application prior to disease development. For early application apply at Zadok's stage 12-36.
	Suppression of septoria leaf blotch (<i>Septoria tritici</i>), net blotch (<i>Pyrenophora teres</i>)		
	Control of septoria leaf blotch (<i>Septoria tritici</i>), powdery mildew (<i>Erysiphe graminis</i>), stripe rust (<i>Puccinia striiformis</i>), net blotch (<i>Pyrenophora teres</i>), scald (<i>Rhynchosporium secalis</i>)	175 to 350 mL	Begin applications prior to disease development and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high. For optimizing yield and flag leaf disease control, apply <i>Acapela</i> at Zadok's stage 39-41 (flag leaf out stage).
Oats	Control of powdery mildew (<i>Erysiphe graminis</i>), stripe rust (<i>Puccinia striiformis</i>), crown rust (<i>Puccinia coronata</i> f.sp. <i>avenae</i>)	175 to 350 mL	Begin applications prior to disease development and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high. For optimizing yield and flag leaf disease control, apply <i>Acapela</i> at Zadok's stage 39-41 (flag leaf out stage).

Crop	Diseases	Application Rate (per acre)	Application Timing
Rye	Control of scald (<i>Rhynchosporium secalis</i>), leaf rust (<i>Puccinia recondita</i>)	120 mL	Begin application prior to disease development. For early application apply at Zadok's stage 12-36.
	Suppression of septoria leaf blotch (<i>Septoria tritici</i>)		
	Control of leaf rust (<i>Puccinia recondita</i>), stripe rust (<i>Puccinia striiformis</i>), septoria leaf blotch (<i>Septoria tritici</i>), powdery mildew (<i>Erysiphe graminis</i>), scald (<i>Rhynchosporium secalis</i>)	175 to 350 mL	Begin applications prior to disease development and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high. For optimizing yield and flag leaf disease control, apply <i>Acapela</i> at Zadok's stage 39-41 (flag leaf out stage).
Triticale	Control of leaf rust (<i>Puccinia recondita</i>)	120 mL	Begin application prior to disease development. For early application apply at Zadok's stage 12-36.
	Suppression of septoria leaf blotch (<i>Septoria tritici</i>)		
	Control of leaf rust (<i>Puccinia recondita</i>), stripe rust (<i>Puccinia striiformis</i>), septoria leaf blotch (<i>Septoria tritici</i>), powdery mildew (<i>Erysiphe graminis</i>)	175 to 350 mL	Begin applications prior to disease development and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high. For optimizing yield and flag leaf disease control, apply <i>Acapela</i> at Zadok's stage 39-41 (flag leaf out stage).
Corn (field corn, sweet corn, seed popcorn)	Control of northern leaf blight (<i>Setosphaeria turcica</i> , <i>Exserohilum turcicum</i>)	215 to 325 mL	Begin applications prior to disease development and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high.
	Suppression of tar spot (<i>Phyllachora maydis</i>) in corn	325 mL	
Soybean	Control of brown spot (<i>Septoria glycines</i>); frogeye leaf spot (<i>Cercospora soja</i>)	175 to 350 mL	Begin applications prior to disease development and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high.
	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)	350 mL	Initial preventative application at 100% bloom (1 flower blooming on all plants) and follow with second application 7 to 10 days later at full bloom.
Canola	Control of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	325 to 485 mL	Apply at 20 to 50% bloom prior to disease development. Under high disease pressure, make a second application of another fungicide from a different fungicide group, 7 to 14 days later. Use the higher rate or shorter interval when disease pressure is high.
Flax	Control of pasmo (<i>Septoria linicola</i>)	240 to 355 mL	Begin application prior to disease development or 7 to 10 days after flower initiation (roughly 20% bloom) and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high.
Potatoes	Early blight and white mould	240 to 400 mL	Begin applications prior to disease development and continue on a 7 to 10 day interval. Use higher rate and shorter interval when disease pressure is high.
	Late blight	180 to 400 mL	
Sunflower	Control of Alternaria leaf spot, stem canker, black stem	240 to 350 mL	Begin applications prior to disease development and continue on a 7 to 10-day interval. Use higher rate and shorter interval when disease pressure is high.
	Suppression of Sclerotinia head and stem rot	325 to 400 mL	
Alfalfa	Common leaf spot (<i>Pseudopeziza medicaginis</i>) and Stemphylium leafspot (<i>Stemphylium botryosum</i>)	178 to 365 mL	Begin applications in the spring at green-up and once 1 to 3 new leaves have grown after each cutting. Initiate applications prior to disease development and no later than 14 days prior to cutting. Use higher rate and shorter interval when disease pressure is high.
Grass grown for seed	Yellow Rust (<i>Puccinia striiformis</i> f. sp. <i>poae</i>)	178 to 365 mL	Begin applications prior to disease development and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high.

Application Information:

- **Water Volume:** Use sufficient water to obtain thorough coverage of plants.
 - **Ground:** minimum 45 L per acre.
 - **Aerial:** minimum 20 L per acre.

How it Works:

The active ingredient picoxystrobin is a broad spectrum strobilurin fungicide and is to be used as a preventative application when environmental conditions are favorable for disease development. Picoxystrobin has curative and locally systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Herbicides: *Travallas* spring wheat (including durum) and barley.

Insecticide: *Delegate* on corn

According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - **Dry legumes and canola** – DO NOT exceed 1 application before switching to a fungicide with a different mode of action; maximum season use rate is 700 mL per acre.
 - **Cereal grains, soybean** – Make no more than 2 sequential applications of *Acapela* Fungicide before switching to a fungicide with a different mode of action registered for the same use.
 - **Corn** – Make no more than 2 sequential applications of *Acapela* Fungicide before switching to a fungicide with a different mode of action registered for the same use.
 - **Flax** – DO NOT exceed 1 application before switching to a fungicide with a different mode of action; maximum season use rate is 700 mL per acre.
 - **Potatoes** – DO NOT exceed 2 application before switching to a fungicide with a different mode of action; maximum season use rate is 1100 mL per acre.
 - **Sunflowers** – Make no more than 2 sequential applications of *Acapela* Fungicide before switching to a fungicide with a different mode of action registered for the same use.
 - **Alfalfa and grass grown for seed** – DO NOT exceed 2 sequential applications before switching to a fungicide with a different mode of action registered for the same use. Maximum seasonal use rate is 1100 mL per acre.
- **Grazing:**
 - **Grass grown for seed** – The harvest of forage is permitted immediately after a single application. The cutting of hay is permitted immediately following multiple applications. Maximum seasonal use rate is 1100 mL per acre.
- **Preharvest interval:**
 - **Dry legumes and soybean** – 14 days
 - **Cereal grains** – 45 days (7 days for forage, 14 days for hay)
 - **Corn** – 7 days
 - **Canola** – 28 days
 - **Flax** – 28 days
 - **Potatoes** – 3 days
 - **Sunflowers** – 7 days
 - **Alfalfa** – 14 days
 - **Grass grown for seed** – 0 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** Crops that are on the product label may be replanted immediately after harvest. All other crops – 10 months following last application of picoxystrobin.
- **Storage:** Store product in original container only, away from other pesticides, fertilizer, food or feed. Not for use or storage in or around the home. Keep container closed. To prevent contamination, store this product away from food or feed.
- **Environment:** Observe prescribed buffer zones. Minimize off-target drift to reduce the effects on beneficial insects at the field boundary. DO NOT apply to areas prone to run-off and delay spraying if heavy rainfall is forecast.

Hazard Rating:

None listed.

Refer to the Introduction for an explanation of the symbols.

Aprovia Top

Fungicide Group
7, 3

Company:

Syngenta Canada (PCP#31526)

Formulation:

78 g/L benzovindiflupyr and 117 g/L difenoconazole formulated as an emulsifiable concentrate.

- Container size – 4 x 3.78 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Potato	Control of early blight (<i>Alternaria solani</i>) Suppression of brown spot (<i>Alternaria solani</i>)	260 to 390 mL	Begin applications prior to disease development and continue throughout the season on a 7 to 14 day interval. For early blight, use the high rate and short application interval under high disease pressure. Make no more than two consecutive applications before switching to a non-Group 7 and 3 fungicide.

Application Information:

- **Water Volume:**
 - **Ground:** Use a minimum water volume of 60 L per acre
 - **Aerial:** Use a minimum water volume of 20 L per acre

How it Works:

The active ingredient benzovindiflupyr is a succinate dehydrogenase inhibitor (SDHI) fungicide with broad spectrum activity. The active ingredient difenoconazole is a demethylation inhibitor (DMI) fungicide. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information..

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT make more than 2 applications by air or more than 4 applications by ground. If applications are made by one method (ground or air), all consecutive applications must be made by the same method. It is not acceptable to mix aerial and ground applications in the same calendar year.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** 14 days.
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** There is no plant back restriction for potatoes, tuberous and corm vegetables, fruiting vegetables, cucurbit vegetables and plants in the rapeseed sub group. A plant back restriction of 60 days is required for cereals (wheat, barley, oats, rye, triticale) and corn. A plant back restriction of 6 months (180 days) is required for all other crops intended for food and feed.
- **Storage:** Keep in original container, tightly closed, during storage. Store in a cool, dry, well-ventilated area away from feed and foodstuffs and out of the reach of children and animals. To prevent contamination, store this product away from food or feed.
- **Environment:** Toxic to aquatic organisms and non-terrestrial plants. Observe buffer zones outlined in the label.

Hazard Rating:



Danger Poison – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Azoxystrobin

Fungicide Group

11

Quasi, Quadris, Azoshy 250 SC, Emissarius, Razor 250 SC, VIKING Azoxystrobin

Company:

Parijat Industries India Ltd. (*Emissarius* – PCP # 33729)
 Syngenta Canada (*Quadris* – PCP#26153)
 Sharda Crop Chem Canada (*Azoshy 250 SC* – PCP#32263)
 NewAgco Inc. (*Quasi* – PCP#33807)
 Viking Crop Production Partners Inc. (*VIKING Azoxystrobin Fungicide* – PCP # 34771)
 Albaugh (*Razor* – PCP#34408)

Formulation:

250 g/L azoxystrobin formulated as a flowable suspension or emulsifiable concentrate.

- Container sizes – *Azoshy 250 SC* (4 x 3.78 L case); *Emissarius* (4 x 3.78 L case); *Quadris* (4 x 3.78L); *Quasi* (2 X 13.3 L); *Razor* (4 x 3.79 L); *VIKING Azoxystrobin* (2 X 8 L)

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Dry bean	Anthracoise (<i>Colletotrichum lindemuthianum</i>), ascochyta blight (<i>Ascochyta</i> spp.)	200 mL	Apply before disease is established and no later than onset of flowering; make second application 10 to 14 days later.
Chickpea, faba bean	Ascochyta blight (<i>Ascochyta</i> spp.), anthracnose (<i>Colletotrichum</i> spp.)	200 mL	Apply before disease is established and no later than onset of flowering; make second application 10 to 14 days later.
Lentil	Anthracoise (<i>Colletotrichum truncatum</i>), ascochyta blight (<i>Ascochyta lentis</i>) Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)*	200 mL	Apply before disease is established and no later than onset of flowering; make second application 10 to 14 days later.
Field pea	Mycosphaerella blight (<i>Mycosphaerella pinodes</i>), powdery mildew (<i>Erysiphe pisi</i>), anthracnose (<i>Colletotrichum</i> spp.), ascochyta blight (<i>Ascochyta</i> spp.)	200 mL	Apply before disease is established and no later than onset of flowering; make second application 10 to 14 days later.
Soybean	Powdery mildew (<i>Microsphaera diffusa</i>), cercospora leaf spot (<i>Cercospora kikuchii</i>)	200 mL	Apply at the R1 to R3 stage, or when 5% disease in the field; make second application 14 days later.
Canola	Blackleg (<i>Leptosphaeria maculans</i>)	200 mL	Apply at the 2 to 6 leaf stage.
	Sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	280 to 400 mL	Apply at early bloom (prior to 30% bloom). This timing will also suppress alternaria black spot. Use the higher rate if there is a history of sclerotinia infection in the area and when conditions favour development.
	Alternaria black spot (<i>Alternaria brassicae</i> , <i>A. raphani</i>)	200 mL	Apply at pod stage (90% petal fall).
Corn	Rust (<i>Puccinia sorghi</i>)	180 mL	Apply before disease is established and make second application 7 to 14 days later.
Coriander (for seed production)** and caraway (for caraway <i>Quadris</i> and <i>Razor</i> only)**	Blossom blight (<i>Aureobasidium</i> spp.)	180 to 450 mL	Apply once prior to disease establishment. Use higher rate if a high disease pressure is present.

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Potato	Early blight (<i>Alternaria solani</i>)	200 to 320 mL	Apply prior to disease development and repeat on a 7 to 14 day interval. Use the higher rate if extending treatment interval to 14 days. Apply in alternation with fungicides with a different mode of action. If late blight becomes established, discontinue use of azoxystrobin and use alternative fungicides.
	Late blight (<i>Phytophthora infestans</i>)	320 mL	
	Rhizoctonia stem rot, stolon canker, black scurf (<i>Rhizoctonia solani</i>), silver scurf (<i>Helminthosporium solani</i>)	4 to 6 mL per 100 m of row	Apply once as an in-furrow spray in 20 to 56 L/acre water at planting. Mount the spray nozzle so that spray is directed into the furrow as a 15 to 20 cm band just before the seed is covered. DO NOT apply by air.
	Black dot (<i>Colletotrichum coccodes</i>)	200 to 320 mL	Apply on a 7 to 14 day interval prior to disease development. Use the high rate and short application interval under high disease pressures.

*Suppression of white mould in lentils for *Quadris* only

**DO NOT apply by air for coriander and caraway. Follow instructions on the labels for other uses.

Application Information:

- **Water Volume:**
 - **Ground:** Use sufficient water volume to obtain adequate coverage. Use minimum 40 L per acre. In-furrow treatment in 20 to 56 L per acre.
 - **Aerial:** Use minimum of 18 L per acre. Ensure uniform application.

How it Works:

The active ingredient azoxystrobin is a methoxyacrylate compound (strobilurin) with broad spectrum contact and systemic activity. To be used as a preventative and curative fungicide application. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Follow the further instructions provided on products labels for all tank mixes indicated below prior to mixing and application.

Insecticides: For legumes and field corn, *Quasi*, *Quadris* and *Azoshy 250 SC* may be tank-mixed with *Matador 120EC* insecticide.

For control of potato diseases and insects, *Quasi*, *Quadris*, *Azoshy 250 SC*, *Emissarius*, *Razor 250 SC*, and *VIKING Azoxystrobin Fungicide* can be tank-mixed with *Actara 240* insecticide.

Consult each label for pests controlled, appropriate timing, precautions, and specific application instructions.

Fungicides: For the control of early blight of potato, *Quasi*, *Quadris*, *Azoshy 250 SC*, *Razor 250 SC* and *VIKING Azoxystrobin Fungicide* may be tank-mixed with *Bravo 500*. For control of Rhizoctonia stem, stolon canker and black scurf in potato, *Quasi*, *Quadris*, *Azoshy 250 SC*, *Emissarius*, *Razor 250 SC* and *VIKING Azoxystrobin Fungicide* can be tank-mixed with *Ridomil Gold 480EC* or *Ridomil Gold 480 SL*. Follow the instructions on the label. For control of ascochyta blight in chickpea, *Quasi*, *Quadris*, *Azoshy 250 SC*, *Razor 250 SC*, and *VIKING Azoxystrobin Fungicide* must be tank-mixed with *Bravo 500*. *Quasi*, *Quadris*, *Azoshy 250 SC*, *Emissarius*, *Razor 250 SC* and *VIKING Azoxystrobin Fungicide* may be tank-mixed with *Tilt 250E* in legumes (including soybean), wheat and barley.

- **Note:** According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most "restrictive use limitations for either product.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - **Coriander and caraway** – DO NOT exceed 1 application of this product per season.
 - **Bean, canola, chickpea, corn, lentil, pea, soybean** – DO NOT exceed 2 applications of this product per season.
 - **Potato** – DO NOT exceed 3 applications of this product per season.
- **Grazing:** DO NOT feed dried pea vines to livestock.
- **Preharvest interval:**
 - **Canola** – 30 days
 - **Coriander and caraway** – 21 days
 - **Corn** – 7 days
 - **Legumes** – 15 days
 - **Potatoes** – 1 day

- **Restricted Entry Interval:** DO NOT re-enter treated areas until residues have dried.
- **Re-cropping:** DO NOT plant broadleaf or root crops within 30 days of application. DO NOT plant cereals within 45 days of application.
- **Storage:** Store in a cool, dry, well-ventilated area. DO NOT store below 0°C.
- **Environment:** This product is toxic to fish and aquatic organisms. Observe buffer zones outlined in the label.

Hazard Rating:

None.

Other precautions: May irritate eyes.

Refer to the Introduction for an explanation of the symbols.

Azoxystrobin and Prothioconazole

Fungicide Group
3, 11

Rambler Pro, Viking Kannus

Company:

NewAgco Inc. [*Rambler Pro* (Quasi – PCP #33807, *Rambler* PCP # 35048)]

VIKING Crop Production Partners Inc. “[*Viking Kannus* (*VIKING Azoxystrobin* PCP#33807, *VIKING Prothioconazole* – PCP#35109)]

Formulation:

Rambler Pro is a co-pack of *Quasi* and *Rambler*. *Quasi* (250 g/L Azoxystrobin formulated as suspension), *Rambler* (480 g/L Prothioconazole formulated as suspension concentrate), container size: co-pack 13.3L of *Quasi*, 10L of *Rambler*.

Viking Kannus is a co-pack of *VIKING Azoxystrobin* and *VIKING Prothioconazole*. *VIKING Azoxystrobin* (250 g/L Azoxystrobin formulated as suspension), *VIKING Prothioconazole* (480 g/L Prothioconazole formulated as suspension concentrate), container size: co-pack 8.1L of *VIKING Azoxystrobin*, 5.1L of *VIKING Prothioconazole*.

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Canola	Control of Sclerotinia (<i>Sclerotinia sclerotiorum</i>) stem rot, alternaria black spot (<i>Alternaria</i> spp), virulent blackleg (<i>Leptosphaeria maculans</i>)	202 mL/acre <i>Quasi</i> + 128 mL/acre <i>Rambler</i>	Sclerotinia stem rot: early bloom stage Alternaria black spot: 2-6 leaf stage Virulent blackleg: 2-6 leaf stage
		202 mL/acre <i>VIKING Azoxystrobin</i> + 128 mL/acre <i>VIKING Prothioconazole</i>	
Chickpea	Control of Ascochyta blight (<i>Ascochyta rabiei</i>)	202 mL/acre <i>Quasi</i> + 128 mL/acre <i>Rambler</i>	Before disease is established and no later than the onset of flowering.
		202 mL/acre <i>VIKING Azoxystrobin</i> + 128 mL/acre <i>VIKING Prothioconazole</i>	
Lentil	Control of Anthracnose (<i>Colletotrichum lentis</i>), Ascochyta blight <i>Ascochyta</i> sp), White mold (<i>Sclerotinia sclerotiorum</i>)	202 mL/acre <i>Quasi</i> + 128 mL/acre <i>Rambler</i>	Before disease is established and no later than the onset of flowering.
		202 mL/acre <i>VIKING Azoxystrobin</i> + 128 mL/acre <i>VIKING Prothioconazole</i>	
Soybean	Control of Frogeye leaf spot (<i>Cercospora soja</i>)	202 mL/acre <i>Quasi</i> + 128 mL/acre <i>Rambler</i>	R1 to R3 developmental stage
		202 mL/acre <i>VIKING Azoxystrobin</i> + 128 mL/acre <i>VIKING Prothioconazole</i>	

Application Information:

- **Water Volume:**
 - **Ground:** Minimum water volume 40 L/acre
 - **Air:** Minimum water volume 20 L/acre

How it Works:

The azoxystrobin active ingredient is a methoxyacrylate compound (strobilurin) with broad spectrum contact and systemic activity used as a preventative and curative fungicide application. The Prothioconazole active ingredient is a triazole fungicide with broad-spectrum systemic activity. For more information refer to "Fungicide Modes of Action".

Tank Mixes:

Not registered

Restrictions:

- **Maximum number of applications:** Do not make more than a total of two applications of *Rambler Pro* or *VIKING Kannus* per season.
- **Rainfall:** Avoid application when heavy rain is in forecast.
- **Rainfast:** One hour
- **Pre-harvest Intervals:** 36 days after application for canola, 15 days for chickpea and lentil, and 20 days for soybean.
- **Re-entry:** 12 hours
- **Grazing:** No restrictions listed.
- **Re-cropping interval:** Grow all major crops the year after application.
- **Aerial Application:** Follow the label.
- **Storage:** Store this product away from food and feed. Store in a cool, dry, locked, well-ventilated area without a floor drain.
- **Environment:** This product is TOXIC to aquatic organisms. Observe spray buffer zones specified on the label. The azoxystrobin component is persistent and will carryover. It is recommended that this product is not used in areas treated with Azoxystrobin 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. Do not apply directly to water or areas where surface water is present. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body. This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Hazard Rating:



Poison.

AZteroid FC

Fungicide Group
11

Company:

Vive Crop Protection distributed by UAP Canada (PCP#34742)

Formulation:

390 g/L azoxystrobin formulated as a suspension concentrate.

- Container size – 4 x 3.78L case

Crops, Diseases, Rates and Timing:

Crop	Disease / Pest	Rate	Crop stage and other timing information
Potato	Control of Silver Scurf (<i>Helminthosporium solani</i>)	2.56 – 3.85 mL per 100 m of row	At planting directly into the furrow before seed is covered.
	Suppression of Rhizoctonia stem rot, stolon canker, black scurf (<i>Rhizoctonia solani</i>)		

Application Information:

- **Water Volume:**
 - **Ground:** Apply using minimum water volume of 20 to 56 L/ acre.
 - **Do not apply by air.**

How it Works:

The active ingredient azoxystrobin is a methoxyacrylate compound (strobilurin) with broad spectrum contact and systemic activity. To be used as a preventative and curative fungicide application.

Tank Mixes:

None registered.

According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Maximum number of applications:** Do not exceed one application of this product per season.
- **Re-entry:** 12 hours after application.
- **Storage:** Do not store below zero degrees Celsius. Store in original containers only. Keep container closed when not in use. Store in a cool, dry place, and do not expose to heat. Store this product away from food or feed.
- **Environment:** Toxic to aquatic organisms. Azoxystrobin is persistent and may carry over. It is recommended that this product not be used in areas treated with any products containing azoxystrobin 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 in forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body. This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Hazard Rating:

None listed.

Boscalid

Fungicide Group

7

Lance WDG, SHAFT Fungicide, Maxunitech Boscalid 70% WG, Terra Guard

Company:

BASF Canada (*Lance WDG* – PCP#27495)

Sharda CropChem (*SHAFT Fungicide* – PCP#34642)

Maxunitech North America (*Maxunitech Boscalid 70% WG* – PCP#35329)

Tide International Canada, Inc. (*Terra Guard* – PCP#35673)

Formulation:

SHAFT Fungicide: 70% boscalid formulated as wettable granule.

- Container size – 2 x 2.83 kg per case

Lance WDG: 70% boscalid formulated as a water dispersible granular.

- Container size – 2 x 2.83 kg per case

Maxunitech Boscalid 70% WG: 70% boscalid formulated as wettable granules.

- Container size – 1 – 104 L

Terra Guard: 70% boscalid formulated as wettable granules.

- Container size – 100 g – 25 kg

Crops, Diseases, Rates and Timing:

(Ground, Aerial, and Pivot or Sprinkler Irrigation Applications, strictly follow the label)

Crop	Diseases	Application Rate (per acre)	Application Timing
Alfalfa (seed production only)	Control of blossom blight (<i>Sclerotinia sclerotiorum</i> , <i>Botrytis cinerea</i>), common leaf spot (<i>Pseudopeziza medicaginis</i>), spring black stem (<i>Phoma medicaginis</i>), leaf spot (<i>Leptosphaerulina briosiani</i>)	170 g	Apply at 20 to 50% flowering. Apply every 7 to 14 days if disease persists, or weather conditions are favourable for disease development.

Crop	Diseases	Application Rate (per acre)	Application Timing
Canola, mustard (oilseed and condiment)	Control of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	140 g	Apply at 20 to 50% flowering. Apply a second time 7 to 14 days later up to full bloom if disease persists, or weather conditions are favourable for disease development.
	Control of black spot (<i>Alternaria brassicae</i> and <i>A. raphani</i>)	140 g	Apply at late flowering to early green pod.
Dry bean, faba bean	Control of white mould (<i>Sclerotinia sclerotiorum</i>)	225 to 310 g	Apply at 20 to 50% flowering. Apply a second time 7 to 14 days later if disease persists, or weather conditions are favourable for disease development. Use the higher rate to obtain extended protection and maximum yield benefit.
Potato	Control of early blight (<i>Alternaria solani</i>)	70 to 125 g	Apply prior to disease development and at 14 days intervals. DO NOT make more than 4 applications per season.
	SHAFT Fungicide: Control of late blight (<i>Phytophthora infestans</i>)		If late blight is on label, <i>Boscalid</i> must be tank mixed with a group M fungicide following label directions for control of late blight. Apply prior to disease development.
Birdsfoot trefoil grown for seed production	Suppression of crown and stem rot (<i>Sclerotinia trifoliorum</i>)	170 g	Apply at early flowering stage to suppress crown rot/stem rot. Apply a second time 7-14 days later if disease persists, or weather conditions are favourable for disease development.

*For use on birdsfoot trefoil, BASF Canada has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

(Ground Application Only)

Crop	Diseases	Application Rate (per acre)	Application Timing
Field pea**	Control of ascochyta blight (<i>Ascochyta</i> spp.), mycosphaerella blight (<i>Mycosphaerella pinodes</i>), grey mould (<i>Botrytis cinerea</i>)	170 g	Apply at the beginning of flowering. Apply a second time 7 to 14 days later if disease persists, or weather conditions are favourable for disease development.

**DO NOT apply by air. DO NOT APPLY BY PIVOT OR SPRINKLER IRRIGATION.

(Ground and Aerial Applications)

Crop	Diseases	Application Rate (per acre)	Application Timing
Chickpea***, lentil	Control of ascochyta blight (<i>Ascochyta</i> spp.), white mould (<i>Sclerotinia sclerotiorum</i>), grey mould (<i>Botrytis cinerea</i>)	170 g	Apply at the beginning of flowering. Apply a second time 7 to 14 days later if disease persists, or weather conditions are favourable for disease development.
Caraway	Suppression of blossom blight (<i>Botrytis cinerea</i> , <i>Sclerotinia sclerotiorum</i>), ascochyta blight (<i>Ascochyta</i> spp.)	170 g	Apply at 20 to 50% flowering. Apply a second time 7 to 14 days later if disease persists, or weather conditions are favourable for disease development.
Sunflower	Suppression of sclerotinia head rot (<i>Sclerotinia sclerotiorum</i>), leaf spot (<i>Alternaria helianthi</i>)	140 to 260 g	Apply at early flower for optimal disease suppression. Use the higher rate when disease pressure is high or there is a history of high disease in the field.

***Do not apply by pivot or sprinkler irrigation.

Application Information:

- **Water Volume:**
 - **Ground:** Use a minimum water volume of 40 L per acre and ensure thorough coverage of foliage.
 - **Aerial (registered for all crops but field pea):** Use a minimum water volume of 16 L per acre and ensure thorough coverage of foliage.
 - **Pivot and Sprinkler Irrigation:** Carefully follow the label to see if pivot and sprinkler irrigation is allowed, when such applications are permitted, DO NOT exceed 0.64 cm (1/4 inch) or 25,700 L per acre. Apply only through sprinkler systems including centre pivot, lateral move, end two, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems.

How it Works:

The active ingredient boscalid is a carboxamide (SDHI) fungicide with systemic activity. To be used as a preventative application when environmental conditions are favourable for disease development. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Insecticides: For the control of corn borer, *Lance WDG*, *Terra Guard* and *Maxunitech Boscalid 70% WG* can be tank mixed with *Matador 120 EC* at 34 mL per acre. Apply before the larva bores into the plant stalk or pods. Follow the most restrictive application directions for each of the tank mix partner with respect to the maximum number of applications, pre-harvest interval and other label instructions.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - *Sunflower* – DO NOT exceed 1 application of this product per season.
 - *Canola, mustard, dry bean, chickpea, lentil, pea and birdsfoot trefoil* – DO NOT exceed 2 applications of this product per season.
 - *Alfalfa* – DO NOT exceed 3 applications of this product per season.
 - *Potato* – DO NOT exceed 4 applications of this product per season, check with other products' labels.
- **Grazing:** All crops except alfalfa and Birdsfoot trefoil (grown for seed) can be grazed or fed to livestock unless product label directs otherwise. DO NOT cut treated birdsfoot trefoil fields for hay/forage.
- **Preharvest interval:**
 - *Potato (for early blight and late blight tank-mixes)* – 30 days
 - *Beans, canola, mustard (oilseed and condiment), chickpea, lentil, pea, Caraway, sunflowers and Birdsfoot trefoil* – 21 days
 - *Alfalfa* – not applicable
- **Restricted Entry Interval:** DO NOT re-enter treated area for 12 hours after application or until dry.
- **Re-cropping:** A plant back restriction of 14 days is required for all crops not on the label.
- **Storage:** Store in a cool, dry, locked, well-ventilated area without a floor drain.
- **Environment:** TOXIC to aquatic organisms and non-target terrestrial plants. 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

Hazard Rating:



Caution Poison – Potential Skin Sensitizer



Warning – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Cantus WDG Fungicide

Fungicide Group
7

Company:

BASF Canada (PCP#30141)

Sharda CropChem (*Cabil Fungicide* – PCP#34638)

Formulation:

70% boscalid formulated as a water dispersible granule.

- Container size – 4 x 2.83 kg

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Potato	Early blight (<i>Alternaria solani</i>)	70 to 130 g	Apply prior to disease development and at 14 day intervals if conditions continue to favour disease development.

Application Information:

- **Water Volume:**
 - **Ground:** Use a minimum water volume of 40 L per acre and ensure thorough coverage of foliage.
 - **Aerial:** Use a minimum water volume of 16 L per acre and ensure thorough coverage of foliage.
 - **Pivot and Sprinkler Irrigation:** DO NOT exceed 0.64 cm (1/4 inch) or 25,700 L per acre. Apply only through sprinkler systems including centre pivot, lateral move, end two, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. The system must contain functional valves to prevent water source contamination from backflow.

How it Works:

The active ingredient boscalid is a carboxamide (SDHI) fungicide with systemic activity. It inhibits spore germination, mycelia growth and sporulation of the fungus on the leaf surface. To be used as a preventative application when environmental conditions are favourable for disease development. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** 4 applications per season on potatoes.
- **Grazing:** No restriction listed.
- **Preharvest interval:** 30 days
- **Restricted Entry Interval:** DO NOT re-enter treated area for 12 hours after application or until dry.
- **Re-cropping:** A plant back restriction of 14 days is required for all crops not on the label.
- **Storage:** Store in a cool, dry, locked, well-ventilated area without a floor drain.
- **Environment:** Toxic to aquatic organisms and non-target terrestrial plants. DO NOT apply to areas where runoff is likely to occur, or near any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

Hazard Rating:



Caution Poison – Potential Skin Sensitizer



Warning – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Caramba*

Fungicide Group

3

*NOTE: This product is no longer manufactured but product still remains in the distribution system.
This product may be removed from future editions.

Company:

BASF Canada (PCP#29767)

Formulation:

90 g/L metconazole formulated as an emulsifiable concentrate.

- Container sizes – Case (2 x 8.1 L); 128 L drum; or 400 L tote

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)*	Application Timing
Wheat	Control of leaf rust (<i>Puccinia recondita</i>), stripe rust (<i>Puccinia striiformis</i>), stem rust (<i>Puccinia graminis</i>), powdery mildew (<i>Erysiphe graminis f. sp. tritici</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), septoria leaf blotch (<i>Septoria tritici</i>) Suppression of spot blotch (<i>Cochliobolus sativus</i>)	200 to 280 mL	Apply prior to disease development or at the onset of disease.
	Suppression of fusarium head blight (<i>Fusarium</i> spp.)	400 mL	Apply prior to development of the disease when environmental conditions are favourable for disease development. Apply within the time period when at least 75% of the heads on the main stem are fully emerged to when 50% of the heads on the main stem are in flower.
Barley	Control of net blotch (<i>Pyrenophora teres</i>), scald (<i>Rhynchosporium secalis</i>), leaf rust (<i>Puccinia hordei</i>); stripe rust (<i>Puccinia striiformis</i>), powdery mildew (<i>Erysiphe graminis</i>); Suppression of spot blotch (<i>Cochliobolus sativus</i>)	200 to 280 mL	Apply prior to disease development or at the onset of disease.
	Suppression of fusarium head blight (FHB) (<i>Fusarium</i> spp.)	400 mL	Apply prior to development of the disease when environmental conditions are favourable for disease development. Apply between full head emergence and up to 3 days after full emergence of main stem heads.
Oat	Control of crown rust (<i>Puccinia coronata</i>), septoria leaf blotch (<i>Septoria avenae</i>)	200 to 280 mL	Apply prior to disease development or at the onset of disease.
	Suppression of fusarium head blight (<i>Fusarium</i> spp.)	400 mL	Apply prior to development of the disease when environmental conditions are favourable for disease development. Apply within the time period when at least 75% of the heads on the main stem are fully emerged to when 50% of the heads on the main stem are in flower.
Corn*	Suppression of fusarium (<i>Fusarium graminearum</i>) and gibberella (<i>Gibberella zeae</i>) ear rots	400 mL	Apply when the crop is between silking and silk browning stage for maximum suppression. Ensure silk coverage for optimum efficacy.

Crop	Diseases Controlled	Application Rate (per acre)*	Application Timing
Rye	Control of leaf rust (<i>Puccinia recondita</i>), stripe rust (<i>Puccinia striiformis</i>), powdery mildew (<i>Erysiphe graminis</i>)	200 to 280 mL	Apply prior to disease development or at the onset of disease.
	Suppression of fusarium head blight (<i>Fusarium</i> spp.)	400 mL	Apply prior to development of the disease when environmental conditions are favourable for disease development. Apply within the time period when at least 75% of the heads on the main stem are fully emerged to when 50% of the heads on the main stem are in flower.
Triticale	Control of leaf rust (<i>Puccinia recondita</i>), stripe rust (<i>Puccinia striiformis</i>), stem rust (<i>Puccinia graminis</i>), powdery mildew (<i>Erysiphe graminis f. sp. tritici</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), septoria leaf blotch (<i>Septoria tritici</i>); Suppression of spot blotch (<i>Cochliobolus sativus</i>)	200 to 280 mL	Apply prior to disease development or at the onset of disease.

*A case can treat 40 acres after heading (suppression of FHB) or 60 to 80 acres before heading (leaf disease). A drum can treat 320 acres after heading (suppression of FHB) or 460 to 640 acres before heading (leaf disease).

*Corn includes field corn, sweet corn, popcorn and seed production corn.

Application Information:

- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - **Aerial:** minimum 20 L per acre.
 - Consult nozzle manufacturers for specific nozzle and pressure recommendations.

How it Works:

The active ingredient, metconazole, is a broad spectrum triazole demethylation inhibitor (DMI) fungicide with systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None listed.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - **Wheat, oat, rye, barley, corn** – DO NOT exceed 1 application of this product per season.
- **Grazing:** All crops can be grazed or fed to livestock.
- **Preharvest interval:**
 - **Wheat, barley, oat, rye** – 30 days
 - **Field corn grain** – 20 days
 - **Sweet Corn** – see label harvesting restrictions
- **Restricted Entry Interval:**
 - **Wheat, barley, oat, rye** – DO NOT re-enter treated areas within 12 hours of application.
 - **Corn** – DO NOT re-enter treated area for 12 hours or up to 3 days depending on re-entry activity (see label instructions).
- **Re-cropping:** A plant back interval of 35 days is required for all crops not listed on the label.
- **Storage:** Store in original tightly closed container. Protect from freezing.
- **Environment:** Avoid run-off from treated areas into aquatic areas. Toxic to aquatic organisms, non-target terrestrial plants and small wild animals.

Hazard Rating:



Warning – Eye Irritant
Check label for first-aid information.

Refer to the Introduction for an explanation of the symbols.

Cerefit

Fungicide Group
3, 11

Company:

Corteva Agriscience (*Cerefit A* – PCP#33522, *Cerefit B* – PCP#33348)

Formulations:

The *Cerefit* package contains 2 components.

Cerefit A – 250 g/L picoxystrobin formulated as a suspension concentrate.

- Container size – 5.3 L

Cerefit B – 435 g/L propiconazole formulated as an emulsifiable concentrate.

- Container size – 3.5 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Barley	Control of leaf and stem rust, net blotch, powdery mildew, scald, septoria leaf spot, spot blotch	132.5 mL/acre – <i>Cerefit A</i> , 87.5 mL/acre – <i>Cerefit B</i>	For early application, apply at first sign of disease, usually at the beginning of stem elongation (G.S. 12-36). For late application, apply at flag leaf (G.S. 39-41). DO NOT apply after flowering (Feekes 10.5 or Zadoks 59).
Oats	Control of crown rust, septoria leaf blotch	132.5 mL/acre – <i>Cerefit A</i> , 87.5 mL/acre – <i>Cerefit B</i>	For early application, apply at first sign of disease, usually at the beginning of stem elongation (G.S. 12-36). For late application, apply at flag leaf (G.S. 39-41). DO NOT apply after flowering (Feekes 10.5 or Zadoks 59).
Wheat	Control of leaf and stem rust, powdery mildew, glume blotch, septoria leaf spot, stripe rust, tan spot	132.5 mL/acre – <i>Cerefit A</i> , 87.5 mL/acre – <i>Cerefit B</i>	For early application, apply at first sign of disease, usually at the beginning of stem elongation (G.S. 12-36). For late application, apply at flag leaf (G.S. 39-41). DO NOT apply after flowering (Feekes 10.5 or Zadoks 59).

Application Information:

- **Water Volume:**
 - **Ground:** 40 to 80 L per acre.
 - **Aerial:** 20 L per acre.

Application Tips: Good coverage is essential for effective disease control. *Cerefit* should be applied as a preventative disease control measure. Established diseases are more difficult to control and may have already reduced crop vigor.

How it Works:

The active ingredient propiconazole is a triazole fungicide with broad spectrum systemic activity. The active ingredient picoxystrobin is a broad spectrum strobilurin fungicide and is to be used as a preventative application when environmental conditions are favorable for disease development. Picoxystrobin has curative and locally systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 2 applications of this product per season.
- **Grazing:** May be grazed 7 days after application
- **Preharvest interval:**
 - **Wheat, barley and oats harvested for grain** – 45 days
 - **Forage harvest** – 7 days
 - **Greenfeed/hay** – 14 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** Crops that appear on the label may be replanted immediately after harvest, all other crops may be planted 10 months after the last application of *Cerefit*.

- **Storage:** Store in original container in a secured, dry storage area. Prevent cross-contamination with other pesticides and fertilizer. Keep away from food and feed.
- **Environment:** Toxic to aquatic organisms and non-target terrestrial plants. Observe prescribed buffer zones. Minimize off-target drift to reduce the effect on beneficial insects at the field boundary. DO NOT apply to areas prone to runoff and delay application if heavy rainfall is forecast.

Hazard Rating:

Cerefit A: None listed

Cerefit B:



Caution – Poison



Warning – Eye and Skin Irritant, Potential Skin Sensitizer

Refer to the Introduction for an explanation of the symbols.

Cevya

Fungicide Group
3

Company:

BASF (PCP#33405)

Formulations:

400 g/L mefentrifluconazole formulated as a suspension concentrate.

- Container size – 4 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Potato	Control of early blight (<i>Alternaria solani</i>)	77 – 101 mL	Begin applications prior to disease development. Apply an additional application at an interval of 7 to 14 days if disease persists or weather conditions are favourable. DO NOT apply more than 455 mL/acre per year.
	Suppression of black dot (<i>Colletotrichum coccodes</i>), brown spot (<i>Alternaria alternata</i>)		

Application Information:

- **Water Volume:**
 - **Ground:** Minimum water volume of 40 L per acre.
 - **Aerial:** Minimum water volume of 20 L per acre.

How it Works:

The active ingredient mefentrifluconazole is a triazole fungicide with broad spectrum systemic activity. Refer to “Fungicide Modes of Action” in the Plant Disease Control section for more information..

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Field Sprayer Application:** DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the **ASAE medium** classification. Boom height must be 60 cm or less above the crop or ground.
- **Aerial Application:** DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply when wind speed is greater than 16 km per hour at flying height at the site of application. DO NOT apply with spray droplets smaller than the **ASAE medium** classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length MUST NOT exceed 65 percent of the wing- or rotorspan.

Hazard Rating:



Warning – Contains the Allergen Soy

Potential Skin Sensitizer

Refer to the Introduction for an explanation of the symbols.

Chlorothalonil

Fungicide Group
M5

Bravo Zn/Bravo ZNC/Echo NP/Echo 90WSP/Echo 720

Company:

Syngenta Canada (Bravo Zn – PCP#28900, Bravo ZNC – PCP#33515)

Sipcam Canada (Echo 720 – PCP#29355 Echo NP – PCP#33479, Echo 90WSP – PCP#33519)

Formulations:

Bravo Zn – 500 g/L chlorothalonil formulated as a suspension.

- Container size – 450 L

Bravo ZNC – 500 g/L chlorothalonil formulated as a suspension.

- Container size – 2 x 10 L case

Echo 90WSP – 90% chlorothalonil formulated as water dispersible granule sealed within a water-soluble bag.

- Container size – 10 kg (20 x 500 g)

Echo 720 - 720 g/L chlorothalonil formulates as a suspension

- Container size - 450 L

Echo NP – 720 g/L chlorothalonil formulated as a suspension.

- Container size – 2 x 9.46 L case

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)			Application Timing
		Bravo Products	Echo 720/ Echo NP	Echo 90WSP	
Wheat	Control of tan spot (<i>Pyrenophora tritici-repentis</i>), septoria glume blotch, septoria leaf blotch (<i>Septoria tritici</i>)	600 to 1000 mL	405 to 690 mL	320 to 570 g	Begin application at flag leaf emergence; repeat 10 to 14 days later when heads are visible. A third application when heads are fully emerged may be necessary.
	Suppression of fusarium head blight (<i>Fusarium</i> spp.)	800 to 1000 mL	570 to 690 mL	450 to 570 g	For suppression of fusarium head blight apply at early flowering (before flowering has started in the majority of tillers) and before the beginning of weather favouring disease.
Pea	Control of mycosphaerella blight (<i>Mycosphaerella pinodes</i>)	800 to 1200 mL	570 to 850 mL	450 to 690 g	Begin application at early flowering and repeat 10 days later at early pod set or mid-flowering if necessary. Make a third application 10 to 14 days after the second application at pod fill should conditions remain favourable for disease.
Lentil	Control of ascochyta blight (<i>Ascochyta lentis</i>), anthracnose (<i>Colletotrichum truncatum</i>)	800 to 1600 mL	570 to 1130 mL	450 to 890 g	For one application only, apply at early flowering. For two applications: apply first before flowering when bud formation is evident; apply second at early to mid-flowering 10 to 14 days after the first application but before rows close in.
Chickpea	Control of ascochyta blight (<i>Ascochyta rabiei</i>)	1200 to 1600 mL for first application; 800 to 1200 mL for subsequent applications.	850 to 1130 mL for first application; 570 to 850 mL for subsequent applications.	690 to 890 g for first application; 450 to 690 g for subsequent applications.	Make first application at very early flowering and remaining applications at 10 day intervals.

Crop	Diseases Controlled	Application Rate* (per acre)				Application Timing
		<i>Bravo 500</i>	<i>Bravo Zn</i>	<i>Echo 720</i>	<i>Echo 90DF/90WSP</i>	
Potato	Late blight (<i>Phytophthora infestans</i>)	480 to 1000 mL	480 to 1000 mL	320 to 690 mL	280 to 530 g	Begin application when plants are 6 to 8 inches (15 to 20 cm) high or when disease threatens. Repeat applications at 7 to 10 day intervals or as necessary to maintain disease control. *Under high disease pressure, use higher rate and shorter spray intervals.
	Early blight (<i>Alternaria solani</i>)	640 to 1000 mL	640 to 1000 mL	445 mL	370 to 530 g	
	Botrytis vine rot (<i>Botrytis cinerea</i>)	640 to 1000 mL	640 to 1000 mL	445 mL	370 to 530 g	

Application Information:

- **Water Volume:** Volume will vary with crop and amount of plant growth. Use sufficient water to obtain adequate coverage of foliage.
 - **Ground:** Spray volume will usually range from 90 to 640 L per acre for dilute sprays and 20 to 40 L per acre for concentrate sprays. Applicators treating potato fields must use groundboom equipment with an enclosed cab.
 - **Chickpea** – 90 L per acre. Ground application only.
 - **Aerial:** Use minimum of 12 L per acre. DO NOT apply *Bravo ZNC* using aerial application equipment.
- Note: when using *Bravo ZNC* or *Echo NP*, mixers and loaders cannot handle more than 340 kg a.i. chlorothalonil (680 L) per person per day.**

How it Works:

The active ingredient chlorothalonil is a chloronitrile fungicide with multi-site contact activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

DO NOT combine with pesticides, surfactants or fertilizers unless prior use has shown the combination is physically compatible and non-injurious under your conditions of use.

Fungicides: For control of early blight in potato, *Bravo 500* may be tank-mixed with 200 mL per acre *Quadris*. DO NOT apply sequential applications of this tank-mix and DO NOT exceed 3 tank-mix applications per season. DO NOT apply to potatoes later than 2 days before harvest. For control of early blight, late blight, and botrytis vine rot in potato and for suppression of storage rots, pythium leak and pink rot, in potato *Bravo Zn* may be tank mixed with 80 mL per acre *Ridomil Gold 480 EC* or *Ridomil Gold 480 SL*.

Herbicides: On lentils, DO NOT apply in combination with *Poast* herbicide and *Merge* surfactant or within 48 hours of the application of *Poast* and *Merge*.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - *Lentil* – DO NOT exceed 2 applications of this product per season.
 - *Wheat, pea, chickpea* – DO NOT exceed 2 applications of this product per season. **Note: *Bravo ZNC* maximum 2 applications per season.**
 - *Potato (Echo 90DF)* – DO NOT exceed 3 applications of this product per season. **Note: *Bravo ZNC* and *Echo NP* not registered on potatoes.**
- **Grazing:** DO NOT graze treated areas. DO NOT feed straw from treated crops to livestock.
- **Preharvest interval:**
 - *Potato* – 1 day
 - *Lentil* – 48 days
 - *Chickpea* – *Bravo 500* – 14 days, *Echo 720* – 48 days
 - *Wheat* – 30 days
 - *Pea* – 32 days
- **Restricted Entry Interval:** DO NOT re-enter treated area within 48 hours of application. If required, and at least 4 hours have passed since application, individuals may re-enter treated area for short-term tasks not involving hand labour. Long pants, long-sleeved shirt, and chemical resistant gloves must be worn.
- **Re-cropping:** None.
- **Storage:** DO NOT store near feed or food stuffs. Store in a cool, dry, ventilated place. Protect from excessive heat.
- **Environment:** DO NOT apply if weather conditions favour drift from area being treated. DO NOT contaminate lakes, streams or ponds. Observe a buffer zone of 100 m for aerial applications and 15 m for ground applications to protect aquatic systems.

Hazard Rating:
 Caution – Poison

 Warning – Causes Severe Eye Damage

Refer to the Introduction for an explanation of the symbols.

Copper

**Fungicide Group
M1***Copper 53W/Copper Spray/Cueva/Parasol WG/Corbanza/HyCop/Parasol FL***Company:**Sharda CropChem (*HyCop* – PCP#34645)Sharda CropChem (*Corbanza* – PCP#34558)W. Neudorff GmbH KG (*Cueva* – PCP#31825), Distributed by Belchim Crop Protection CanadaLoveland Products Canada, (*Copper 53W* – PCP#09934, *Copper Spray* – PCP#19146)Nufarm Agriculture Inc. (*Parasol WG* – PCP#29063)Nufarm Agriculture Inc. (*Parasol FL* – PCP#25901)**Formulations, Crops, Diseases, Rates and Timing:**

Product		<i>Copper 53W</i>	<i>Copper Spray</i> and <i>Corbanza</i>	<i>Cueva</i>	<i>Parasol WG</i> and <i>HyCop</i>	<i>Parasol FL</i>
Formulation and Container Size		53% tribasic copper sulphate (wetable powder). 10 kg	50% copper oxychloride (wetable powder). 10x2 kg	Copper as 1.8% copper octanate (solution). 1-1000L	50% elemental copper as copper hydroxide (wetable granule). 10 kg	24.4% elemental copper, present as copper hydroxide. 2 x 10 L
Crop	Disease	Application Rate and Timing				
Potato	Septoria leaf spot (<i>Septoria lycopersici</i>)	-	-	Use a 0.5% to 2% solution, applied at 190 to 380 L/acre. Apply 2 weeks before disease normally appears (make use of predictive disease models if available) and repeat using 5 to 10 day intervals.	-	-
	Early blight (<i>Alternaria solani</i>)	2.2 kg/acre Apply when plants are 5 to 7 inches (12 to 18 cm) tall. Repeat at 7 day intervals.	1.6 kg/acre Apply when plants are 4 to 8 inches (10 to 20 cm) tall. Repeat at 7 to 10 day intervals or as per indicated on label.		0.44 to 1.0 kg/acre Apply when plants are 6 inches (15 cm) tall. Apply combined with 0.7 to 0.9 kg of mancozeb (80%)/acre, at 7 to 10 day intervals. Strictly follow the labels of both products.	0.3 to 0.7 L/acre. Apply when plants are 6 inches (15 cm) tall. Apply combined with 0.7 to 0.9 kg of mancozeb (80% active)/acre at 7 to 10 day interval
	Late blight (<i>Phytophthora infestans</i>)					
	Tuber blight (<i>Phytophthora infestans</i>)	-	-		-	1.36 kg/acre (vine kill). Apply with a desiccant recommended on the label at vine kill or alone after vine kill, prior to harvest.

Crop	Disease	Application Rate and Timing			
Dry bean	Anthracnose (<i>Colletotrichum truncatum</i>)	2.2 kg/acre. Apply prior to disease development or at the onset of disease	-	-	(<i>Parasol WG</i> only) 0.9 to 1.3 kg/acre. Apply prior to disease development or at the onset of disease
	Downy mildew (<i>Phytophthora phaseoli</i>)		-	-	-
	Common bacterial blight (<i>Xanthomonas campestris</i> pv. <i>phaseoli</i>), halo blight (<i>Pseudomonas syringae</i> pv. <i>phaseolicola</i>)			Use a 0.5% to 2% solution, applied at 190 to 380 L/acre. Apply 2 weeks before disease normally appears (make use of predictive disease models if available). Re-apply using 5 to 10 day intervals.	
Dry bean, soybean, field pea, lentil and chickpea	Ascochyta blight (<i>Ascochyta pisi</i>), brown spot (<i>Pseudomonas syringae</i> pv. <i>syringae</i>), powdery mildew (<i>Erysiphe</i> spp.), rust (<i>Uromyces appendiculatus</i>)				

Application Information:

- **Ground:** Follow the instructions on the label for each of the product. Use enough water to ensure thorough coverage. As noted on the labels, 400 L per acre (*Copper 53W* and *Copper Spray*); boom height must be 60 cm or less above the crop or ground (*Cueva*).
- **Aerial:** DO NOT apply by air

How it Works:

The active ingredients containing copper are inorganic fungicides with contact activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - *Cueva*: DO NOT exceed 15 applications per year.
 - *Bean (Parasol WG)* – DO NOT exceed 6 applications per season.
 - *Potato (Parasol WG and Parasol FL)* – DO NOT exceed 10 applications per season.
 - *Potato (HyCop)* – DO NOT exceed 8 applications per season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** DO NOT apply within three days of harvest or as indicated on label.
- **Restricted Entry Interval:**
 - *Copper 53W, Copper Spray, HyCop, Parasol FL, and Parasol WG* – DO NOT re-enter treated areas within 48 hours of application
 - *Cueva* – 4 hours
- **Re-cropping:** No restrictions listed.
- **Storage:** Store in original container in a cool, dry, well ventilated area. To prevent contamination store this product away from food or feed. Protect from freezing. Keep away from heat, fire, and sparks. Store out of reach of children and animals.
- **Environment:** DO NOT apply or allow to drift onto streams or any body of water. To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.
- **Toxicity:** Toxic to birds, small wild mammals and aquatic organisms (indicated on *Cueva* label).

Hazard Rating:

 **Copper 53W, Copper Spray:** Warning – Poison

 **Parasol WG and Parasol FL:** Caution – Poison

Refer to the Introduction for an explanation of the symbols.

Cotegra

Fungicide Group
3, 7

Company:

BASF Canada (PCP#32530)

Formulation:

250 g/L boscalid and 150 g/L prothioconazole formulated as a suspension concentrate.

- Container size – 2 x 9.8 L per case

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Canola (including rapeseed and oriental mustard)	Control of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	240 to 280 mL	Apply <i>Cotegra</i> at 20 to 50% flowering. Select the use rate based on relative disease pressure. Use the high rate when risk for disease development is high (e.g. narrow host rotation with disease history and high potential for inoculum). Apply a second application 7 to 14 days if disease persists or weather conditions are conducive for disease development.
Chickpeas	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>) and Grey mold (<i>Botrytis cinerea</i>); Control of Ascochyta blight (<i>Ascochyta rabiei</i>)	280 mL	Apply <i>Cotegra</i> at the beginning of flowering or at the onset of disease symptoms. Apply a second application 7 to 14 days if disease persists or weather conditions are conducive for disease development.
Dry bean; faba bean	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)	400 mL	Apply <i>Cotegra</i> at 20 to 50% flowering. Apply a second application 7 to 14 days if disease persists or weather conditions are conducive for disease development.
Field Peas	Control of Mycosphaerella blight (<i>Mycosphaerella pinodes</i>) and Ascochyta blight (<i>Ascochyta pinodes</i>) at high rate; suppression at low rate. Suppression of white mould (<i>Sclerotinia sclerotiorum</i>) at high rate.	240-280 mL	Apply <i>Cotegra</i> at the beginning of flowering or at the onset of disease symptoms. Apply a second application 7 to 14 days if disease persists or weather conditions are conducive for disease development.
Lentils	Control of anthracnose (<i>Colletotrichum lentis</i>) including biotypes resistant to Group 11 fungicides at high rate; suppression at low rate. Suppression of white mould (<i>Sclerotinia sclerotiorum</i>) and suppression of Grey mold (<i>Botrytis cinerea</i>) at high rate.	240-280 mL	Apply <i>Cotegra</i> at the beginning of flowering or at the onset of disease symptoms. Apply a second application 7 to 14 days if disease persists or weather conditions are conducive for disease development.
Soybean	Control of frog-eye leaf spot (<i>Cercospora sojina</i>), pod and stem blight (<i>Diaporthe phaseolorum</i>) Suppression of white mould (<i>Sclerotinia sclerotiorum</i>), brown spot (<i>Septoria glycines</i>)	280 mL	Apply <i>Cotegra</i> prior to disease development when conditions are favourable for disease development or at the onset of disease symptoms. Apply a second application 7 to 14 days if disease persists or weather conditions are conducive for disease development.

Application Information:

- **Water Volume:**
 - **Ground:** Use a minimum water volume of 40 L per acre and ensure thorough coverage of foliage.
 - **Aerial:** Use a minimum water volume of 20 L per acre and ensure thorough coverage of foliage.

How it Works:

The active ingredient boscalid is a carboxamide (SDHI) fungicide with systemic activity. The active ingredient prothioconazole is a triazole fungicide with broad-spectrum systemic activity. To be used as a preventative application when environmental conditions are favourable for disease development. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - *Canola, mustard, dry bean, chickpea, lentil, pea, soybean* – DO NOT exceed 2 applications of this product per season.
- **Grazing:** All crops can be grazed or fed to livestock 7 days after application.
- **Preharvest interval:**
 - *Beans, chickpea, lentil, pea, soybean* – 21 days
 - *Canola, rapeseed, and oriental mustard* – 36 days
- **Restricted Entry Interval:** DO NOT re-enter treated area for 24 hours after application.
- **Re-cropping:** A plant back restriction of 14 days is required for all crops not on the label. 30 days for all crops NOT on the label.
- **Storage:** Store the leftover product in original tightly closed container. Protect from freezing. Store in a cool, dry, locked, well-ventilated area without a floor drain.
- **Environment:** Toxic to aquatic organisms. Observe buffer zones and DO NOT apply to any body of water or where runoff is likely to occur.

Hazard Rating:



Caution – Poison

Refer to the Introduction for an explanation of the symbols.

Curzate

Fungicide Group
27

Company:

Corteva Agriscience (PCP#26284)

Formulation:

60% cymoxanil formulated as a dry flowable.

- Container size – 1.8 kg

Crops, Diseases Timing:

Control of late blight (*Phytophthora infestans*) in potato. Initial applications should start when local conditions indicate that late blight is imminent. Make additional applications at 5 to 7 day intervals; however, at least 20 days must pass between the second and third application.

Rate:

Apply *Curzate* at 90 grams per acre

-plus-

Manzate DF or *Manzate Pro-Stick* at 540 grams to 650 grams per acre.

Application Information:

- **Water Volume:**
 - **Ground:** Utilize sufficient water to obtain thorough coverage – 80 to 400 L per acre.
 - **Aerial:** Apply by air with a minimum water volume of 20 L per acre.

How it Works:

The active ingredient cymoxanil is a cyanoacetamide-oxime fungicide with locally systemic activity. To be used as a preventative, curative and inhibitive (antisporeulant) fungicide application. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

DO NOT use *Curzate* alone. Use only in a tank mix with *Dithane Rainshield*, *Manzate DF* or *Manzate Pro-Stick*.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 4 applications of this product per season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** 8 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 24 hours of application.
- **Re-cropping:** No restrictions listed.
- **Storage:** Store product in original container in a secure, dry area away from food or feed. Protect against humid air and water. Not for use or storage in or around the home. Keep container tightly closed.
- **Environment:** A buffer zone of 50 m is required between the down-wind edge of the boom and sensitive aquatic habitats such as ponds, lakes, rivers, streams, and wetlands. DO NOT contaminate these habitats when cleaning and rinsing equipment or containers. DO NOT clean sprayer near well or water source or near desirable vegetation.

Hazard Rating:

 Danger – Poison

 Caution – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Custodia

Fungicide Group
3, 11

Company:

Adama Canada (PCP#33672)

Formulation:

200 g/L of Tebuconazole and 120 g/L of Azoxystrobin formulated as a suspension concentrate.

- Container size – 10.08 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Wheat (spring, winter, durum)	Leaf rust, Stem rust, Stripe rust, Septoria leaf blotch, Tan spot	190-250 mL/ac	Apply <i>Custodia</i> ® to leaf foliage at the first sign or very early stage of disease, up to the end of the flowering period. Use of the higher rate should be considered when weather conditions are conducive to heavy disease development.
Barley	Net blotch, Spot blotch, Leaf rust, Stem rust, Stripe rust, Septoria leaf blotch, Tan spot	190-250 mL/ac	Apply <i>Custodia</i> ® to leaf foliage at the first sign or very early stage of disease. Use of the higher rate should be considered when weather conditions are conducive to heavy disease development.
Oats	Crown rust, stem rust, septoria leaf blotch	190 mL/ac	Apply <i>Custodia</i> ® to leaf foliage at the first sign or very early stage of disease.
Soybean	Frogeye leaf spot	190-250 mL/ac	Apply <i>Custodia</i> ® at the very early stages of disease development. Use of the higher rate should be considered when weather conditions are conducive to heavy disease development or when heavy disease pressure is present.

Application Information:

- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - **Aerial:** minimum 20 L per acre.

How it Works:

The active ingredient azoxystrobin is a methoxyacrylate compound (strobilurin) with broad spectrum contact and systemic activity. To be used as a preventative and curative fungicide application. The active ingredient tebuconazole is a triazole demethylation inhibitor (DMI) fungicide with systemic broad-spectrum activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** Do not apply more than once per year.
- **Grazing:** DO NOT graze or feed green forage to livestock prior to 6 days after treatment. Straw cut after harvest may be fed or used for bedding.
- **Preharvest interval:**
 - *Mature grain* – 36 days.
 - *Forage and hay* – 6 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** No restrictions listed.
- **Storage:** Store above 5°C in original, tightly closed container. DO NOT ship or store near food, feed, seed and fertilizers. Store in a cool, dry, locked, well-ventilated area without a floor drain. Keep from freezing.
- **Environment:** This product is toxic to birds, small wild animals, aquatic organisms, and non-target plants. This product demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of *Custodia* foliar fungicide in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination. To reduce runoff from treated areas in to aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Hazard Rating:



Caution – Poison

Refer to the Introduction for an explanation of the symbols.

Delaro 325 SC

Fungicide Group
3, 11

Company:

Bayer (PCP#31533)

Formulation:

175 g/L of prothioconazole and 150 g/L of trifloxystrobin formulated as a suspension concentrate.

- Container size – 7.1 L

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Wheat (spring, durum)	Septoria leaf blotch (<i>Septoria tritici</i>), Powdery mildew (<i>Erysiphe graminis</i>), Tan spot (<i>Pyrenophora tritici-repentis</i>), Leaf rust (<i>Puccinia triticina</i>), Stem rust (<i>Puccinia graminis</i>), Stripe rust (<i>Puccinia striiformis</i>)	230 mL	Apply preventatively or at the very early stages of disease development, from 4 leaf to flag leaf, but prior to head emergence.
Barley	Net blotch (<i>Pyrenophora teres</i>), Scald (<i>Rhynchosporium secalis</i>), Leaf rust (<i>Puccinia hordei</i>), Stem rust (<i>Puccinia graminis</i>), Stripe rust (<i>Puccinia striiformis</i>), Powdery mildew (<i>Erysiphe graminis</i>)		
Oats	Crown rust (<i>Puccinia coronata</i>), Leaf blotch (<i>Septoria avenae</i>), Stem rust (<i>Puccinia graminis</i>)	230 mL	Apply preventatively or at the very early stages of disease development, from 4 leaf to flag leaf, but prior to head emergence.
Triticale	Stem rust (<i>Puccinia graminis</i>), Scald (<i>Rhynchosporium secalis</i>)		
Wheat (winter)	Septoria leaf blotch (<i>Septoria tritici</i>), Powdery mildew (<i>Erysiphe graminis</i>), Tan spot (<i>Pyrenophora tritici-repentis</i>), Leaf rust (<i>Puccinia triticina</i>), Stem rust (<i>Puccinia graminis</i>), Stripe rust (<i>Puccinia striiformis</i>)	177 to 230 mL	
Faba bean	Grey mould and chocolate spot (<i>Botrytis cinerea</i>), white mould (<i>Sclerotinia sclerotiorum</i>)	356 mL	Begin fungicide applications at the beginning of flowering or at first sign of disease.
Field Peas	Mycosphaerella blight (<i>Mycosphaerella pinodes</i>), ascochyta blight (<i>Ascochyta pisi</i>), white mould (<i>Sclerotinia sclerotiorum</i>), grey mould (<i>Botrytis cinerea</i>)	356 mL	Apply at the first sign of disease. When disease pressure is high or when agronomic or weather conditions are conducive to disease development, make a second application 10 to 14 days later.
Chickpea	Ascochyta blight (<i>Ascochyta rabiei</i>), white mould (<i>Sclerotinia sclerotiorum</i>), grey mould (<i>Botrytis cinerea</i>)		Use shorter intervals for best protection.
Lentils	White mould (<i>Sclerotinia sclerotiorum</i>), ascochyta blight (<i>Ascochyta lentis</i>), grey mould (<i>Botrytis cinerea</i>), anthracnose (<i>Colletotrichum truncatum</i>)		
Soybean	Brown spot (<i>Septoria glycines</i>), phomopsis stem blight (<i>Phomopsis longicolla</i>), white mould (<i>Sclerotinia sclerotiorum</i>), frog-eye leaf spot (<i>Cercospora soja</i>)	230 mL	Apply preventatively or at the first signs of disease from early flowering (R1) to complete pod fill (R5). When disease pressure is high or when agronomic or weather conditions are conducive to disease development, make a second application 10 to 14 days later. Continue applications as needed on a 10 to 14 day interval.

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Corn	Common rust (<i>Puccinia sorghi</i>), eye spot (<i>Aureobasidium zeae</i>), Northern corn leaf blight (<i>Setosphaeria turcica</i> ; anamorph <i>Exserohilum turcicum</i>), grey leaf spot (<i>Cercospora zeae-maydis</i>)	230 mL	Apply at first sign of disease. When disease pressure is high or when agronomic or weather conditions are conducive to disease development, make a second application 10 to 14 days later.
Alfalfa for seed production only (minor use registration)	Blossom blight (<i>Sclerotinia sclerotiorum</i> , <i>Botrytis cinerea</i>)	356 mL	Begin fungicide applications at the beginning of flowering or at first sign of disease. When disease pressure is high or when agronomic or weather conditions are conducive to disease development make a second application 10 to 14 days later.

Application Information:

- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - **Aerial:** minimum 20 L per acre.

How it Works:

The active ingredient prothioconazole is a triazole fungicide with broad spectrum systemic activity. The active ingredient trifloxystrobin is a strobilurin fungicide with broad spectrum preventative activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 2 applications of *Delaro 325 SC* per season in field pea, chickpea, lentil, soybean, winter wheat and corn. DO NOT exceed 1 application of *Delaro 325 SC* per season in barley, oats, triticale, spring wheat and durum.
- **Grazing:** No restrictions listed.
- **Preharvest interval:**
 - **Wheat, barley, oats, triticale** – 45 days
 - **Field pea, chickpea, lentil** – 30 days
 - **Field corn, popcorn** – 30 days
 - **Soybean** – 20 days
 - **Sweet corn** – 14 days
 - **Flax** – 36 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** Crops listed on label, corn, cereals and sugarbeet may be planted immediately following last application. DO NOT plant any other crops within 30 days of application of *Delaro 325 SC*.
- **Storage:** Store this product away from food or feed. Keep away from fire or open flame or other sources of heat. DO NOT store at temperatures below freezing. If stored for 1 year or longer, shake well before using. Store away from feed, seed, fertilizer, plant and foodstuffs. DO NOT store in or around the home. Keep in original container during storage.
- **Environment:** Toxic to aquatic organisms and non-target terrestrial plants. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes. DO NOT apply to areas where runoff is likely to occur.
- Rainfast 1 hour.

Hazard Rating:



Caution – Eye Irritant

Potential Skin Sensitizer

Refer to the Introduction for an explanation of the symbols.

Delaro Complete*

Fungicide Group
3, 7, 11

*NOTE: As of January 1, 2025, www.keepitclean.ca indicates that the use of this product on certain crop types, particularly on barley and especially on malt barley, may have market access concerns. Please see Introduction for more information AND consult potential grain buyers before using this product.

Company:

Bayer (PCP#34095)

Formulation:

176.2 g/L Prothioconazole, 154 g/L Trifloxystrobin, and 128 g/L Fluopyram as suspension concentrate

- Container size – 7.1 L jug (20ac/jug), 113.8 L drum (320 ac/drum)

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Lentils, chickpeas, field peas, dry beans, faba bean	Control of white mould (<i>Sclerotinia sclerotiorum</i>), grey mould (<i>Botrytis cinerea</i>), aschochyta blight (<i>Ascochyta spp.</i>), anthracnose in dry bean (<i>Colletotrichum lindemuthianum</i>), anthracnose in lentil (<i>Colletotrichum lentis</i>), mycosphaerella blight in field pea (<i>Mycosphaerella pinodes</i>), powdery mildew (<i>Erysiphe pisi</i>), chocolate spot in Faba bean (<i>Botrytis cinerea</i>)	356mL	Begin fungicide applications preventatively, at the beginning of flowering or at first sign of disease. When disease pressure is high or when agronomic or weather conditions are conducive to disease development, make a second application 7 to 14 days later. Within the stated interval range, use shorter intervals for best protection. Ensure that the area to be treated is covered uniformly. Good spray coverage and canopy penetration are important for best results.
Soybean	Control of frogeye leaf spot (<i>Cercospora sojina</i>), brown spot (<i>Septoria glycines</i>), phomopsis stem blight (<i>Phomopsis longicolla</i>) Suppression of charcoal rot (<i>Macrophomina phaseolina</i>), and white mould (<i>Sclerotinia sclerotiorum</i>)	237mL	Begin fungicide applications preventatively or at the first signs of disease from early flowering (R1) to complete pod fill (R5). When disease pressure is high or when agronomic or weather conditions are conducive to disease development, make a second application 10 to 14 days later.
Corn (sweet corn, field corn, popcorn, including corn grown for seed)	Control of common rust (<i>Puccinia sorghi</i>), southern corn rust (<i>Puccinia polysora</i>), eye spot (<i>Aureobasidium zeae</i> , syn. <i>Kabatiella zeae</i>), northern corn leaf blight (<i>Setosphaeria turcica</i> , syn. <i>Exserohilum turcicum</i>), grey leaf spot (<i>Cercospora zeae-maydis</i>), tar spot (<i>Phyllachora maydis</i>)	237mL	Apply DELARO COMPLETE when disease first appears and re-apply after 7-14 days if favourable conditions for disease development persist. DO NOT apply DELARO COMPLETE with an adjuvant in corn. Do not apply more than 2 applications of DELARO COMPLETE per crop year. To limit the potential for development of disease resistance to these fungicide classes do not make more than 2 applications of DELARO COMPLETE or any Group 11 or Group 7 containing fungicide before rotating with a fungicide from a different Group.

Crop	Diseases	Application Rate (per acre)	Application Timing
Winter Wheat	Control of septoria leaf blotch (<i>Septoria tritici</i>), powdery mildew (<i>Erysiphe graminis</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), leaf rust (<i>Puccinia triticina</i>), stem rust (<i>Puccinia graminis</i>), stripe rust (<i>Puccinia striiformis</i>)	189mL to 237mL	DELARO COMPLETE should be applied as a preventative disease control measure or at the very early stages of disease development. This could occur anytime during tillering or stem elongation. Typically, one application from the tillering up to flag leaf emergence is required. A second application may be made if needed. DO NOT apply within 14 days of the first treatment. DELARO COMPLETE must be applied prior to head emergence. Timing of Application: Single application: 4-leaf stage up to flag leaf (GS 14-47). Two applications: First application: 4-leaf stage to flag leaf stage. Second application: not within 14 days of the first application and prior to head emergence.
Wheat (spring and durum)	Control of septoria leaf blotch (<i>Septoria tritici</i>), powdery mildew (<i>Erysiphe graminis</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), leaf rust (<i>Puccinia triticina</i>), stem rust (<i>Puccinia graminis</i>), stripe rust (<i>Puccinia striiformis</i>)	237mL	DELARO COMPLETE should be applied as a preventative disease control measure or at the very early stages of disease development. Typically this application will occur from tillering up to flag leaf emergence.
Barley	Control of net blotch (<i>Pyrenophora teres</i>), scald (<i>Rhynchosporium secalis</i>), leaf rust (<i>Puccinia hordei</i>), stem rust (<i>Puccinia graminis</i>), stripe rust (<i>Puccinia striiformis</i>), powdery mildew (<i>Erysiphe graminis</i>)		
Oats	Control of crown rust (<i>Puccinia coronata</i>), septoria leaf blotch (<i>Septoria avenae</i>), stem rust (<i>Puccinia graminis</i>)		
Triticale	Control of stem rust (<i>Puccinia graminis</i>), scald (<i>Rhynchosporium secalis</i>)	237mL	

Application Information:

- **Water Volume:**
 - **Ground:** 40 Litre/acre.
 - **Air:** 20 Litre/acre.
- For application in dry shelled pea and bean, *Delaro Complete* should be thoroughly dispersed prior to the addition of a Non-Ionic Surfactant. *Delaro Complete* may be used with a registered Non-Ionic Surfactant, such as Agral 90 or Ag-Surf, at 0.125% vol/vol.

How it Works:

The active ingredient prothioconazole is a triazole fungicide with broad-spectrum systemic activity. Trifloxystrobin is a strobilurin fungicide with broad spectrum preventative activity. The active ingredient fluopyram is a carboxamide fungicide with systemic activity. Fluopyram is highly plant mobile and works to disrupt disease spore germination.

Tank Mixes:

Follow the product label. 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.

Restrictions:

- **Maximum number of applications:** maximum 2 application per season.
- **Rainfall:** Avoid application when heavy rain is in forecast.
- **Pre-harvest Intervals:** see table below.
- **Grazing:** see table below.
- **Re-entry:** 12 hours after application (see table below).

Crop	Pre Harvest Interval (days)	Pre-Grazing Interval (days)	Re-entry
Soybean	20	n/a	12 hours
Dried shelled pea and bean	30	7	12 hours
Field corn, popcorn	14 (grain)	14 (forage, stover)	12 hours (including mechanical detasseling of corn)
Sweet corn	14 (ears)	14 (forage, fodder)	12 hours; (14 days for manual detasseling of corn)
Spring and durum wheat, barley, oats, triticale	45	30 (grazing/forage) 45 (hay, straw, grain)	12 hours
Winter wheat	45	1 application: 30 (grazing/forage) 45 (hay, straw, grain) 2 applications: Do not allow livestock to graze within the treated area and do not harvest	12 hours

- **Re-cropping interval:** Treated areas may be replanted with any crop specified on the label as soon as practical after the last application. For all other crops, do not plant back within 30 days of last application.
- **Storage:** Store this product away from food or feed. Do not contaminate water, food, or feed by storage or disposal. Do not store below freezing. Keep away from direct sunlight. If stored for 1 year or longer, shake well before using. Store the tightly closed container away from feeds, seeds, fertilizer, plants and foodstuffs. Do not use or store in or around the home. Keep the product in the original container during storage.
- **Environment:** Toxic to birds. Toxic to aquatic organisms and non-target terrestrial plants. Observe spray buffer zones. Toxic to certain beneficial arthropods (which may include predatory and parasitic insects, spiders, and mites). Minimize spray drift to reduce harmful effects on beneficial arthropods in habitats next to the application site such as hedgerows and woodland. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Hazard Rating:

Eye irritant, Skin Sensitizer, Lung Irritant

Diplomat 5SC Fungicide

Company:

Belchim Crop Protection Canada Inc. (PCP # 32918)

Formulations:

Polyoxin D Zinc Salt, 5.0% as formulated as Suspension Concentrate

- Container size: 4 x 5L

Crops, Diseases, Rates and Timing:

Crop	Diseases controlled	Application Rate (per acre)	Application Timing
Potatoes	Suppression of Early blight (<i>Alternaria solani</i>)	221 – 375 mL/acre	Begin as a preventative application when conditions favour disease development and continue on a 7-14 day interval as needed to maintain suppression. Do not apply by air.

Application Information:

- **Water Volume:**
 - **Ground:** Apply as a foliar spray in sufficient water to provide thorough coverage of foliage.
 - Do not apply by air.

How it Works

Polyoxin D zinc salt stops the growth of susceptible fungal pathogens by interfering with their cell wall growth.

Tank Mixes:

None registered.

Restrictions:

- **Maximum number of applications:** Do not apply more than 61 g a.i./acre/season
- **Rainfall:** Avoid application when heavy rain is forecast.
- **Pre-harvest Intervals:** 0 days
- **Re-entry:** Until sprays have dried
- **Re-cropping interval:** n/a
- **Storage:** Store in the original container in a dry location away from food or feed
- **Environment:** To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Hazard Rating:

None listed.

Potential Skin Sensitizer

Double Nickel LC/Double Nickel 55

Fungicide Group
44

Company:

Distributed by UAP (*Double Nickel LC; Double Nickel 55*)

Formulations:

Double Nickel LC (PCP#31887): 1×10^{10} *Bacillus amyloliquefaciens* strain D747 spores/mL (minimum) formulated in an aqueous suspension.

- Container size – 2 x 9.46 L and 1,000 L

Double Nickel 55 (PCP#31888): 5×10^{10} *Bacillus amyloliquefaciens* strain D747 spores/g formulated in a water dispersible granule.

- Container size – 4 x 2.27 kg

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rates		Application Timing
		<i>Double Nickel LC</i> (L/acre)	<i>Double Nickel 55</i> (kg/acre)	
Potato	White mould (<i>Sclerotinia sclerotiorum</i>)	0.4 to 2 L	0.08 to 0.4 kg	Begin preventative foliar application when conditions are favorable for disease development. Repeat application every 3 to 10 days if the favorable conditions for disease development persist. Apply when disease pressure is low or newly emerged plants.
	White mould (<i>Sclerotinia sclerotiorum</i>)	2 to 5* L	0.4 to 1* kg	Use higher rate (*) when disease pressure is moderate to high or when environmental conditions or plant stage is conducive to rapid disease development
	Early blight (<i>Alternaria solani</i>)	1 to 4 L	0.2 to 0.8 kg	Begin foliar application on onset of crop cover to formation of tuber. Repeat application every 3 to 10 days if the favorable conditions for disease development persist.
	Black scurf (<i>Rhizoctonia solani</i>)	0.4 to 2 L	0.08 to 0.4 kg	Apply in soil at the time of planting, following the instructions for Banded/in-furrow application
Soybean	White mould (<i>Sclerotinia sclerotiorum</i>)	1 to 4 L	0.2 to 0.8 kg	Begin foliar application from early flowering to pod set. Repeat application every 3 to 10 days if the favorable conditions for disease development persist.

Crop	Diseases Controlled	Application Rates		Application Timing
		<i>Double Nickel LC</i> (L/acre)	<i>Double Nickel 55</i> (kg/acre)	
Hemp	Suppression of white mold (<i>Sclerotinia sclerotiorum</i>), grey mold (<i>Botrytis cinerea</i>)	1 to 2 L	0.2 to 0.4 kg	Growth stage: From planting/ transplanting until maturity and harvest. Begin applications preventatively when conditions are favorable for onset of disease. Ensure full spray coverage. White mold: Repeat application every 3 to 14 days for as long as conditions favor disease development. Grey mold: Repeat application every 3 to 11 days for as long as conditions favor disease development. Under moderate to high disease pressure, or when environmental conditions and plant stage are conducive to rapid disease development, use higher label rates (2.02 L/ac), or apply more frequently (every 3 to 7 days). Lower rates (1.01 L/ac) may be applied under low disease pressure or to smaller (e.g. newly-emerged or transplanted plants and cuttings).

Application Information:

- **Foliar:** Mix in sufficient volume of water to achieve thorough coverage of the crop canopy with minimal runoff.
- **For control of early blight, black scurf in potato and white mould in soybean:** Apply lower rate under low disease pressure or to smaller, newly emerged plants. Higher rates may be applied when disease pressure is moderate to high or when environmental conditions and plant stage are conducive to rapid disease development. Apply more frequently (3 to 7 days) or rotate with other fungicides for improved performance.
- **Soil application:** Apply by banded/in-furrow application. Mix the required amount of product in water and apply as banded spray (10 to 15 cm wide) or seedrow drench centered over the furrow. Apply directly over the seeds in the furrow just before seeds are covered with soil. Refer to the product labels for the table with application rates for different row spacing's.

How it Works:

The active ingredient, *Bacillus amyloliquefaciens* strain D747, is a beneficial bacterium with broad spectrum activity. *B. amyloliquefaciens* colonizes the plant surfaces preventing establishment of disease-causing fungi and bacteria.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** Can be applied every 3 to 10 days as long as conditions favor disease development.
- **Grazing:** No restrictions listed.
- **Pre-harvest Interval:**
 - *Hemp* – 3 to 4 weeks
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 4 hours of application.
- **Re-cropping:** No restrictions listed.
- **Storage:** Store in original container away from children and direct sunlight, at 4 to 25°C for up to two years. DO NOT contaminate feed/food.
- **Environment:** To reduce runoff into aquatic habitats, avoid application when heavy rain in forecast. Runoff can also be reduced by including a vegetative strip between the treated area and edge of water body.

Hazard Rating:

Possible eye irritant and may cause sensitization.

Dyax

Fungicide Group
7, 11

Company:

BASF Canada (PCP#32746)

Formulation:

250 g/L of fluxapyroxad and 250 g/L of pyraclostrobin formulated as a suspension concentrate.

- Container size – 2 x 9.6 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate* (per acre)	Application Timing
Chickpea	Control of ascochyta blight (<i>Ascochyta rabiei</i>) Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)	160 mL	Apply at the onset of symptoms and prior to row closure at the beginning of flower. DO NOT make sequential applications of <i>Dyax</i> .
Lentil	Control of anthracnose (<i>Colletotrichum truncatum</i>) and ascochyta blight (<i>Ascochyta lentis</i>) Suppression of white mold (<i>Sclerotinia sclerotiorum</i>)	120 to 160 mL/acre	Apply at the onset of symptoms and prior to row closure at the beginning of flower.
Faba bean	Ascochyta blight suppression (<i>Ascochyta</i> spp.), white mold suppression (<i>Sclerotinia sclerotiorum</i>)	120 to 160 mL	Apply at the beginning of flowering or at the onset of symptoms.
Field pea	Control of <i>Mycosphaerella</i> blight (<i>Mycosphaerella pinodes</i>), powdery mildew (<i>Erysiphe pisi</i> ; high rate only), ascochyta blight (<i>Ascochyta pinodes</i>), white mold suppression (<i>Sclerotinia sclerotiorum</i>)	120 to 160 mL/acre	Apply at the onset of symptoms and prior to row closure at the beginning of flower.
Dry bean	Control of anthracnose (<i>Colletotrichum lindemuthianum</i>), powdery mildew (<i>Erysiphe</i> spp.) and rust (<i>Uromyces appendiculatus</i>)	160 mL	Apply at the beginning of flowering.
	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)	240 mL to 320 mL	
Soybean	Suppression of septoria brown spot (<i>Septoria glycines</i>), frog-eye leaf spot (<i>Cercospora sojina</i>), white mould (<i>Sclerotinia sclerotiorum</i>)	120 to 160 mL/acre	Apply prior to disease development when conditions are favourable for disease development.
Canola	Control of Blackleg (<i>Leptosphaeria maculans</i>); Suppression of <i>Sclerotinia</i> stem rot (<i>Sclerotinia sclerotiorum</i>) and <i>Alternaria</i> black spot (<i>Alternaria brassicae</i> and <i>A. raphani</i>)	120 to 160 mL/acre	Apply <i>Dyax</i> at 20-50% flowering to suppress <i>Sclerotinia</i> stem rot and <i>Alternaria</i> black spot. If disease persists or weather conditions are favourable for disease development, make a second application 10 to 14 days later with a fungicide that contains a different mode of action. Apply <i>Dyax</i> at late flowering to early green pod to suppress black spot. Use the high rate under high disease pressure.
Flax	Control of Pasm (<i>Septoria linicola</i>) Suppression of <i>Sclerotinia</i> stem rot (<i>Sclerotinia sclerotiorum</i>)	120 to 160 mL/acre	Apply <i>Dyax</i> at 20-50% flowering to control pasmo and suppress <i>Sclerotinia</i> stem rot.
Sunflower	Suppression of Leaf rust (<i>Puccinia helianthi</i>)	160 mL/acre	Apply <i>Dyax</i> at first sign of disease to suppress leaf rust.

Crop	Diseases	Application Rate* (per acre)	Application Timing
Alfalfa for seed production	Control of Common leaf spot (<i>Pseudopeziza medicaginis</i> ; high rate only) Suppression of Blossom blight (<i>Sclerotinia sclerotiorum</i>)	120 to 160 mL/acre	For optimal disease control, apply <i>Dyax</i> at the beginning of flowering (10-30% bloom) or at the onset of disease. DO NOT make more than 1 application per year

DO NOT make sequential applications of *Dyax*. If disease persists or weather conditions are favourable for disease development, make a second application 10 to 14 days later, with a fungicide that contains a different mode of action. Use the shorter interval when disease pressure is high.

Application Information:

- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - **Aerial:** minimum 20 L per acre.

How it Works:

The active ingredient fluxapyroxad is a carboxamide (SDHI) fungicide with system activity. The active ingredient pyraclostrobin is a strobilurin fungicide with broad spectrum contact and systemic activity. To be used as a preventative application when environmental conditions are favourable for disease development. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 1 sequential application of this product per season with a maximum of two total applications per season.
- **Grazing:** All crops on this label can be grazed or fed to livestock. Observe the minimum pre-harvest intervals for each crop.
- **Preharvest interval:**
 - *Field pea, lentil, chickpea, faba bean, dry bean* – 30 days
 - *Soybean* – 21 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** Crops listed on label, tuberous and corm vegetables, fruiting vegetables, pome fruits and stone fruits may be planted immediately following last application. A plant-back interval of one year is required for all other crops.
- **Storage:** Store this product away from food or feed.
- **Environment:** Maintain specified buffer zones. Toxic to aquatic organisms, small mammals, and non-target terrestrial plants.

Hazard Rating:



Danger Poison – Skin Irritant

Refer to the Introduction for an explanation of the symbols.

Elatus

Fungicide Group
7, 11

Company:

Syngenta Canada

Formulations:

The Elatus package has 2 components:

- *Elatus A Fungicide* (PCP #31973): 250 g/L azoxystrobin, formulated as a suspension
- *Elatus B Fungicide* (PCP #31977): 100 g/L benzovindiflupyr, formulated as an emulsifiable concentrate

Crops, Diseases, Rates and Timing:

Crop	Diseases	Rate <i>Elatus A</i>	Rate <i>Elatus B</i>	Application Timing
Chickpea	Ascochyta blight (<i>Ascochyta</i> spp.), anthracnose (<i>Colletotrichum</i> spp.) Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)	200 mL/acre	200 to 300 mL/acre	In pulse crops, the first application must be applied before disease is established and no later than the onset of flowering. A second application can be made 10 to 14 days later, if disease pressure is severe or conditions are conducive to disease development.
Dry bean including faba bean	Ascochyta blight (<i>Ascochyta</i> spp.), anthracnose (<i>Colletotrichum</i> spp.) Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)			
Field pea	Ascochyta blight (<i>Ascochyta</i> spp.), anthracnose (<i>Colletotrichum</i> spp.), mycosphaerella blight (<i>Mycosphaerella pinodes</i>), powdery mildew (<i>Microsphaera diffusa</i> , <i>Erysiphe pisi</i> , <i>E. polygoni</i>) Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)			
Lentil	Ascochyta blight (<i>Ascochyta</i> spp.), anthracnose (<i>Colletotrichum</i> spp.) Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)			
Potato	Control of silver scurf (<i>Helminthosporium solani</i>), rhizoctonia stem canker and rhizoctonia stolon canker (<i>Rhizoctonia</i> spp.), black scurf (<i>Rhizoctonia solani</i>)	4 to 6 mL/100 m row	200 to 300 mL/acre	Apply once as an in furrow spray in 20 to 55 L/acre of water at planting. Mount the spray nozzle so the spray is directed into the furrow as a 15 to 20 cm band just before the seed is covered. DO NOT apply by air.
	Suppression of verticillium wilt (<i>Verticillium dahlia</i>)	-	300 mL/acre	
Soybean	Control of cercospora leaf spot (<i>Cercospora kikuchii</i>), powdery mildew (<i>Microsphaera diffusa</i> , <i>Erysiphe pisi</i> , <i>E. polygoni</i>), septoria brown spot (<i>Septoria glycines</i>) Suppression of pod and stem blight (<i>Diaporthe phaseolorum</i>)	200 mL/acre	200 to 300 mL/acre	Make first application at the R1 to R3 developmental stage or when there is a 5% disease level in the field. A second application may be made 14 days later, if conditions are conducive to disease development.

As of January 1, 2021, www.keepingitclean.ca indicates that grain from pulse crops treated with this product may have market access concerns. Refer to "Understanding Maximum Residue Limit Statements in the Guide" in the introduction for more information AND consult potential grain buyers before using this product.

Application Information:

- If disease pressure is high, use the highest rate and shortest application interval. For best results, use sufficient water volume to provide thorough coverage.
- **Ground:** minimum of 40 to 80 L per acre water volume is recommended.
- **Aerial:** minimum of 18 L per acre water volume is recommended.
- Use sufficient water to obtain thorough coverage of plants. DO NOT apply under periods of dead calm. Avoid application of this product when winds are gusty.

How it Works:

The active ingredient azoxystrobin is a methoxyacrylate compound (strobilurin) broad spectrum contact and systemic activity with preventative and curative applications. The active ingredient benzovindiflupyr is a succinate dehydrogenase inhibitor (SDHI) fungicide with broad spectrum activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

The Elatus package has 2 components. Add *Elatus A* (SC) and any additional SC formulation mix partners prior to adding *Elatus B* (EC) and any additional EC formulation mix partners.

It is not recommended to combine solid (WG or DF) formulations with liquid tank mix partners within a single batch. Batch mix any WG or DF formulation mix partners before *Elatus A* (SC) and any additional SC formulation mix partners. Any SN or SL formulation mix partners should be added by induction or an additional batch mix after the EC (*Elatus B*) and any additional EC formulation mix partners.

Restrictions:

Note that Elatus contains 2 components with separate labels. Follow the most restrictive precautions, restrictions, and directions found on each of the *Elatus A* and *Elatus B* labels.

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT apply consecutive applications and DO NOT apply more than 2 applications per season.
- **Grazing:** DO NOT feed dried pea vines to livestock.
- **Preharvest interval:** DO NOT apply on pulse crops within 15 days of harvest. DO NOT apply on soybean within 14 days of harvest.
- **Restricted Entry Interval:** DO NOT re-enter fields for 12 hours after application.
- **Re-cropping:** Potatoes, pulse crops (including dried pea and bean subgroup), soybean, fruiting and cucurbit vegetables, cereals (wheat, barley, oat, rye, triticale), corn, and rapeseed (including canola, mustard, flax, and borage) may be planted immediately after last application as long as they are also registered for use with azoxystrobin products. All other crops intended for food and feed may be planted 180 days after last application of *Elatus*.
- **Storage:** Store product in original container only, away from other pesticides, fertilizer, food or feed. Not for use or storage in or around the home. Keep container closed. To prevent contamination, store this product away from food or feed.
- **Environment:** DO NOT use to control aquatic pests. *Elatus A* is extremely phytotoxic to certain apple varieties. DO NOT use where spray drift may reach apple trees.

Hazard Rating:



Warning Poison – Corrosive to Eyes and Skin

Refer to the Introduction for an explanation of the symbols.

Elatus Era

Fungicide Group
3, 7

Company:

Syngenta Canada Inc. [Elatus Era – PCP # 35477 (Elatus Era A) /35474 (Elatus Era B)]

Formulation

Elatus Era is a co- pack of Elatus Era A and Elatus Era B. Elatus Era A (100 g/L Benzovindiflupyr formulated as emulsifiable concentrate), Elatus Era B (250 g/L Prothioconazole formulated as emulsifiable concentrate), container size: Case of 10.12L Elatus Era A and 9.6L Elatus Era B.

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Chickpeas	Control of Ascochyta Blight (<i>Ascochyta rabiei</i>) Anthracnose (<i>Colletotrichum</i> spp.)	A: 0.253L/ac B: 0.24L/ac	Apply at the first sign of disease. After the initial application, a repeat application may be made 10-14 day later.
Lentils	Control of Ascochyta Blight (<i>Ascochyta</i> spp.) White mold (<i>Sclerotinia sclerotiorum</i>) Anthracnose (<i>Colletotrichum</i> spp.)	A: 0.253L/ac, B: 0.24L/ac	Apply at the beginning of flowering or at first sign of disease. After the initial app, one additional app may be made 10-14 days afterwards if conditions remain favourable for continued or increased disease development.
Field Peas	Control of Ascochyta Blight (<i>Ascochyta</i> spp.) White mold (<i>Sclerotinia sclerotiorum</i>)	A: 0.253L/ac B: 0.24L/ac	Apply at the beginning of flowering or at first sign of disease. After the initial app, one additional app may be made 10-14 days afterwards if conditions remain favourable for continued or increased disease development
Soybean	Control of Septoria brown spot (<i>Septoria glycines</i>) Frog eye leaf spot (<i>Cercospora sojina</i>)	A: 0.253L/ac B: 0.24L/ac	Make one application prior to disease establishment.

Application information

- **Water Volume:**
 - **Ground:** Minimum water volume 40-80 L/acre
 - **Air:** Minimum water volume 18 L/acre

How it Works

The active ingredient benzovindiflupyr is a succinate dehydrogenase inhibitor (SDHI) fungicide with broad spectrum activity. The active ingredient prothioconazole is a triazole fungicide with broad-spectrum systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabeled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Maximum number of applications:** Lentils, field peas, chickpeas: 2 applications, Soybeans: 1 application
- **Rainfall:** Avoid application when heavy rain is in forecast.
- **Rainfast:** 2 hours
- **Pre-harvest Intervals:** 15 days for chickpeas, field peas and Lentils. 20 days for soybeans.
- **Re-entry:** 24 hours
- **Grazing:** Please see and carefully follow the product labels for grazing precautions.

- **Re-cropping interval:** 0 days: Dried shelled pea and bean subgroup (CG 6C); 30 days: Potatoes, cereals (wheat, barley, oats, rye, triticale), Grasses grown for seed, corn, Rapeseed subgroup CG 20A.
- **Storage:** Elatus Era A: 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. Elatus Era B: Store this product away from food or feed. Keep away from fire or open flame or other sources of heat. Do not store at temperatures below freezing. If stored for 1 year or longer, shake well before using. Store the tightly closed container away from feeds, seeds, plants and foodstuffs. Do not use or store in or around the home. Keep in original container during storage.
- **Environment:** TOXIC to aquatic organisms and non-target terrestrial plants. Carefully follow the labels for buffer zones. 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 because of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Hazard Rating:



Elatus Era A: Poison, Danger: Corrosive to eyes and skin.

Elatus Era B: Caution – Poison; Potential Skin Sensitizer.

Evito 480

Fungicide Group
11

Company:

UPL AgroSolutions Canada Inc. (PCP#30408)

Formulation:

480 g/L fluoxastrobin formulated as a suspension.

- Container size – 4.8 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Wheat	Control of leaf rust (<i>Puccinia triticina</i> , <i>P. hordei</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), stripe rust (<i>Puccinia striiformis</i>), stem rust (<i>Puccinia graminis</i>) Suppression of septoria leaf blotch (<i>Septoria tritici</i>)	59 to 118 mL	Apply preventively and repeat if needed after a 14 to 21 day interval. Use the higher rates and shorter interval when disease pressure is high. Apply prior to disease development from Feekes 5 (Zadok's 30) up to late head emergence at Feekes 10.5 (Zadok's 59).
	Powdery mildew (<i>Erysiphe graminis</i>)	74 to 118 mL	
Barley, Rye, Triticale	Leaf rust (<i>Puccinia triticina</i> , <i>P. hordei</i>), stripe rust (<i>Puccinia striiformis</i>), stem rust (<i>Puccinia graminis</i>), net blotch (<i>Pyrenophora teres</i>)	59 to 118 mL	Apply preventively and repeat if needed after a 14 to 21 day interval. Use the higher rates and shorter interval when disease pressure is high. Apply prior to disease development from Feekes 5 (Zadok's 30) up to late head emergence at Feekes 10.5 (Zadok's 59).
	Powdery mildew (<i>Erysiphe graminis</i>)	74 to 118 mL	
Oat	Crown rust (<i>Puccinia coronata</i>) (suppression), stem rust (<i>Puccinia graminis</i>), septoria leaf blotch (<i>Septoria avenae</i>) (suppression)	59 to 118 mL	Apply preventively and repeat if needed after a 14 to 21 day interval. Use the higher rates and shorter interval when disease pressure is high.
Corn	Common rust, (<i>Puccinia sorghi</i>), grey leaf spot (<i>Cercospora maydis</i>) Suppression of northern corn leaf blight (<i>Setosphaeria turcica</i> ; anamorph: <i>Exserohilum turcicum</i>)	59 to 120 mL	Apply preventatively and repeat if needed after 7 to 10 day intervals. Use higher rates and shorter intervals when disease pressure is high.

Crop	Diseases	Application Rate (per acre)	Application Timing
Canola , borage, flax (seed), camelina, and mustard (seed)	Suppression of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	59 to 118 mL	Apply preventatively at 20% to 50% bloom stage. For optimum results apply prior to petal drop. Follow up with a second application as needed on a 7 to 14 day interval. Use higher rates and shorter interval when disease pressure is high.
Soybean	Control of frogeye leaf spot (<i>Cercospora sojina</i>)	59 to 120 mL	Apply preventatively and repeat if needed after a 14 to 21 day interval. Use the higher rate and shorter interval when disease pressure is high.
Potato*	Control of late blight (<i>Phytophthora infestans</i>) and black dot (<i>Colletotrichum coccodes</i>) Suppression of early blight	112 mL	Apply preventatively and repeat on a 7 day interval. If disease symptoms develop, switch to a fungicide with a different mode of action.
	Black scurf (<i>Rhizoctonia solani</i>)	1.55 to 2.33 mL product/ 100 m row	Apply as an in-furrow application or banded application shortly after plant emergence, during herbicide application or cultivation.*
	Silver scurf (<i>Helminthosporium solani</i>)	2.33 mL product/ 100 m row	Apply as an in-furrow application or banded application shortly after plant emergence, during herbicide application or cultivation.*

*Consult with product label before application.

Application Information:

- **Water Volume:**
 - **Ground:** Apply in a minimum of 40 L of water per acre.
 - **Aerial:** Apply in a minimum of 20 L of water per acre.

How it Works:

The active ingredient fluoxastrobin is a systemic fungicide that works by interfering with respiration in plant pathogenic fungi, and is a potent inhibitor of spore germination and mycelial growth. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

All Cereals: propiconazole.

- **Wheat, barley and oat:** tebuconazole, *Caramba*, *Proline 480 SC*, *Prosaro 250 EC*.

Corn: propiconazole (field, seed, sweet), chlorothalonil (sweet corn only).

Soybean: propiconazole, tebuconazole

Potatoes: MUST be tank mixed with chlorothalonil, mancozeb.

Refer to tank mix partner labels for use in directions, restrictions and precautions.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - **Wheat, barley, corn, oat, rye, triticale, canola, soybean** – 2 applications per year
 - **Potatoes** – 3 applications per year
- **Grazing:** DO NOT apply within 7 days of harvest for hay and forage. If wheat forage will be harvested, make only one application.
- **Preharvest interval:**
 - **All cereals** – 40 days
 - **Canola** – 21 days
 - **Potatoes** – 7 days
 - **Corn** – 30 days (grain) or 7 days (sweet)
 - **Soybean** – DO NOT apply later than R6 (full seed)
- **Re-cropping:**
 - All crops on the *Evito 480* label (cereals, corn, canola, potato, soybean, dry bean, field pea, faba bean, chickpea, lentil) may be planted immediately following harvest.
 - Alfalfa and forage grasses may be planted following a 30 days plant back interval.
 - Sunflower may be planted following a 180 days plant back interval.
 - For all other crops, DO NOT plant back within one year of the last field application.

- **Storage:** Store in cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, or feed. Store in original container and out of reach of children, preferably in a locked storage area. *Evito 480* is not affected by freezing.
- **Environment:** Toxic to aquatic organisms. Observe buffer zones as specified on the label. To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Hazard Rating:

Potential Skin Sensitizer

Fluazinam

Fungicide Group
29

Allegro 500F, Downforce AG, Vantana

Company:

Syngenta Canada – *Allegro 500F* (PCP#27517)

Sipcam Canada – *Downforce AG* (PCP#34723)

ADAMA Canada – *Vantana* (PCP#35050)

Formulation:

Allegro 500F and *Downforce AG* – 40% Fluazinam formulated as suspension.

- Container size – 2 x 10 L

Vantana – 500 g/L Fluazinam formulated as suspension.

- Container size – 2 x 10 L jugs

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Potato	Late blight (<i>Phytophthora infestans</i>)	160 mL	Begin applications when plants are 15 to 20 cm tall or when conditions favour disease development. Repeat application at 7 to 10 day intervals.
	Sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	160 to 240 mL	Begin applications at full bloom. Repeat application intervals of 7 to 10 days. When white mould pressure is low to moderate, use 160 mL. When conditions favour moderate to high white mould pressure, increase the rate to 240 mL.
Dry bean	White mould (<i>Sclerotinia sclerotiorum</i>), Anthracnose (<i>Colletotrichum lindemuthianum</i>)	240 to 405 mL	For control of white mold make the first application at 10 to 30% bloom (e.g. when 10 to 30% of the plants have at least one (1) open bloom). If needed, a second application may be applied 7 to 10 days later. For control of Anthracnose make first application at 10-30% bloom (e.g. when 10 to 30% of the plants have at least (1) open bloom). If needed, a second application may be applied 10 to 14 days later. Under conditions favorable for severe disease development use the higher rate.
Soybean	White mould (<i>Sclerotinia sclerotiorum</i>)	180 to 470 mL	For suppression of white mould use 180 mL rate. For control of white mould use 355 to 470 mL rate. Begin application at the R1 (early bloom) to R2 (full bloom) stage of development and if needed, again 10 to 14 days later at early pod formation (R3). As a preventative spray or with conditions favoring low disease pressure, use the low rate. For conditions favoring moderate to high disease development, use high rate.

Application Information:

- **Water Volume:**
 - **Ground:** 80 to 240 L per acre. Spray volumes vary with amount of plant growth; apply in sufficient water to obtain adequate coverage of foliage.
 - **Aerial:** For potatoes, soybean and dry bean minimum of 18 L per acre.

How it Works:

The active ingredient fluazinam is a pyridinamine fungicide with contact activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - **Bean and soybean** – DO NOT exceed 2 applications of this product per season. DO NOT apply more than the maximum seasonal use rate of 809 mL (for bean) and 947 mL (for soybean) per acre during each growing season.
 - **Potato** – Make no more than 3 sequential applications of this product before alternating to another fungicide belonging to a different chemical family. DO NOT apply more than the maximum use rate of 1619 mL per acre during each growing season.
- **Grazing:** For soybean, DO NOT allow livestock to graze treated areas. DO NOT feed hay from treated fields to livestock.
- **Preharvest interval:** 14 days (potatoes); 30 days (dry bean). DO NOT apply after growth stage R3, early pod formation in soybean.
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 24 hours of application.
- **Re-cropping:** Can be replanted with potatoes as soon as practical after the last application, 30 days for other root crops and leafy vegetables, and 70 days for all other crops. Fluazinam will carry over, DO NOT use in areas treated with this product during the previous season.
- **Storage:** Store product in a dry place separate from other pesticides, fertilizer, food, and feed.
- **Environment:** DO NOT contaminate aquatic habitats when cleaning and rinsing spray equipment or containers. DO NOT overspray non-target terrestrial or aquatic habitats.
- **Rainfall:** Avoid application when heavy rain is forecast.

Hazard Rating:



Caution – Poison



Warning – Skin Irritant
Potential Skin Sensitizer

Refer to the Introduction for an explanation of the symbols.

Fontelis

Fungicide Group

7

Company:

Corteva Agriscience (PCP#30331)

Formulation:

200 g/L penthiopyrad formulated as a suspension.

- Container size – 2 x 9.6 L jug

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Alfalfa	Sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	500 to 700 mL	Begin applications prior to disease development and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high.

Application Information:

- **Water Volume:**
 - **Ground:** 45 L per acre.
 - **Aerial:** 16 L per acre.
- Use sufficient water to obtain thorough coverage of plants. DO NOT apply under periods of dead calm. Avoid application of this product when winds are gusty.

How it Works:

The active ingredient penthiopyrad is a carboxamide fungicide with broad spectrum, locally systemic and curative properties recommended for foliar and soil borne plant diseases. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed two sequential applications of this product before switching to a fungicide with a different mode of action. DO NOT exceed 1.4 L per acre in one season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** 14 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas until 12 hours after application.
- **Re-cropping:** Crops and crop groups on the *Fontelis* label as well as the following crops may be planted immediately after harvest: canola, cereal grains crop group, corn, cotton, legume vegetables crop subgroup, soybean, sugarbeet, tuberous and corn vegetables and leaves crop subgroup. All other crops cannot be planted until 12 months after the last application.
- **Storage:** Store product in original container only, away from other pesticides, fertilizer, food or feed. Not for use or storage in or around the home. Keep container closed.
- **Environment:** This product is toxic to aquatic organisms. When using *Fontelis*, consult the product label for buffer zones.

Hazard Rating:

Potential Skin Sensitizer

Forum

Fungicide Group
40

Company:

BASF Canada (PCP#32026)

Formulation:

500 g/L of dimethomorph formulated as a suspension concentrate.

- Container size – 2 x 4.5 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Potato	Late blight (<i>Phytophthora infestans</i>)	182 mL	Make the first application when disease threatens or when visible signs of disease occur in nearby fields. Apply every 5 to 7 days under high pressure or every 7 to 10 days under low pressure. A minimum interval of 5 days between applications is required.
	Tuber blight (<i>Phytophthora infestans</i>)	182 mL	Apply after first desiccation to target stem lesions to reduce tuber blight.

Application Information:

- **Water Volume:**
 - **Ground:** Use a minimum water volume of 20 L per acre.
 - **Aerial:** Use a minimum water volume of 80 L per acre.

How it Works:

The active ingredient dimethomorph is a carboxylic acid amide fungicide with contact, systemic and antispore activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

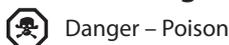
Fungicides: For resistance management and early blight control (*Alternaria solani*), *Forum* must be tank-mixed with one of *Dithane DG Rainshield* or *Bravo* at the product label rate.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 3 applications.
- **Preharvest interval:**
 - **Potatoes** – 4 days

- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** DO NOT plant a new crop in the treated area within 120 days of the last application.
- **Storage:** Store under cool and dry conditions in secure, well-ventilated buildings, away from foodstuffs and animal feed and out of reach of children.
- **Environment:** Toxic to aquatic organisms and mammals. Observe buffer zones outlined in the label.

Hazard Rating:



Danger – Poison

Refer to the Introduction for an explanation of the symbols.

Fullback 125SC

Fungicide Group
3

Company:

FMC of Canada Ltd. (PCP#31679)

Distributed by: Belchim Crop Protection Canada

Formulation:

Flutriafol 125.08 g/L formulated as a suspension concentrate.

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Soybean	Cercospora blight and leaf spot (<i>Cercospora kikuchii</i>), brown spot (<i>Septoria glycines</i>), frog-eye leaf spot (<i>Cercospora sojina</i>)	207 to 414 mL	Apply as a broadcast foliar spray to soybean plants in R3 growth stage (early pod fill) or when environmental conditions are favourable for disease development. Apply second application if conditions are conducive for heavy disease development. Use the higher rate and shorter spray interval under severe sustained disease pressure. Spray Interval 14 to 21 days.

Application Information:

- **Water Volume:** minimum 40 L per acre.
- **ASABE medium** droplets. Boom height must be 60 cm or less above the crop.
- DO NOT apply by air

How it Works:

Flutriafol is a demethylation inhibitor with contact and systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Fullback 125SC may be tank mixed with *Headline EC Fungicide* at the label rates for resistance management. If compatibility is in question, use the compatibility jar test before mixing the entire tank.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Rainfall:** Within 2 hours may reduce effectiveness.
- **Maximum number of applications:** DO NOT apply more than 828 mL per acre per season. DO NOT apply more than 3 applications per growing season. Only one application at 414 mL per acre may be made to any one field during a single growing season. Apply only to soybean harvested for dry seed. Flutriafol is persistent and may carryover. It is recommended that any products containing flutriafol not be used in areas treated with this product during the previous season.
- **Grazing:** DO NOT feed forage or hay to animals or permit animals to graze.
- **Preharvest interval:** DO NOT apply within 21 days of harvest.
- **Restricted Entry Interval:** 12 hours.
- **Re-cropping:** Labeled crops may be planted anytime. Field corn, popcorn may be planted 150 days after application and sweet corn may be planted 200 days after application. All other unlabeled crops may be planted 365 days after application.
- **Storage:** Store unused product in original container in a cool, dry area. DO NOT contaminate water, food or feed by storage, disposal or cleaning of equipment. Shelf life of *Fullback 125 SC* is 3 years.

- **Environment:** DO NOT apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. See label for more information on ground water contamination and surface water advisory. Avoid application when heavy rain is forecast. Toxic to aquatic organisms and non-target terrestrial plants. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Hazard Rating:

Potential Skin Sensitizer

Keep out of reach of children and prevent access by unauthorized personnel.

Gavel DF Fungicide

Fungicide Group
22, M3

Company:

Gowan Canada (PCP#26842)

Formulation:

66.7% mancozeb and 8.3% zoxamide formulated as a dry flowable.

- Container size – 13.6 kg

Crops, Diseases Timing:

Control of early blight (*Alternaria solani*) and late blight (*Phytophthora infestans*) in potato. Optimum disease control is achieved when the fungicide is applied in a regularly scheduled preventative spray program. Begin applications at the first sign of disease or when blight is reported in the area. Apply at 0.90 kg per acre (2.25 kg/ha) every 7 days under high disease pressure when either disease is present or environmental conditions favour continued disease development.

Apply at 0.70 kg per acre (1.7 kg/ha) every 7 days under low disease pressure and environmental conditions unfavorable for disease development.

Rate:

Apply at 0.70 to 0.90 kg per acre (1.7 to 2.25 kg/ha).

Application Information:

- Thorough, uniform coverage is essential for good disease control.
- **Water Volume:**
 - **Ground:** 18 to 36 L per acre (45 to 90 L/ha). Use 36 L of water per acre under high disease pressure to provide better crop coverage.
 - **Aerial:** 18 to 36 L per acre. Use 36 L of water per acre under high disease pressure to provide better crop coverage.

How it Works:

To be used as a preventative fungicide application. The active ingredient zoxamide is a benzamide fungicide with contact activity. The mancozeb component is a dithiocarbamate fungicide with contact activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

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 the label. In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Gowan Company at 1-800-960-4318 or information before applying any tank mix that is not specifically recommended on the label.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 6 applications of this product per season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** 3 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** A 30 day plant back interval (PBI) is required for leafy vegetables and root and tuber vegetables. For all other crops not included on the label, the PBI should be 140 days.

- **Storage:** DO NOT allow product to freeze. Keep away from fire and sparks. Store in a cool, dry, well ventilated place away from feed or food.
- **Ground application:** This pesticide is toxic to aquatic organisms. A buffer zone of up to 5 m for application by ground sprayer should be established between the last spray swath and the edge of aquatic systems. Follow product label for further instructions.
- **Aerial application:** A buffer zone of up to 350 m is required between the downwind edge of the boom and the closest edge of sensitive aquatic habitats, follow product label for further instructions.

Hazard Rating:

 Caution Poison – Potential Skin Sensitizer

 Warning – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Gauntlet

Fungicide Group
3, 11

Company:

Nufarm Agriculture (PCP# 35045)

Formulation:

150 g/L Azoxystrobin and 150 g/L Prothioconazole formulated as suspension concentrate

- Container size: 10L, 108L

Crops, Diseases, Rates and Timing:

Crop	Disease	Rate per acre	Crop stage and other timing information
Canola	Suppression of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	400 mL	Apply when the crop is in the early bloom stage (10-50% bloom)
	Alternaria black spot (<i>Alternaria brassicae</i> , <i>Alternaria raphanin</i>)		Apply when the crop is at the pod (90% petal fall) stage
Lentil	Ascochyta blight (<i>Ascochyta lentis</i>), White mold (<i>Sclerotinia sclerotiorum</i>), <i>Mycosphaerella</i> blight (<i>Mycosphaerella pinodes</i>), Anthracnose (<i>Colletotrichum</i> spp.)	337 mL	Apply at the beginning of flowering or at the first sign of disease. After the initial application, one additional application may be made 10-14 days afterwards if conditions remain favourable for increased disease development. Maximum of two applications per year.
Field Peas	Control of Anthracnose (<i>Colletotrichum</i> spp.) and suppression of Ascochyta blight (<i>Ascochyta pisi</i>), <i>Mycosphaerella</i> blight (<i>Mycosphaerella pinodes</i>), White mold (<i>Sclerotinia sclerotiorum</i>)	337 mL	Apply at the first sign of disease. After the initial application, one additional application may be made 10-14 days afterwards if conditions remain favourable for continued or increased disease development. Apply the higher rate when conditions favour disease development, or when growing less disease resistant varieties. Maximum of two applications per year.

Application information

- Water Volume:
 - Ground: Minimum water volume 40 L/acre
 - Air: Minimum water volume 60 L/acre

How it Works

The active ingredient Prothioconazole is a triazole fungicide with broad-spectrum systemic activity. The active ingredient azoxystrobin is a methoxyacrylate compound (strobilurin) with broad spectrum contact and systemic activity with preventative and curative applications. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- Maximum number of applications: Two
- Rainfall: Avoid application when heavy rain is in forecast.
- Pre-harvest Intervals: Lentils: 15 days. Canola: 36 days
- Re-entry: 24 hours
- Grazing: None specific.
- Re-cropping interval: Treated areas may be replanted with any crop specified on the label as soon as practical after the last application. For crops not listed on this label, do not plant back within 30 days of last application.
- Storage: Do not store at temperatures below freezing. Shake well before using if stored for greater than 1 year.
- Environment: Gauntlet is toxic to aquatic organisms. Observe spray buffer zones specified on label. Do not contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes. Avoid application to areas where ground runoff is likely to occur. The use of this product may result in contamination of groundwater, particularly in areas where soils are permeable (e.g. sandy soil) and/or the depth to the water table is shallow.

Hazard Rating:

Poison

Kenja 400SC

Fungicide Group

7

Company:

ISK Biosciences Corporation, distributed by Belchim Crop Protection Canada (PCP#31758)

Formulation:

400 g/L isofetamid formulated as a suspension

- Container size – 4 x 4L

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Dry bean, faba bean, chickpea, lentil, field pea	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)	0.51 L	Apply at flowering prior to disease development. Can apply a subsequent application 7 to 14 days if disease risk is high and environmental conditions are conducive for disease development. DO NOT apply more than 2 applications of <i>Kenja 400 SC</i> per season.

Application Information:

- Thorough, uniform coverage is essential for good disease control.
- **Water Volume:**
 - **Ground:** minimum 20 L per acre.

How it Works:

The active ingredient isofetamid is a carboxamide (SDHI) fungicide with system activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 2 applications of *Kenja 400 SC* per season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** 30 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 24 hours of application.

- **Re-cropping:** No restrictions listed.
- **Storage:** Store in a dry, secure place.
- **Environment:** Toxic to birds, small wild animals and aquatic organisms. Avoid application to areas with a moderate to steep slope, compacted soil or clay to reduce runoff. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body. Follow buffer zones as per the product label.

Hazard Rating:

None listed.

LALSTOP Contans WG

Fungicide Group
Not classified, bio-fungicide

Company:

UAP (PCP#29066)

Formulation:

Wettable Granules – 5.0% *Coniothyrium minitans* strain CON/M/91-08. Contains minimum of 1×10^9 cfu per gram.

- Container size – 20 kg

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Pre-plant – Soils where canola, sunflower, safflower, dry bean, alfalfa or soybean will be planted	White mould or sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>) and rots caused by <i>S. minor</i>	400 to 800 g	Prior to planting of spring crop; three months before the typical onset of sclerotinia stem rot or white mould. In fall, prior to spring planting of susceptible crop. After application to the soil, the product should be incorporated to within 5 cm of the topsoil. Incorporation should take place as soon as possible after application (within 1 week maximum).
		800 to 1600 g	If soil incorporation is to a depth greater than 5 cm, higher rate should be applied.
Postharvest – On harvest residue of susceptible crops		200 to 400 g	Prior to the next soil treatment, the residues of the susceptible crops in rotation can be also treated to help reduce inoculum loads of sclerotia in the field.

Application Information:

- Use sufficient water volumes to give thorough coverage of the soil surface and/or the crop residue (40 liters per acre of water volume).
- DO NOT allow spray mixture to stand overnight or for prolonged periods; should be used within 24 hours of being prepared.
- After incorporation, treated soils should not be disturbed to avoid bringing untreated sclerotia from lower soil depths to the topsoil layer.
- As part of an overall long-term pest management strategy, it is recommended to use other management practices along with *LALSTOP Contans WG* such as in season foliar fungicide applications and proper crop rotations.
- DO NOT apply by air.

How it Works:

The active ingredient, *Coniothyrium minitans*, is a fungus that infects the sclerotia of *Sclerotinia sclerotiorum* and *S. minor*. Infection of sclerotial bodies prevents production of ascospores and mycelial structures that infect plants. Regular use of *LALSTOP Contans WG* in successive years within a long-term management strategy will improve disease control.

Tank Mixes:

DO NOT tank-mix with fungicides or fertilizers. Also, DO NOT tank mix with acids, alkalines or any product that attacks organic materials. Contact UAP for more information on what products are compatible with *Contans WG*.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** No restrictions listed.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** Can be applied up to and including the day of harvest.
- **Restricted Entry Interval:** No restrictions listed.
- **Re-cropping:** No restrictions listed.
- **Storage:** Maximum storage period of one year at 4°C or below. Up to 6 weeks at temperatures between 4°C and 23°C. Store in a dry area inaccessible to children. Store in original container away from food or feed.
- **Environment:** DO NOT apply this product directly to freshwater habitats, estuarine/marine habitats. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Hazard Rating:



Caution – Potential Sensitizer

Refer to the Introduction for an explanation of the symbols.

Lance AG*

Fungicide Group
7, 11

*NOTE: This product is no longer manufactured but product still remains in the distribution system. This product may be removed from future editions.

Lance AG is a co-pack of Lance WDG and Headline EC. Due to the formulation of Lance AG, the range of diseases controlled by Lance AG are not the same as for the individual components. Please refer to the table below. For other detailed information on the component products, please see the product labels from Lance WDG and Headline EC.

Company:

BASF Canada (*Lance WDG Fungicide* – PCP#27495; *Headline EC* – PCP#27322)

Formulations:

Lance AG A Fungicide: 70% boscalid formulated as a water dispersible granular.

Lance AG B Fungicide: 250 g/L of pyraclostrobin formulated as an emulsifiable concentrate.

Case of 2 Split chambered jugs containing 3.3 L *Headline EC* (*Lance AG B*) and 3.5 kg *Lance WDG* (*Lance AG A*).

Crops, Diseases, Rates and Timing:

(Ground, Aerial, and Pivot or Sprinkler Irrigation Applications)

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Canola (including rapeseed), canola quality <i>B. juncea</i> and oilseed/condiment mustard	Control of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>) Suppression of alternaria black spot (<i>Alternaria brassicae</i> and <i>Alternaria raphani</i>)	132 mL/acre <i>Lance AG (B)</i> and 140 g/acre <i>Lance AG (A)</i> (one jug does 25 acres)	Apply at 20 to 50% flowering.
Field Pea	Control of ascochyta blight (<i>Ascochyta</i> spp.), mycosphaerella blight (<i>Mycosphaerella pinodes</i>), grey mould (<i>Botrytis cinerea</i>), powdery mildew (<i>Erysiphe</i> spp.) Suppression of downy mildew (<i>Peronospora viciae</i> f. sp. <i>pisi</i>)	165 mL/acre <i>Lance AG (B)</i> and 175 g/acre <i>Lance AG (A)</i> (one jug does 20 acres)	Apply at the beginning of flowering or at the onset of symptoms. In a planned two pass application, product should be sprayed as a second pass 10 to 14 days after first application.
Lentil	Control of anthracnose (<i>Colletotrichum truncatum</i>), ascochyta blight (<i>Ascochyta lentis</i>), white mould (<i>Sclerotinia sclerotiorum</i>), grey mould (<i>Botrytis cinerea</i>)	165 mL/acre <i>Lance AG (B)</i> and 175 g/acre <i>Lance AG (A)</i> (one jug does 20 acres)	Apply at the beginning of flowering or at the onset of symptoms. In a planned two pass application, product should be sprayed as a second pass 10 to 14 days after first application.

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Chickpea	Control of ascochyta blight (<i>Ascochyta lentis</i>), white mould (<i>Sclerotinia sclerotiorum</i>), grey mould (<i>Botrytis cinerea</i>)	165 mL/acre <i>Lance AG (B)</i> and 175 g/acre <i>Lance AG (A)</i> (one jug does 20 acres)	Apply at the beginning of flowering or at the onset of symptoms. If diseases persists or weather conditions are favourable for disease, apply a second application 10 to 14 days later with a fungicide that contains a different mode of action.
Alfalfa (for seed production only)	Control of common leaf spot (<i>Pseudopeziza medicaginis</i>), blossom blight (<i>Sclerotinia sclerotiorum</i> , <i>Botrytis cinerea</i>), spring black stem (<i>Phoma medicaginis</i>), leaf spot (<i>Leptosphaerulina briosiani</i>)	165 mL/acre <i>Lance AG (B)</i> and 175 g/acre <i>Lance AG (A)</i> (one jug does 20 acres)	Apply at 10 to 30% bloom or at the onset of symptoms. If diseases persists or weather conditions are favourable for disease development, apply a second application 10 to 14 days later with a fungicide that contains a different mode of action.

*DO NOT apply by air

Application Information:

- **Water Volume:**
 - **Ground:** Use a minimum volume of 40 L per acre and ensure thorough coverage of foliage.
 - **Aerial:** Use a minimum volume of 20 L per acre and ensure thorough coverage of foliage.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - **Alfalfa** – DO NOT exceed one application of this product per season.
 - **All other crops** – DO NOT exceed 2 applications per season and rotate applications with a fungicide that contains a different mode of action.
- **Grazing:** DO NOT feed alfalfa hay or forage to livestock. All other crops on this label can be grazed – follow pre-harvest interval.
- **Preharvest interval:**
 - **Field pea, lentil, chickpea, faba bean** – 30 days
 - **Canola** – 21 days
 - **Alfalfa** – Not applicable
- **Restricted Entry Interval:** DO NOT re-enter treated areas until 12 hours after application.
- **Re-cropping:** All labelled crops and the tuberous and corm vegetables, fruiting vegetables, pome fruits and stone fruits may be planned immediately following the last application. A plant back restriction of 14 days for all other crops not on label.
- **Storage:** Store in a cool, dry, locked, well-ventilated area away from food or feed.
- **Environment:** DO NOT apply to any water body. Toxic to aquatic organisms and non-target terrestrial plants. Observe buffer zones outlined in the label.

Hazard Rating:



Caution Poison – Potential Skin Sensitizer



Warning – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

LifeGard WG

Fungicide Group
P 06

Company:

Certis USA, (PCP#32526)

Formulation:

40% *Bacillus mycooides* (isolate J) formulated as a wettable granule. Guarantee – 3 x 10¹⁰ spores per gram.

- Container size – 20 x 0.454 kg

Crops, Diseases, Rates and Timing:

Crop	Diseases Suppressed	Application Rate	Application Timing
Potato	Suppression of early blight (<i>Alternaria solani</i>), late blight (<i>Phytophthora infestans</i>)	Apply at a concentration of 0.33g/L of water. The amount of <i>LifeGard WG</i> applied will depend on the spray volume used to adequately cover the crop. DO NOT apply less than 28 grams of <i>LifeGard WG</i> /acre.	Repeat applications at 7 day intervals.
	Partial suppression of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)		Apply at 7 to 14 day intervals. Use the shorter interval when high disease pressure is anticipated.
Hemp and Cannabis (<i>Cannabis sativa</i>) for commercial use on plants grown in the field and indoors	Partial suppression of white mold (<i>Sclerotinia sclerotiorum</i>); grey mold (<i>Botrytis cinerea</i>)	Apply at a concentration of 0.33 g/L of water. DO NOT apply less than 28 g of <i>LifeGard WG</i> per acre.	Begin as a preventative spray. Apply at 7 to 14 day intervals when only <i>LifeGard WG</i> will be applied. Use the shorter interval when high disease pressure is anticipated. When used as part of a rotational program with fungicides labeled for this use, repeat every 7 to 21 days.

Note: *LifeGard* is most beneficial when applied in alternation with other foliar fungicides that are registered for the specific use/pathogen.

Application Information:

- **Water Volume:**
 - 20 to 100 L per acre. Use water volumes to give good canopy penetration and coverage of plant parts to be protected.

How it Works:

Bacillus mycooides is a bacterium bio-fungicide that works as a host plant defence inducer. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** No restrictions listed.
- **Grazing:** No restrictions listed.
- **Pre-harvest interval:**
 - **Hemp** – 3 to 4 weeks
 - **Potatoes** – 0 days
- **Restricted Entry Interval:** 4 hours
- **Re-cropping:** No restrictions listed.
- **Storage:** Store in a dry area inaccessible to children in the original container. Store at or below 25°C for up to 16 months.
- **Environment:** May be toxic to bees. Bees can be exposed to direct treatment, drift or residues on flowering crops or weeds. DO NOT apply to flowering crops if bees are visiting the treatment area. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site. 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 in the forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Hazard Rating:



Danger – Eye Irritant, Potential Sensitizer

Refer to the Introduction for an explanation of the symbols.

Luna Tranquility

Fungicide Group
7, 9

Company:

Bayer (PCP#30510)

Formulation:

125 g/L fluopyram and 375 g/L pyrimethanil formulated as a suspension concentrate.

- Container size – 2 x 4.86 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Potato	Control of early blight (<i>Alternaria solani</i>), brown leaf spot (<i>Alternaria alternata</i>)	245 mL	Begin fungicide applications preventatively. Continue as needed on a 7 to 14 day interval.
	Control of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>) Suppression of black dot (<i>Colletotrichum coccodes</i>)	325 mL	When disease pressure is severe, use the shorter intervals.

Application Information:

- **Water Volume:**
 - **Ground:** Use a minimum water volume of 80 L per acre and ensure thorough coverage of foliage.
 - **Aerial:** Use a minimum water volume of 20 L per acre and ensure thorough coverage of foliage.

How it Works:

The active ingredient fluopyram is a carboxamide fungicide with systemic activity. The active ingredient pyrimethanil is an anilinopyrimidine fungicide with contact and systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT apply more than 1.3 L per acre of this product per season.
- **Grazing:** No restriction listed.
- **Preharvest interval:** 7 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas until 12 hours after application.
- **Re-cropping:** A plant back restriction of 30 days is required for canola, cereal grains, corn, soybean, dry bean, chickpea, lentil, and alfalfa.
- **Storage:** DO NOT store below freezing. If stored for one year or longer, shake well before using. Store the tightly closed container away from feeds, seeds, fertilizer, plants and foodstuffs. Keep the product in the original container during storage.
- **Environment:** Toxic to aquatic organisms and birds. DO NOT apply directly to water, to areas where surface water is present, or to intertidal areas below the high water mark. Observe buffer zones outlined in the label.

Hazard Rating:

None listed.

Mancozeb

Fungicide Group
M3

Dithane Rainshield/Manzate Pro-Stick/Manzate Max/Penncozeb 75 DF/Penncozeb 80WP

Company:

UPL AgroSolutions Canada Inc. (*Manzate Pro-Stick* – PCP#28217; *Manzate Max* – PCP#33299; *Penncozeb 75 DF* – PCP#25397; *Penncozeb 80WP* – PCP#25396), *Dithane Rainshield* – PCP#20553

Formulations:

Dithane Rainshield – 75% mancozeb formulated as a water dispersible granule.

- Container size – 3.5 to 544 kg

Manzate Pro-Stick – 75% mancozeb formulated as a dry flowable.

- Container size – 20 kg

Manzate Max – 480 g/L formulated as a flowable.

- Container size – 10 L, 450 L, 946 L

Penncozeb 75 DF – 75% mancozeb formulated as a wettable granule.

- Container size – 2.5 to 250 kg

Penncozeb 80 WP – 80% mancozeb formulated as a wettable powder. (*Note: Same rates as Penncozeb 75 DF.*)

- Container size – 20 kg

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Potato	Early blight (<i>Alternaria solani</i>), late blight (<i>Phytophthora infestans</i>)	0.45 to 0.9 kg 0.7 to 1.4 L	Begin applications when plants are 10 to 15 cm high, repeat at 7 to 10-day intervals or shorter only if the label permits. Spray interval may be reduced to 5 to 6 days during periods of wet weather favouring late blight and/or vigorous crop growth. Start with the low rate if disease pressure is low, or plants are small; increase to the maximum rate as foliage develops or disease pressure increases.

Application Information:

- **Water Volume:** Consult with the label. Thorough uniform coverage is essential for good disease control.

How it Works:

The active ingredient mancozeb is a dithiocarbamate fungicide with multi-site contact activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Fungicides: For late blight control, *Manzate Pro-stick* and *Manzate Max* can be tank-mixed with *Curzate*.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications is 8.**
- **Grazing:** DO NOT graze or feed treated crop or straw to livestock. DO NOT graze or cut treated alfalfa for hay.
- **Preharvest interval:**
 - *Potato* – 3 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** No restrictions listed.
- **Storage:** Store in cool, dry, well-ventilated place. Keep away from fire and sparks. Keep *Manzate Max* from freezing.
- **Environment:** Toxic to aquatic organisms. DO NOT contaminate any body of water by direct application, drift or by cleaning equipment.

Hazard Rating:

 Warning – Poison

 Danger – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Maxentis

Fungicide Group
3, 11

Company:

Adama Agricultural Solutions Canada Ltd (PCP#34963)

Formulation:

120 g/L Azoxystrobin and 90 g/L Prothioconazole formulated as Emulsifiable Concentrate

- Container size – 2 x 8.45 L jugs, 118.1 L drum

Crops, Diseases, Rates and Timing:

Crop	Disease	Rate/acre	Crop stage and other timing information
Canola	Control of white mould (<i>Sclerotinia sclerotiorum</i>)	443 mL	20–50% bloom stage
	Control of blackleg (<i>Leptosphaeria maculans</i>)	253 mL	Early application required 2-6 leaf for blackleg
Peas	Control of white mold (<i>Sclerotinia sclerotiorum</i>), Suppression of Mycosphaerelle blight (<i>Mycosphaerella pinodes</i>)	422 mL	Spray at the beginning of flowering or first sign of disease
Lentils	Control of anthracnose* (<i>Colletotrichum lentis</i>), white mould (<i>Sclerotinia sclerotiorum</i>), and Ascochyta blight (<i>Ascochyta lentis</i>)	422 mL	Spray at the beginning of flowering or first sign of disease
Soybeans	Control of white mould (<i>Sclerotinia sclerotiorum</i>)	422 mL	Spray at the beginning of flowering or first sign of disease

* Including biotypes resistant to Group 11 (strobilurin) fungicides.

Application Information:

- **Water Volume:**
 - **Ground:** Minimum 40 L/ac
 - **Air:** Minimum 20 L/ac

How it Works:

This multi-mode fungicide works by combining two synergistic actives which includes the active ingredient azoxystrobin, a methoxyacrylate compound (strobilurin) with broad spectrum contact and systemic activity. To be used as a preventative and curative fungicide application. The other active prothioconazole is a triazole fungicide with broad-spectrum systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None listed.

Restrictions:

- **Maximum number of applications:** Do not apply more than one application per year on canola and two applications per year on peas, lentils and soybeans.
- **Rainfall:** Avoid application when heavy rain is in forecast.
- **Pre-harvest Intervals:** 36 days canola; 15 days peas, lentils; 20 days soybeans and 30 days forage and hay
- **Grazing:** Forage, hay: 30 days- Grazing or green feed: 6 days- Peas, lentils, soybeans: do not feed dried pea vines to livestock
- **Re-entry:** 24 hrs.
- **Re-cropping interval:** No restrictions.
- **Storage:** Store in the original container in a dry location away from food or feed. Do not freeze.

- **Environment:**
 - Toxic to aquatic organisms, birds, small wild mammals, and non-target terrestrial plants.
 - Azoxystrobin is persistent and will carryover. It is recommended that any products containing azoxystrobin not be used in areas treated with this product during the previous season. This product demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of *Maxentis* in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination. 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.

Hazard Rating:

Danger: corrosive to eyes and skin.

Minuet

Fungicide Group
BM02

Company:

Bayer CropScience (PCP # 33651)

Formulation

QST 713 strain of *Bacillus subtilis* – minimum of 2.7×10^{10} viable spores per gram (liquid)

- Container size: 3.78 L

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Corn	Suppression of Fusarium root rot, Rhizoctonia root rot, Pythium root rot	0.2 -1.13 L/acre	Soil surface applications, in-furrow applications, shanked-In and Injected applications, Post planting applications at any crop stage, carefully review and follow the label for each use.

Application information

- **Water Volume:**
 - **Ground and in-furrow:** 20 L/ac minimum
 - **Aerial:** Do NOT apply by air
 - Carefully follow the label for preparation and application

How it Works

MINUET contains bacteria that, when applied to the soil, will germinate to colonize the developing root system and provide suppression of listed diseases on the label. It may be applied as a soil application by various methods either alone, or in an alternating program of applications with other registered crop protection products.

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.

Restrictions

- **Maximum number of applications:** Not Applicable
- **Rainfall:** Not Applicable
- **Pre-harvest Intervals:** 0 days
- **Re-cropping:** There are no crop rotation or plant back restrictions
- **Re-entry:** If the product is soil-injected, soil incorporated, or applied in-furrow, workers may enter the treated area without restrictions if there will be no contact with anything that has been treated. DO NOT enter or allow worker entry into treated areas for 4 hours or until sprays have settled unless wearing long-sleeved shirt, long pants, socks with shoes and waterproof gloves. Carefully follow the label.
- **Grazing:** Not Applicable

- **Storage:** Store this product away from food or feed. Store in a dry area inaccessible to children. Store in original container only. Keep container closed when not in use. This product should be used within 3 years from the date of manufacture when stored at room temperature.
- **Environment:** To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body

Hazard Rating:

None listed.

Potential Skin Sensitizer

MIRAVIS Ace

Fungicide Group
7, 3

Company:

Syngenta Canada Inc. (PCP#33573)

Formulation:

150 g/L pydiflumetofen and 125 g/L propiconazole formulated as a suspension emulsion.

- Container size – 2 x 8.1 L

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Barley	Suppression of fusarium head blight (<i>Fusarium</i> spp.), ergot (<i>Claviceps purpurea</i>), scald (<i>Rhynchosporium secalis</i>)	404 mL	Apply within the range of at least 70% of heads on the main stem fully emerged to 3 days after full head emergence. Application at the timing for fusarium head blight will control leaf diseases that occur later in the season. Application at this timing is not intended to provide curative control of established leaf diseases.
	Control of spot blotch (<i>Cochliobolus sativus</i>), net blotch (<i>Pyrenophora teres</i>), septoria leaf spot (<i>Septoria tritici</i>), leaf rust (<i>Puccinia hordei</i>), stem rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i> and f.sp. <i>secalis</i>), powdery mildew (<i>Erysiphe graminis</i>)		
Oats	Suppression of fusarium head blight (<i>Fusarium</i> spp.), ergot (<i>Claviceps purpurea</i>)	404 mL	Apply within the range of at least 75% of heads on the main stem fully emerged to when 50% of the heads on the main stem are flowering. Application at the timing for fusarium head blight will control leaf diseases that occur later in the season. Application at this timing is not intended to provide curative control of established leaf diseases.
	Control of septoria leaf blotch (<i>Septoria avenae</i>), crown rust (<i>Puccinia coronata</i>)		
Wheat (spring, winter and durum)	Suppression of fusarium head blight (<i>Fusarium</i> spp.), ergot (<i>Claviceps purpurea</i>)	404 mL	Apply within the range of at least 75% of heads on the main stem fully emerged to when 50% of the heads on the main stem are flowering. DO NOT apply after BBCH 65. Application at the timing for fusarium head blight will control leaf diseases that occur later in the season. Application at this timing is not intended to provide curative control of established leaf diseases.
	Control of septoria leaf spot (<i>Septoria tritici</i>), septoria glume blotch (<i>Stagonospora nodorum</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), leaf rust (<i>Puccinia triticina</i>), stem rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i>), stripe rust (<i>Puccinia striiformis</i>), powdery mildew (<i>Erysiphe graminis</i>)		

Apply *Miravis Ace* with a non-ionic surfactant at a rate of 0.125% v/v in the spray tank following label.

Application Information:

- **Water Volume:** Thorough uniform coverage is essential for good disease control.
 - **Ground:** minimum 40 L per acre.
 - **Air:** minimum 20 L per acre.

How it Works:

The active ingredient pydiflumetofen is a N-methoxy-(phenyl-ethyl)-pyrazole-carboxamide, unique within the carboxamide (SDHI) fungicides. The active ingredient propiconazole is a triazole fungicide with broad spectrum activity. Propiconazole is rapidly translocated acropetally through the xylem. Pydiflumetofen moves acropetally slowly through the xylem. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 1 application of this product per season.
- **Preharvest interval:** Apply no later than BBCH 65 (50% of main heads in flower). 7 days for harvest of forage/hay. Grain/straw can be fed at normal harvest maturity.
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.

Hazard Rating:



Caution – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

MIRAVIS Bold

Fungicide Group

7

Company:

Syngenta Canada Inc. (PCP#33213)

Formulation:

200 g/L of pydiflumetofen formulated as a suspension concentrate.

- Container size – 2 x 8 L jugs per case

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Canola	Sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	304 to 405 mL	10 to 50% bloom. Apply the higher rate under higher disease pressure, a subsequent application with an alternate fungicide should be considered.

Application Information:

- **Water Volume:**
 - **Ground:** minimum 60 L per acre.
 - **Air:** minimum 20 L per acre.

How it Works:

The active ingredient pydiflumetofen is a N-methoxy-(phenyl-ethyl)-pyrazole-carboxamide, unique within the carboxamide (SDHI) fungicides. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Add non-ionic surfactant to achieve a final concentration of 0.125% v/v in the spray tank.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 1 application of this product per season.
- **Preharvest interval:** DO NOT apply within 30 days of harvest.
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.

Hazard Rating:

 Warning – Contains the Allergen Sulfites

Refer to the Introduction for an explanation of the symbols.

MIRAVIS Duo

Fungicide Group
7, 3

Company:

Syngenta Canada Inc. (PCP#33206)

Formulation:

75 g/L pydiflumetofen and 125 g/L difenoconazole formulated as a suspension concentrate.

- Container size – 2 x 8 L jugs per case

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Potato	Control of Early blight (<i>Alternaria solani</i>), Brown spot (<i>Alternaria alternata</i>)	405 mL	Apply on a 7 to 14 day interval starting prior disease establishment. If disease pressure is high, use the shortest interval.
	Suppression of White mould (<i>Sclerotinia sclerotiorum</i>)	405 mL	Begin applications at 20% bloom. Repeat applications 10 to 14 days later
	Suppression of Botrytis grey mould (<i>Botrytis cinerea</i>)	405 mL	Apply on a 7 to 14 day interval, starting prior to disease establishment. If disease pressure is high, use the shortest interval

Application Information:

- **Water Volume:**
 - **Ground:** minimum 60 L per acre.
 - **Air:** minimum 20 L per acre.

How it Works:

The active ingredient pydiflumetofen is a N-methoxy-(phenyl-ethyl)-pyrazole-carboxamide, unique within the carboxamide (SDHI) fungicides. The active ingredient difenoconazole is a demethylation inhibitor (DMI) fungicide. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - DO NOT exceed 3 applications of this product per season.
 - DO NOT exceed 2 consecutive applications, before switching to a non-Group 3 and non-Group 7 fungicide.
- **Preharvest interval:** DO NOT apply within 14 days of harvest.
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.

Hazard Rating:

 Warning – Contains the Allergen Sulfites

Refer to the Introduction for an explanation of the symbols.

Miravis Era

Fungicide Group
3, 7

Company:

Syngenta Canada (PCP # 34323 (*Miravis Era A*) and 34168 (*Miravis Era B*))

Formulation:

Miravis Era A: 200 g/L pydiflumetofen formulated as suspension concentrate.

Miravis Era B: 250 g/L prothioconazole formulated as emulsifiable concentrate

- Container size: co-pack case 10.1 L *Miravis Era A* + 8.1 L *Miravis Era B*

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Wheat (spring, winter, durum)	Suppression of Fusarium head blight (<i>Fusarium graminearum</i>)	253 mL/acre <i>Miravis Era A</i> + 202 mL/acre <i>Miravis Era B</i>	Apply within the range of at least 75% of heads on the main stem fully emerged to when 50% of the heads on the main stem are flowering.
	Control of leaf Rust (<i>Puccinia recondita</i>), Septoria leaf blotch (<i>Septoria tritici</i>), and tan spot (<i>Pyrenophora tritici-repentis</i>)		Application at the timing for Fusarium head blight will control leaf rust that occurs later in the season. Application at this timing is not intended to provide curative control of established leaf rust.
Barley	Suppression of Fusarium head blight (<i>Fusarium</i> spp.)		Apply within the range of at least 70% of heads on the main stem fully emerged to 3 days after full head emergence.
	Control of scald (<i>Rhynchosporium secalis</i>), spot blotch (<i>Cochliobolus sativus</i>), and net blotch (<i>Pyrenophora teres</i>)		Application at the timing for Fusarium head blight will control leaf diseases that occur later in the season. Application at this timing is not intended to provide curative control of established leaf diseases.
Rye, Oats and Triticale	Suppression of Fusarium head blight (<i>Fusarium graminearum</i>)		For suppression of fusarium head blight in rye, oats, and triticale, apply within the range of at least 75% of heads on the main stem fully emerged to when 50% of the heads on the main stem are flowering. Application may only be made using ground spray equipment. DO NOT apply by air.

Application Information:

- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - Apply with a non-ionic surfactant at a rate of 0.125% v/v in the spray tank
 - **Air:** minimum 20 L per acre when air application is permitted on the label

How it Works:

The active ingredient pydiflumetofen is a N-methoxy-(phenyl-ethyl)-pyrazole-carboxamide, unique within the carboxamide (SDHI) fungicides. The active ingredient prothioconazole is a triazole fungicide with broad spectrum systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information..

Tank Mixes:

Apply with a non-ionic surfactant at a rate of 0.125% v/v in the spray tank

Restrictions:

- **Maximum number of applications:** one application per year.
- **Rainfall:** Avoid application when heavy rain is in forecast.
- **Pre-harvest Intervals:** 30 days
- **Re-entry:** 24 hours
- **Re-cropping interval:** Follow label. 30 days for crops not on label.
- **Storage:** Keep in original container, tightly closed, during storage. Store in a cool, dry, well-ventilated area away from feed and food stuffs, and out of the reach of children and animals.
- **Environment:** Toxic to aquatic organisms and non-target terrestrial plants. Observe buffer zones and other precautions specified on label.

Hazard Rating:

Miravis Era A – warning, contains the allergen sulfites

Miravis Era B – caution, poison eye and skin irritant, potential skin sensitizer

MIRAVIS Neo 300SE

Fungicide Group
7, 11, 3

Company:

Syngenta Canada Inc. (PCP#33391)

Formulation:

75 g/L pydiflumetofen, 100 g/L azoxystrobin and 125 g/L propiconazole formulated as a suspension.

- Container size – 2 x 10.125 L, 97.2 L

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Field pea	Powdery mildew (<i>Erysiphe pisi</i>)	404 mL	Application must occur before disease is established and no later than full bloom stage, 50% of flowers open (BBCH 65).
	Anthracnose (<i>Colletotrichum truncatum</i>), Mycosphaerella blight (<i>Mycosphaerella pinodes</i>)	404 to 505 mL	
	Suppression of white mold (<i>Sclerotinia sclerotiorum</i>)	505 mL	For suppression of white mold begin application when plants are at first bloom to 10% bloom.
Chickpea	Powdery mildew (<i>Erysiphe pisi</i>)	404 mL	Application must occur before disease is established and no later than full bloom stage, 50% of flowers open (BBCH 65).
	Anthracnose (<i>Colletotrichum truncatum</i>)	404 to 505 mL	
	Ascochyta blight (<i>Ascochyta rabiei</i>)	505 mL	Use the higher rate under higher disease pressure conditions.
	Suppression of white mold (<i>Sclerotinia sclerotiorum</i>)	505 mL	For suppression of white mold begin application when plants are at first bloom to 10% bloom
Faba bean	Powdery mildew (<i>Erysiphe pisi</i>)	404 mL	Application must occur before disease is established and no later than full bloom stage, 50% of flowers open (BBCH 65).
	Anthracnose (<i>Colletotrichum truncatum</i>), Mycosphaerella blight (<i>Mycosphaerella pinodes</i>), Chocolate spot (<i>Botrytis fabae</i>)	404 to 505 mL	
	Ascochyta blight (<i>Ascochyta fabae</i>)	505 mL	
	Suppression of white mold (<i>Sclerotinia sclerotiorum</i>)	505 mL	For suppression of white mold begin application when plants are at first bloom to 10% bloom
Lentil	Powdery mildew (<i>Erysiphe pisi</i>)	404 mL	Application must occur before disease is established and no later than full bloom stage, 50% of flowers open (BBCH 65).
	Anthracnose (<i>Colletotrichum truncatum</i>)	505 mL	
	Suppression of white mold (<i>Sclerotinia sclerotiorum</i>)	505 mL	For suppression of white mold begin application when plants are at first bloom to 10% bloom.

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Dry bean	Anthrachnose (<i>Colletotrichum lindemuthianum</i>)	404 to 505 mL	Apply at the beginning of flowering or prior to disease establishment. Use the higher rate under higher disease pressure conditions.
Lima bean and snap bean	Powdery mildew (<i>Erysiphe pisi</i>)	405	Make application at the first sign of disease. DO NOT apply using aerial application equipment.
Soybean	Powdery mildew (<i>Erysiphe pisi</i>)	303 to 404 mL	Apply at the beginning of flowering or prior to disease establishment. Where a rate range is specified, use the higher rate under higher disease pressure conditions.
	Anthrachnose (<i>Colletotrichum truncatum</i>), frogeye leaf spot (<i>Cercospora sojina</i>)	404 to 505 mL	
	Suppression of white mold (<i>Sclerotinia sclerotiorum</i>)	505 mL	
Barley	Scald (<i>Rynchosporium secalis</i>), septoria leaf blotch (<i>Septoria</i> spp.), spot blotch (<i>Cochliobolus sativus</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), net blotch (<i>Drechslera teres</i>), stripe rust (<i>Puccinia striiformis</i>)	303 mL	Make one application between end of tillering to 50% of heads on main stem emerged (BBCH 29-55).
Oats	Septoria leaf blotch (<i>Septoria avenae</i>), crown rust (leaf rust) (<i>Puccinia coronata</i>)	303 mL	Make one application between end of tillering to 50% of heads on main stem emerged (BBCH 29-55).
Rye	Scald (<i>Rynchosporium secalis</i>), septoria leaf blotch (<i>Septoria tritici</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), stripe rust (<i>Puccinia striiformis</i>)	303 mL	Make one application between end of tillering to 50% of heads on main stem emerged (BBCH 29-55).
Triticale	Septoria leaf blotch (<i>Septoria tritici</i>)	303 mL	Make one application between end of tillering to 50% of heads on main stem emerged (BBCH 29-55).
Wheat	Septoria leaf blotch (<i>Septoria tritici</i>), spot blotch (<i>Cochliobolus sativus</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), leaf rust (<i>Puccinia triticina</i>), stripe rust (<i>Puccinia striiformis</i>)	303 mL	Make one application between end of tillering to 50% of heads on main stem emerged (BBCH 29-55).
Corn	Eye spot (<i>Aureobasidium zeae</i>), grey leaf spot (<i>Cercospora zeae-maydis</i>), northern corn leaf blight (<i>Setosphaeria turcica</i>), anthracnose leaf blight (<i>Colletotrichum graminicola</i>)	303 mL	Make the first application at the first sign of disease. A second application can be made 14 days after the first application, when disease pressure is high or when agronomic or weather conditions are conducive to disease development or movement. For season-long control of tar spot a second application may be required. For common rust, use the 404 mL/ac application rate when disease pressure is high or if susceptible hybrids are used. Apply in sufficient water volume to obtain thorough coverage; a minimum spray volume of 81 L/ac and 20 L/ac is recommended for ground and aerial application, respectively.
	Common rust (<i>Puccinia sorghi</i>)	303 to 404 mL	
	Suppression of tar spot (<i>Phyllachora maydis</i>)	405 mL	
	Suppression of fusarium and gibberella ear rots (<i>Fusarium</i> spp. and <i>Gibberella zeae</i>)	404 to 505 mL	

Application Information:

- **Water Volume:** Thorough uniform coverage is essential for good disease control.
 - **Ground:** minimum 40 L per acre, 81 L/acre for corn diseases, review the label before application.
 - **Air:** minimum 20 L per acre.

How it Works:

The active ingredient pydiflumetofen is a N-methoxy-(phenyl-ethyl)-pyrazole-carboxamide, unique within the carboxamide (SDHI) fungicides. The active ingredient azoxystrobin is a strobilurin fungicide with broad spectrum activity. The active ingredient propiconazole is a triazole fungicide with broad spectrum activity. Propiconazole is rapidly translocated acropetally through the xylem. Both pydiflumetofen and azoxystrobin move acropetally slowly through the xylem. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information..

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - *Corn* – DO NOT exceed 2 applications of this product per season.
 - *Field pea, chickpea, faba bean, lentil* – DO NOT exceed 1 application of this product per season.
- **Pre-harvest Interval:**
 - *Field pea, chickpea, faba bean, lentil, corn (grain and forage)* – 30 days
 - *Sweet corn* – 14 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:**
 - *Oats, rye* – 45 days
 - *Potatoes* – 105 days

Hazard Rating:

 Warning – Poison – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Miravis Star

Fungicide Group
7, 12

Company:

Syngenta Canada Inc (PCP#34841)

Formulation:

150 g/L Fludioxinil and 100 g/L Pydiflumetofen as Suspension Concentrate

- Container size – 8.1 litre

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Canola	Sclerotinia stem rot	404 - 485 mL	10-50% bloom

Apply with a non-ionic surfactant at a rate of 0.125% v/v in the spray tank.

Application Information:

- **Water Volume:**
 - *Ground:* minimum 40 L/ac.
 - *Air:* minimum 20 L/ac.

How it Works:

ADEPIDYN (pydiflumetofen) binds strongly to the plant surface and moves rapidly into the leaf surface, forming a reservoir of active ingredient in the waxy layer of the leaf tissue. Once in the plant, it moves slowly into the cells of the leaf and throughout the xylem for even distribution and protection as the plant grows. Fludioxinil is a contact fungicide from group 12 that introduces a highly effective new mode of action against sclerotinia stem rot for resistance management. It inhibits spore germination and germ tube growth thus preventing fungal development on the surface of the plant.

Tank Mixes:

None listed.

Restrictions:

- **Maximum number of applications:** One application per year.
- **Rainfall:** Avoid application when heavy rain is forecast.
- **Pre-harvest Intervals:** 30 days.
- **Re-entry:** 12 hours.
- **Grazing:** No grazing restrictions.
- **Re-cropping interval:** No re-cropping restrictions.
- **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 away from feed and foodstuffs, and out of the reach of children and animals. Store above 0°C, storing MIRAVIS® Star Fungicide below 0°C can negatively affect product quality.
- **Environment:** Toxic to aquatic organisms. Observe spray buffer zones specified on the label under Directions for Use.

Hazard Rating:

Warning, contains the allergen sulfites.

Nexicor

Fungicide Group
7, 11, 3

Company:

BASF Canada (PCP#32678)

Formulation:

30 g/L fluxapyroxad, 200 g/L pyraclostrobin and 125 g/L propiconazole formulated as an emulsifiable concentrate.

- Container size – Case (2 x 8 L), 128 L shuttle

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Wheat (all types including durum) Triticale	Leaf rust (<i>Puccinia recondita</i>), stripe rust (<i>Puccinia striiformis</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), septoria leaf spot (<i>Septoria tritici</i>), spot blotch (<i>Cochliobolus sativus</i>) powdery mildew (<i>Erysiphe graminis f. sp. tritici</i>)	200 mL	Fungicide performance is best when <i>Nexicor</i> is applied prior to disease development or at the onset of disease. To maximize yield in cereals, it is important to protect the flag leaf from disease. Optimum time to apply a single application of <i>Nexicor</i> is immediately after flag leaf emergence (GS 37-39). Apply a maximum of one application of <i>Nexicor</i> per season. <i>Nexicor</i> may be applied for control of listed foliar diseases and followed with a fungicide that targets Fusarium head blight at anthesis stage (GS 61-65).
Barley	Net blotch (<i>Pyrenophora teres</i>), stripe rust (<i>Puccinia striiformis</i>), spot blotch (<i>Cochliobolus sativus</i>), scald (<i>Rhynchosporium secalis</i>)		
Rye	Leaf rust (<i>Puccinia recondita</i>), powdery mildew (<i>Erysiphe graminis f. sp. tritici</i>)		
Oats	Crown rust (<i>Puccinia coronata</i>), septoria leaf blotch (<i>Septoria avenae</i>)		
Canola	Blackleg (<i>Leptosphaeria maculans</i>)	200 mL	To maximize yield in canola, it is important to protect young seedlings from blackleg infections. Apply <i>Nexicor</i> at the 2 to 6 leaf stage. Apply a maximum of one <i>Nexicor</i> application per year.

How it Works:

The active ingredient fluxapyroxad is a SDHI fungicide with systemic activity. The active ingredient pyraclostrobin is a member of the strobilurins class of chemistry used as a broad spectrum fungicide. The active ingredient propiconazole is a triazole fungicide with broad spectrum systemic activity. Best utilized as a preventative application when environmental conditions are favourable for disease development. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Herbicides: In Canola, *Nexicor* can be tank mixed with the following herbicides: *Ares* in Clearfield canola, *Liberty Herbicide* (150 SN or 200 SN) in glufosinate ammonium tolerant canola (e.g. *LibertyLink* canola) and, registered glyphosate herbicides in glyphosate tolerant canola (e.g. *Roundup Ready* canola). Review the product labels before mixing.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 1 application of this product per season.
- **Grazing:** All crops can be grazed within 3 days of application.
- **Preharvest interval:** 45 days for cereals; 30 days for canola.
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours after application.
- **Re-cropping:** The following crops: barley, corn, wheat (all types), oats, triticale, rye, and bluegrasses, fescues and rye grasses (grown for seed production), soybean, canola (including rapeseed) and oilseed/condiment mustard, flax, sunflower, field pea, lentil, chickpea, fababean, dry bean, sugarbeets and alfalfa (grown for seed production), and tuberous vegetables, may be planted immediately following the last application. A plant-back interval of one year is required for all other crops.
- **Storage:** Store in original tightly closed container. Protect from freezing. Store this product away from food or feed.
- **Environment:** Observe buffer zones specified on the label. DO NOT apply on any body of water and prevent cleaning of equipment and reduce risk of runoff from treated areas into aquatic habitats by avoid application to areas with a moderate to steep slope, compacted soil. Toxic to aquatic organisms and non-target terrestrial plants.

Hazard Rating:

 Warning – Poison

Skin and Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Orondis Ultra

Fungicide Group
40, 49

Company:

Syngenta Canada (PCP#32805)

Formulation:

250 g/L mandipropamid and 30 g/L oxathiapiprolin formulated as a suspension concentrate.

- Container size – 4 x 3.78 L

Crops, Diseases, Rates and Timing:

Control of late blight (*Phytophthora infestans*) on potato. Begin applications prior to disease development. Continue applications on 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high.

Rates:

0.16 to 0.24 L per acre.

Application Information:

- **Water Volume:**
 - **Ground:** Use a minimum water volume of 40 L per acre.
 - **Aerial:** Use a minimum water volume of 18 L per acre.

How it Works:

The active ingredient mandipropamid is a carboxylic acid amide (CAA) fungicide with contact and systemic activity. To be used as a preventative and inhibitive (prevents spore germination) fungicide application. The active ingredient oxathiapiprolin is an oxysterol binding protein homologue inhibitor with activity against diseases caused by oomycete fungi. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 4 applications of this product per season.
 - **Maximum number of consecutive applications:** 2 applications, then switch to a non-Group 49 and 40 fungicide.
- **Grazing:** No restriction listed.
- **Preharvest interval:** 14 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas until 12 hours after application.

- **Re-cropping:** There is no re-cropping restriction for all crops listed on the *Orondis Ultra* label. The re-cropping restriction is 30 days for all other crops and 180 days for legume vegetables except succulent peas.
- **Storage:** Keep in the original container, tightly closed during storage. Store in a cool, dry, well-ventilated area away from feed and foodstuffs and out of the reach of children and animals. To prevent contamination store this product away from food or feed.
- **Environment:** Toxic to aquatic organisms. To reduce runoff into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Runoff into aquatic habitats may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Hazard Rating:

None listed.

OxiDate FC

Fungicide Group
NC

Company:

BioSafe Systems, LLC (PCP#33468)

Formulation:

27% hydrogen peroxide and 2.5% peroxyacetic acid formulated as a liquid.

- Container sizes – 9.5, 19, 28, 113.5, 1041 L

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Dry beans	Suppression of bacterial blight (<i>Xanthomonas campestris</i> pv. <i>phaseoli</i>)	1.0% (v:v)	At the first sign of disease and/or when weather conditions are favorable for disease development. Apply diluted spray to the point of run-off to achieve full and even coverage.
Potato	Suppression of botrytis tan spot (<i>Botrytis cinerea</i>)	2.5% (v:v)	Apply at 7 day intervals, depending upon the level of disease pressure.
	White mold (<i>Sclerotinia sclerotiorum</i>)		
	Brown leaf spot (<i>Alternaria alternata</i>)	1.0 to 2.5% (v:v)	Under severe disease conditions, reduce spray intervals to once every 5 days and use stronger dilution rates.

Application Information:

- **Water Volume:** Thorough uniform coverage is essential for good disease control.
 - **Ground:** Apply diluted spray to the point of run-off, a minimum of 100 L per acre.
 - **Air:** DO NOT apply using aerial application equipment.

How it Works:

The active ingredients hydrogen peroxide and peroxyacetic acid have contact activity on fungal and bacterial vegetative cells and spores. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 8 application of this product per season.
- **Pre-harvest Interval:** 0 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 4 hours of application.
- **Storage:** DO NOT allow product to become overheated in storage. The high temperature may increase the degradation of the product, which will decrease product effectiveness. Since *OxiDate FC* is a strong oxidizing agent, contact with combustibles may cause fire. Keep containers tightly closed when not in use. To prevent contamination store this product away from food or feed.
- **Storage:** TOXIC to aquatic organisms and non-target terrestrial plants. This product may be toxic to bees and other beneficial insects exposed to direct contact. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body. DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

Hazard Rating:
 Warning – Poison

 Danger – Corrosive to Eyes

 Danger – Skin Irritant

Refer to the Introduction for an explanation of the symbols.

Phosphorous acid

Rampart/Confine Extra

Fungicide Group

33

Company:

Loveland Products Canada (*Rampart* – PCP #30654)

WinField United Canada (*Confine Extra* – PCP #30648)

Formulation:

53.0% mono- and di-potassium salts of phosphoric acid.

- Container sizes – *Confine Extra* 9.46 to 946 L; *Rampart* 9.46 L

Crops, Diseases, Rates and Timing:

Crop	Diseases Suppressed	Application Rate (per acre)		Application Timing
		<i>Confine Extra</i>	<i>Rampart</i>	
Potato*	Late blight (<i>Phytophthora infestans</i>), pink rot (<i>Phytophthora erythroseptica</i>)	2 to 4 L	1.2 to 3.2 L	Begin applications when conditions are favourable for disease and continue on a 7 to 14 day interval. Use the higher rate and shorter application interval when disease pressure is moderate to high. Use a maximum of 5 foliar and/or chemigation** applications per growing season.

*Not recommended for use on potatoes intended for seed.

**Chemigation application for *Confine Extra* only.

Application Information:

- **Water Volume:**
 - **Ground:**
 - *Confine Extra* – minimum of 40 L per acre
 - *Rampart* – minimum 120 L per acre
 - **Aerial:**
 - *Confine Extra* – DO NOT apply by air
 - *Rampart* – minimum of 40 L per acre

How it Works:

The active ingredient mono- and di-potassium salts of phosphorous acid is a phosphonate fungicide with systemic activity to suppress pathogen inoculum. To be used as a preventative fungicide application on harvested tubers. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Preharvest interval:** DO NOT apply within 1 day of harvest.
- **Restricted Entry Interval:** No restrictions listed.
- **Re-cropping:** No restrictions listed.
- **Storage:** DO NOT store near food or feed.
- **Environment:** DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of waste.

Hazard Rating:

Caution – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Phostrol

Fungicide Group

33

Company:

Belchim Crop Protection Canada (PCP#30449)

Formulation:

53.6% mono- and dibasic sodium, potassium, and ammonium phosphites formulated as a liquid flowable.

- Container sizes – 2 x 10 L and 1000 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate	Application Timing
Potato	Suppression of pink rot (<i>Phytophthora erythroseptica</i>)	2.3 to 4.7 L/acre	In-furrow: Apply in a band at planting directly over the seed pieces prior to row closure.
	Control of late blight (<i>Phytophthora infestans</i>)	1.2 to 4.7 L/acre	Foliar applications: For preventative control of late blight and preventative suppression of pink rot begin applications when conditions favouring disease development exist and continue on a 7 to 14 day interval.
	Suppression of pink rot (<i>Phytophthora erythroseptica</i>)	2.3 to 4.7 L/acre	
	Suppression of Early Blight (<i>Alternaria solani</i>) and Brown Leaf Spot (<i>Alternaria alternata</i>)	1.8 to 2.3 L/acre	
	Control of late blight (<i>Phytophthora infestans</i>), pink rot (<i>Phytophthora erythroseptica</i>) Suppression of silver scurf (<i>Helminthosporium solani</i>)	0.42 L in 2 L water to 1 tonne tubers	Post harvest control: Apply directly to the tubers and ensure complete and even coverage.*
Field pea	Suppression of early season root rot (<i>Aphanomyces euteiches</i> , <i>Pythium ultimum</i>)	1.2 L/acre	At crop emergence followed by a second application 14 days later or in-furrow at planting followed by a second application at crop emergence.

*Consult with product label before application.

Application Information:

- **Water Volume:**
 - **Ground:**
 - *Potato:* Minimum of 12 L per acre for in-furrow treatment and minimum of 81 L per acre for foliar applications.
 - *Field pea:* Minimum of 40 L per acre.
 - **Aerial:**
 - *Potato:* Minimum of 20 L per acre

How it Works:

The active ingredient mono- and dibasic sodium, potassium, and ammonium phosphite is a phosphonates fungicide with systemic activity to suppress pathogen inoculum. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Pink rot: *Ridomil Gold 480SL* (in-furrow), *Ridomil Gold MZ* and *Ridomil Gold Bravo Twin Pack* (foliar)

Late Blight: May be tank mixed with one of the following fungicides: *Bravo 500*, *Bravo ZN*, *Echo 720*, *Echo 90DF*, *Ridomil Gold Bravo Twin Pack*, *Dithane Rainshield*, *Manzate Pro-Stick*, *Gavel 75DF*, *Penncozeb 75DF*

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - *Potato* – DO NOT exceed 7 applications of this product per season.
 - *Field pea* – DO NOT exceed 2 applications of this product per season.
- **Grazing:** DO NOT graze treated fields or feed treated forage to livestock.
- **Preharvest interval:**
 - *Potato* – May be applied up to the day of harvest and post harvest.
 - *Field pea* – preharvest interval is 21 days.
- **Restricted Entry Interval:** Re-entry interval after application is 12 hours.
- **Re-cropping:** No restriction listed.
- **Storage:** Store in a cool, dry, secure and well ventilated area. To prevent contamination, store this product away from food or feed. Keep pesticide in original container. Not for use in or around home. DO NOT store near open flame.
- **Environment:** Avoid run-off from treated areas into aquatic areas.
 - To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil, or clay.
 - Avoid application when heavy rain is forecast.
 - Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.
- **Toxicity:** Toxic to aquatic organisms, non-target terrestrial plants and small wild animals.

Hazard Rating:



Caution – Skin Irritant

Refer to the Introduction for an explanation of the symbols.

Priaxor*

Fungicide Group
7, 11

*NOTE: This product is no longer manufactured but product still remains in the distribution system.
This product may be removed from future editions.

Company:

BASF Canada (PCP#30567)

Formulation:

167 g/L of fluxapyroxad and 333 g/L of pyraclostrobin formulated as a suspension concentrate.

- Container size – 2 x 9.6 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Wheat, triticale	Control of tan spot (<i>Pyrenophora tritici-repentis</i>), septoria leaf blotch (<i>Septoria tritici</i> ; <i>S. nodorum</i>), leaf rust (<i>Puccinia recondita</i>), spot blotch (<i>Cochliobolus sativus</i>), stripe rust (<i>Puccinia striiformis</i>), powdery mildew (<i>Erysiphe graminis</i> f. sp. <i>tritici</i>)	90 to 120 mL	Apply prior to disease development or at the onset of disease symptoms. Applications should be made prior to head emergence. Use the higher rate when disease pressure is high.
Barley	Control of net blotch (<i>Pyrenophora teres</i>), spot blotch (<i>Cochliobolus sativus</i>), scald (<i>Rhynchosporium secalis</i>), stripe rust (<i>Puccinia striiformis</i>)		
Rye	Control of leaf rust (<i>Puccinia recondita</i>), powdery mildew (<i>Erysiphe graminis</i>)		
Oat	Control of crown rust (<i>Puccinia coronata</i>)		
Corn	Control of common rust (<i>Puccinia sorghi</i>), Grey leaf spot (<i>Cercospora zeaе-maydis</i>), Northern leaf blight (<i>Setosphaeria turcica</i>), suppression of eye spot (<i>Aureobasidium zeae</i>)	120 mL	Apply prior to disease development.

Crop	Diseases	Application Rate (per acre)	Application Timing
Canola (including rapeseed, canola quality <i>Brassica juncea</i>) and mustard (oilseed and condiment)	Control of blackleg (<i>Leptosphaeria maculans</i>)	90 to 120 mL	Apply at 2 to 6 leaf (rosette) stage. Use the high rate under high disease pressure.
	Control/suppression of black spot (<i>Alternaria brassicae</i> , <i>A. raphani</i>)	90 to 120 mL	Apply at 20 to 50% bloom for suppression. For control, apply at early pod stage. Use the high rate under high disease pressure.
	Suppression of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	180 mL	Apply at 20 to 50% bloom.
Chickpea	Control of ascochyta blight (<i>Ascochyta rabiei</i>)	120 to 180 mL	Apply at the beginning of flowering or at the onset of symptoms.
	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>), grey mould (<i>Botrytis cinerea</i>)	180 mL	Apply at the beginning of flowering.
Lentil	Control of anthracnose (<i>Colletotrichum truncatum</i>)	120 mL	Apply at the beginning of flowering or at the onset of symptoms.
	Control of ascochyta blight (<i>Ascochyta lentis</i>)	120 to 180 mL	
	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>), grey mould (<i>Botrytis cinerea</i>)	180 mL	Apply at the beginning of flowering.
Faba bean	Control of powdery mildew (<i>Erysiphe</i> spp.)	120 mL	Apply at the beginning of flowering or at the onset of symptoms.
	Control of ascochyta blight (<i>Ascochyta</i> spp.)	120 to 180 mL	
	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>), grey mould (<i>Botrytis cinerea</i>)	180 mL	Apply at the beginning of flowering.
Field pea	Control of powdery mildew (<i>Erysiphe pisi</i>)	120 mL	Apply at the beginning of flowering or at the onset of symptoms.
	Control of mycosphaerella blight (<i>Mycosphaerella pinodes</i>); suppression of downy mildew (<i>Peronospora viciae</i> f.sp. <i>pisi</i>)	120 to 180 mL	For control of <i>Mycosphaerella</i> blight and suppression of white mould apply at the beginning of flowering. For suppression of downy mildew, apply at the beginning of flowering or at the onset of symptoms.
	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)	180 mL	
Dry bean	Control of anthracnose (<i>Colletotrichum lindemuthianum</i>), powdery mildew (<i>Erysiphe</i> spp.), rust (<i>Uromyces appendiculatus</i>)	120 mL	Apply at the beginning of flowering.
Soybean	Control of septoria brown spot (<i>Septoria glycines</i>), frog-eye leaf spot (<i>Cercospora sojae</i>)	97 to 120 mL	Apply prior to disease development when conditions are favourable for disease development. Use the high rate when disease pressure is high.
	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)	180 mL	
Sunflowers	Suppression of leaf rust (<i>Puccinia helianthi</i>)	120 mL	Apply at first sign of disease.
Flax	Control of pasmo (<i>Septoria linicola</i>)	90 to 120 mL	Apply at 20 to 50% flowering.
	Suppression of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	180 mL	
Alfalfa (for seed production)	Control of common leaf spot (<i>Pseudopeziza medicaginis</i>)	120 mL	Apply at the beginning of flowering (10 to 30% bloom) or at the onset of disease.
	Suppression of blossom blight (<i>Sclerotinia sclerotiorum</i>)	180 mL	
Bluegrasses; fescues; rye-grasses (for seed production)	Control of leaf rust (<i>Puccinia recondita</i>), stem rust (<i>P. graminis</i>); suppression of powdery mildew (<i>Erysiphe graminis</i>)	90 to 120 mL	Apply prior to disease development when conditions are favourable for disease development. Use the high rate when disease pressure is high.

Crop	Diseases	Application Rate (per acre)	Application Timing
Non grass animal feeds including: Alfalfa, clover, Sainfoin, trefoil, vetch, crown vetch, milk vetch, and including mixed stands of forages grown for feed	Common leaf spot (<i>Pseudopeziza medicaginis</i>)	120 to 180 mL	For optimal disease control, apply at the beginning of flowering (10 to 30% bloom) or at the onset of disease. Make one application per forage cutting for feed (follow preharvest intervals), with a maximum of 2 applications per season.
	Blossom blight (<i>Sclerotinia sclerotiorum</i>)	180 mL	

DO NOT make sequential applications of *Priaxor*. If disease persists or weather conditions are favourable for disease development, make a second application 10 to 14 days later, with a fungicide that contains a different mode of action. Use the shorter interval when disease pressure is high.

Application Information:

- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - **Aerial:** minimum 20 L per acre.

How it Works:

The active ingredient fluxapyroxad is a carboxamide (SDHI) fungicide with systemic activity. The active ingredient pyraclostrobin is a strobilurin fungicide with broad spectrum contact and systemic activity. To be used as a preventative application when environmental conditions are favourable for disease development. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Herbicides: In Clearfield canola and Clearfield canola quality *Brassica juncea*, *Priaxor* can be tank mixed with *Odyssey*, or *Odyssey* plus *Equinox*. BASF Canada also supports the tank mix of *Priaxor* with *Ares* in Clearfield canola. In Liberty Link canola, *Priaxor* can be tank mixed with *Liberty*. In Roundup Ready canola, *Priaxor* can be tank mixed with glyphosate herbicides.

Fungicides: In canola and mustard, *Priaxor* can be tank mixed with *Lance WDG Fungicide* at 140 grams per acre at 20 to 50 percent bloom to control sclerotinia stem rot and suppress alternaria black spot.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 1 sequential application of this product per season.
 - **Alfalfa, forage grasses** – DO NOT exceed 1 application of this product per season.
 - **Barley, oat, rye, wheat, triticale, corn, soybean, canola, mustard, sunflower, flax, soybean, field pea, lentil, chickpea, faba bean, dry bean** – DO NOT exceed 2 applications of this product per season.
- **Grazing:** DO NOT feed grass hay or forage to livestock. All other crops on this label can be grazed or fed to livestock.
- **Preharvest interval:**
 - **Barley, rye, wheat, oat** – apply no later than the end of flowering
 - **Field pea, lentil, chickpea, faba bean, dry bean** – 30 days
 - **Corn, soybean, canola, sunflower, flax** – 21 days
 - **Forage grasses** – 14 days
 - **Sweet corn** – 7 days
 - **Alfalfa** – not applicable
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** Crops listed on label, tuberous and corm vegetables, fruiting vegetables, pome fruits and stone fruits may be planted immediately following last application. DO NOT plant any other crops within one year of application of *Priaxor*.
- **Storage:** Store this product away from food or feed.
- **Environment:** Maintain specified buffer zones. Toxic to aquatic organisms, small mammals, and non-target terrestrial plants.

Hazard Rating:



Danger Poison – Skin Irritant

Refer to the Introduction for an explanation of the symbols.

Proline GOLD*

*NOTE: As of January 1, 2025, www.keepitclean.ca indicates that the use of this product on certain crop types may have market access concerns. Please see Introduction for more information AND consult potential grain buyers before using this product.

Company:

Bayer (PCP#30511)

Formulation:

200 g/L of fluopyram and 200 g/L of prothioconazole formulated as a suspension concentrate.

- Container size – 10.12 L jugs

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Canola, oriental mustard (Brassica juncea) and Brassica carinata	Control of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	253 mL	Apply when the crop is in the 20 to 50% bloom stage. Best protection will be achieved when the fungicide is applied prior to petals beginning to fall, and it will allow for the maximum number of petals to be protected. Good spray coverage of the plants is essential.
Lentil, Pea, Chickpea, Dry bean, Faba bean	Control of white mold (<i>Sclerotinia sclerotiorum</i>), anthracnose in lentils (<i>Colletotrichum lentis</i>) including biotypes resistant to Group 11 fungicides	303 mL	Begin fungicide applications preventatively.
	Control of ascochyta blight (<i>Ascochyta</i> spp.), mycosphaerella blight (<i>Mycosphaerella pinodes</i>), anthracnose in dry bean (<i>Colletotrichum lindemuthianum</i>)	202 to 303 mL	
Potato	Control of Early blight (<i>Alternaria solani</i>), Brown leaf spot (<i>Alternaria alternata</i>), White mold (<i>Sclerotinia sclerotiorum</i>)	303.5 mL	Begin fungicide applications preventatively. After the initial application, one additional application may be made 10-14 days afterwards if conditions remain favourable for continued or increased disease development.
	Suppression of Black dot (<i>Colletotrichum coccodes</i>)		

Application Information:

- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - **Aerial:** minimum of 20 L per acre.

How it Works:

The active ingredient fluopyram is a carboxamide fungicide with systemic activity. The active ingredient prothioconazole is a triazole fungicide with broad-spectrum systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 2 applications of this product per season.
- **Grazing:**
 - **Canola** – DO NOT allow livestock to graze treated areas, and DO NOT harvest rapeseed forage for feed.
 - **Lentils, peas, chickpeas, potato** – DO NOT allow livestock to graze treated areas and DO NOT harvest for forage and hay for 7 days after application.

- **Preharvest interval:**
 - *Canola* – 36 days
 - *Lentils, peas, chickpeas, potato* – 14 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 24 hours of application.
- **Re-cropping:** DO NOT replant to alfalfa for 14 days after application. Crops listed on this label and other crops from crop subgroup 20A (rapeseeds), cereals, corn, soybeans, peanuts, cucurbit vegetables, crops of oilseed crop subgroup 20B (sunflowers), tuberous and corn vegetables and sugarbeets may be rotated anytime following the last application of *Proline GOLD*. All other crops may be replanted 30 days following the last application of *Proline GOLD*.
- **Storage:** Do not contaminate water, food, or feed by storage or disposal. Keep away from direct sunlight. Do not store below freezing. If stored for 1 year or longer, shake well before using. Store the tightly closed container away from feeds, seeds, fertilizer, plants and foodstuffs. Do not use or store in or around the home. Keep the product in the original container during storage. In case of fire, leaking or damaged containers, call toll free 1-800-334-7577.
- **Environment:** This product is toxic to birds, aquatic organisms and non-target terrestrial plants. Consult the product label for buffer zones.
- **Rainfast:** Avoid application when heavy rain is forecast. Rainfast in 1-2 hours.

Hazard Rating:

None listed.

Propiconazole

Fungicide Group
3

Tilt 250E/Bumper 432 EC/Pivot 418 EC/Propel/Propi Super 25 EC/
Fitness*/Co-Op Pivot/Princeton/VIKING Propiconazole/Modo*

*NOTE: This product is no longer manufactured but product still remains in the distribution system. This product may be removed from future editions.

Company:

Sharda CropChem (*Propi Super 25 EC* – PCP#32240)
 Syngenta Canada (*Tilt 250E* – PCP#19346, *Propel* – PCP#29548)
 ADAMA Canada (*Bumper 432 EC* – PCP#28017)
 Interprovincial Cooperative Ltd. (*Pivot 418 EC* – PCP#28219)
 Loveland Products (*Fitness* – PCP#32639)
 Federated Co-operatives Limited (*Co-Op Pivot* – PCP#32986)
 Sharda CropChem (*Princeton* – PCP#33840)
 NewAgco Inc. (*Modo* – PCP#34213)
 Viking Crop Production Partners Inc. (*VIKING Propiconazole Fungicide* – PCP#34772)

Formulations:

Tilt 250E – 250 g/L propiconazole formulated as an emulsifiable concentrate.

- Container size – 2 x 8 L

Propi Super 25 EC – 250 g/L propiconazole formulated as an emulsifiable concentrate.

- Container size – 2 x 8 L

Bumper 432 EC – 432 g/L propiconazole formulated as an emulsifiable concentrate.

- Container size – 4.8 L

Pivot 418 EC and *Fitness* – 418 g/L propiconazole formulated as an emulsifiable concentrate.

- Container size – 2 x 4.8 L

Propel – 250 g/L propiconazole formulated as an emulsifiable concentrate.

- Container size – 8 L

Co-Op Pivot – 418 g/L propiconazole formulated as an emulsifiable concentrate.

- Container size – 1 to 1,000 L

Princeton – 418 g/L propiconazole formulated as an emulsifiable concentrate.

- Container size – 1 to 1,050 L

Modo – 250 g/L propiconazole formulated as an emulsifiable concentrate.

- Container sizes – 2 X 8.1 L, 500 L

VIKING Propiconazole Fungicide – 250 g/L propiconazole formulated as an emulsifiable concentrate.

- Container sizes – 2 X 8.1 L, 500 L"

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rates (per acre)		Application Timing
		250 g/L products	418 g/L and 432 g/L products	
Wheat	Suppression of septoria leaf blotch (<i>Septoria tritici</i>), tan spot (<i>Pyrenophora tritici-repentis</i>)	100 to 200 mL	60 to 120 mL	Apply with herbicide application at growth stage 12 to 23. If there is a history of high disease pressure in the field and/or field conditions favour disease development use the higher rate.
Wheat	Control of septoria leaf blotch (<i>Septoria tritici</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), septoria glume blotch (<i>S. tritici</i>), stripe rust (<i>Puccinia striiformis</i>), leaf rust (<i>Puccinia triticina</i>), stem rust (<i>Puccinia graminis</i>), powdery mildew (<i>Erysiphe graminis</i> f.sp. <i>tritici</i>)	200 mL	120 mL	Apply at early stages of disease development (tillering or stem elongation). A second application is recommended if disease pressure continues which can be made up to half-emergence of the head.
Barley	Suppression of net blotch (<i>Pyrenophora teres</i>)	100 to 200 mL	60 to 120 mL	Apply with herbicide application at growth stage 12 to 23. If there is a history of high disease pressure in the field and/or field conditions favour disease development use the higher rate.
Barley <i>continued</i>	Control of spot blotch (<i>Cochliobolus sativus</i>), net blotch (<i>Pyrenophora teres</i>), scald (<i>Rhynchosporium secalis</i>), leaf rust (<i>Puccinia hordei</i>), stem rust (<i>Puccinia graminis</i>), septoria leaf blotch (<i>Septoria</i> spp.), powdery mildew (<i>Blumeria graminis</i>)	200 mL	120 mL	Apply at early stages of disease development (tillering or stem elongation). A second application is recommended if disease pressure continues which can be made up to half-emergence of the head.
Oat	Control of septoria leaf blotch (<i>Septoria avenae</i>), crown rust (<i>Puccinia coronata</i>)	200 mL	120 mL	
Corn	Control of rust (<i>Puccinia sorghi</i>)	200 mL	120 mL	Apply when rust pustules first appear, make second application 14 days later.
	Control of northern leaf blight (<i>Setosphaeria turcicum</i>)	100 to 200 mL	60 to 120 mL	Apply when disease first appears. Use higher rate if disease pressure is high.
Canola	Control of blackleg (<i>Leptosphaeria maculans</i>)	200 mL	120 mL	Apply during the rosette stage.
Soybean (grown for seed)	Control of frogeye leaf spot (<i>Cercospora sojina</i>)	202 to 307 mL	120 to 184 mL	Apply when disease first appears. Under severe disease pressure make a second application 14 days later
Dry bean	Control of rust (<i>Uromyces</i> spp.)	200 mL	120 mL	Apply at the first sign of disease, make second application 14 to 21 days later.
	Control of powdery mildew (<i>Erysiphe</i> spp.) [†]	200 mL	-	Apply at the first sign of disease, make second application 14 days later if disease continues.
Lentil, field pea, chickpea, faba bean [‡]	Control of powdery mildew (<i>Microsphaera diffusa</i> , <i>Erysiphe pisi</i> , <i>E. polygoni</i>)	200 mL	--	Apply at the first sign of disease, make second application 14 days later if disease continues.
Soybean	Control of powdery mildew (<i>Microsphaera diffusa</i>) [‡] , cercospora leaf spot (<i>Cercospora kikuchii</i>)	200 mL	--	
Canaryseed*	Suppression of septoria leaf mottle (<i>Septoria triseti</i>)	200 mL	120 mL	Apply at flag leaf emergence.

Crop	Diseases	Application Rates (per acre)		Application Timing
		250 g/L products	418 g/L and 432 g/L products	
Timothy*†	Control of purple eyespot (<i>Cladosporium phlei</i>)	200 mL	120 mL	Apply at the first sign of disease (usually at the beginning of flowering). Can be applied up to full flowering, spray interval of 14 days.

*Ground application only.

† Only *TILT 250E*, *Pivot 418 EC*, *Propi Super 25 EC*, *Propel*, *VIKING Propiconazole Fungicide*, *Fitness*, and *Co-Op Pivot* are registered for use on this crop.

‡ Only *TILT 250 EC*, *Propi Super 25 EC* *VIKING Propiconazole Fungicide* and *Propel* are registered for these uses

Application Information:

- **Water Volume:**
 - **Ground:** minimum 80 L per acre.
 - **Aerial:** 16 to 20 L per acre.

How it Works:

The active ingredient propiconazole is a triazole fungicide with broad spectrum systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Review and follow the detailed instructions, restrictions and precautions on products labels before mixing.

Herbicides: In wheat and barley only, propiconazole may be tank-mixed with one of the following: 2, 4-D amine, MCPA amine, *Buctril-M* or *Pardner* and in wheat only, may be applied with *Horizon NG*. In wheat and barley only, *Pivot 418 EC*, *Co-Op Pivot* and *Fitness* may be tank-mixed with *Logic M* or *Brotex 240*; *Pivot 418 EC*, *Co-Op Pivot*, *Bumper 432 EC*, or *Fitness* may be tank-mixed with *Badge* or *Bromotril 240 EC*. In spring wheat and barley only, *Tilt 250E* or *Propel* may be tank-mixed with *Axial 100EC*. Refer to labels for tank-mix precautions.

Fertilizers: *Propiconazole* may be applied with up to 4 kg per acre (9 lb. per acre) of actual nitrogen. The appropriate amount of urea can be dissolved in water and added to the spray tank before adding the fungicide. Excessive nitrogen or application during hot weather may result in crop injury. DO NOT add nitrogen when tank-mixing *propiconazole* with a herbicide.

Insecticides: In field corn, *propiconazole* can be tank-mixed with one of the following: *Matador 120EC/Silencer 120EC*. In legumes, *Tilt 250E* or *Propel* can be tank-mixed with *Matador 120EC*.

In wheat and barley, *VIKING Propiconazole Fungicide* can be mixed with only one of the following: 2,4-D Amine, MCPA Amine, *Buctril M*, *Mextrol 450*, *Approve*, or *Broadband*. In corn, *VIKING Propiconazole Fungicide* can be mixed with: *Matador* Insecticide. In legume vegetables, *VIKING Propiconazole Fungicide* can be mixed with the following: *Quadris*, *Matador* Insecticide or *Warrior* Insecticide following the label directions. In some case, the tank mix should not be applied by aerial application equipment. review and follow the directions for use and precautions on all labels.

Note: According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - *Wheat, barley, corn, bean, legume, timothy* – DO NOT exceed 2 applications of this product per season.
- **Grazing:** DO NOT graze animals on treated green crops within 3 days of application. DO NOT feed straw treated with herbicide tank mixes to livestock. DO NOT use treated soybean seed for animal feed.
- **Preharvest interval:**
 - *Wheat, oat, barley* – 45 days
 - *Canola* – 60 days
 - *Corn* – 14 days if tank-mixed with an insecticide
 - *Soybean* – 50 days
 - *Bean* – 28 days
 - *Timothy* – 14 days
- **Restricted Entry Interval:** DO NOT allow entry into treated area until dry or for 12 hours; whichever is greater.
- **Re-cropping:** No restrictions listed.
- **Storage:** DO NOT freeze. Store products away from food or feed.
- **Environment:** Toxic to aquatic organisms. DO NOT contaminate any body of water by direct application, drift or by cleaning equipment.

Hazard Rating:

Warning – Eye and Skin Irritant
Potential Skin Sensitizer



Bumper 432 EC, Pivot 418 EC, Co-Op Pivot: Warning – Poison



Tilt 250 EC, Propel, Propi Super 25 EC: Caution – Poison

Refer to the Introduction for an explanation of the symbols.

Propiconazole + Azoxystrobin

Fungicide Group
3, 11

Topnotch, Quasimodo

Company:

ADAMA Canada (*Topnotch* – PCP#31126)

NewAgco Inc. (*Quasimodo* – PCP#33807, 34213)

Formulation:

Topnotch: 143 g/L of azoxystrobin and 124 g/L of propiconazole as suspension concentrate.

Quasimodo: 250 g/L of azoxystrobin + 250 g/L of propiconazole as emulsifiable concentrate.

Crops, Diseases, Rates and Timing:

Crops	Diseases Controlled	Application Rate (per acre)	Application Rate (per acre)	Application Timing
		<i>Topnotch</i>	<i>Quasimodo</i>	
Wheat	Septoria leaf spot (<i>Septoria</i> spp.), tan spot (<i>Pyrenophora tritici-repentis</i>), stripe rust (<i>Puccinia striiformis</i>), wheat leaf rust (<i>Puccinia triticina</i>)	214 mL	90 mL <i>Quasi</i> + 202 mL <i>Modo</i>	Apply once between stem elongation and half head emergence.
Barley	Septoria leaf spot (<i>Septoria</i> spp.), net blotch (<i>Pyrenophora teres</i>), scald (<i>Rhynchosporium secalis</i>), barley leaf rust (<i>Puccinia hordei</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), stripe rust (<i>Puccinia striiformis</i>)			
Oat	Septoria leaf spot (<i>Septoria</i> spp.), net blotch (<i>Pyrenophora teres</i>), crown rust (<i>Puccinia coronata</i> var. <i>avenae</i>)			
Rye	Septoria leaf spot (<i>Septoria</i> spp.), scald (<i>Rhynchosporium secalis</i>), tan spot (<i>Pyrenophora tritici-repentis</i>)	214 mL	90 mL <i>Quasi</i> + 202 mL <i>Modo</i>	Apply once between stem elongation and half head emergence.
Triticale	Septoria leaf spot (<i>Septoria</i> spp.), tan spot (<i>Pyrenophora tritici-repentis</i>)			
Beans, Field pea, Lentil, Soybean	Mycosphaerella blight, anthracnose, ascochyta blight (lentils only)	310 to 620 mL	-	Make the first application at the first sign of disease. Apply the high rate only under conditions of high disease pressures. A second application 14 days later may be needed if conditions persist.
	Powdery mildew, white mold (suppression only)	310 mL		

Application Information:

- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - **Aerial:** minimum 18 L per acre.
- DO NOT apply during periods of dead calm.
- DO NOT apply aerially when wind speed is greater than 16 km per hour.
- Good spray coverage and canopy penetration are important for best results.

How it Works:

Topnotch is composed of two active ingredients; azoxystrobin and propiconazole. Both active ingredients have systemic activity and this mixture can be used for broad spectrum coverage and preventative purpose. Refer to “Fungicide Modes of Action” in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed the total number of applications of *Topnotch* per season per crop as stated in label.
- **Preharvest interval:**
 - *Cereals and straw* – 45 days
 - *Forage and hay* – 30 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** A plant back interval of 105 days is required for all crops not listed in this label. Oat and rye may be planted 45 days after application.
- **Storage:** Store in original tightly closed container in a cool dry, well ventilated area away from feed and foodstuffs. DO NOT store below 0°C.
- **Environment:** Avoid run-off from treated areas into aquatic areas. Toxic to aquatic organisms, certain beneficial insects and may leach to ground water. Avoid application when heavy rain in forecast.
- **Grazing Restrictions (Topnotch):** Do not graze pea vines. 30 days for all other crops.

Hazard Rating:



Caution Poison – Eye and Skin Irritant

Refer to the Introduction for an explanation of the symbols.

Prosaro PRO*

*NOTE: As of January 1, 2025, www.keepitclean.ca indicates that the use of this product on certain crop types, particularly on barley and especially on malt barley, may have market access concerns. Please see Introduction for more information AND consult potential grain buyers before using this product.

Company:

Bayer (PCP#34093)

Formulation:

200 g/L prothioconazole, 100 g/L tebuconazole and 100 g/L fluopyram formulated as a suspension concentrate.

- Container sizes – 6 L, 97 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)*	Application Timing
Barley	Control of net blotch (<i>Pyrenophora teres</i>), spot blotch (<i>Cochliobolus sativus</i>), scald (<i>Rhynchosporium secalis</i>), septoria leaf blotch (<i>Septoria passerinii</i>), leaf, stem and stripe rusts (<i>Puccinia hordei</i> , <i>P. graminis</i> , <i>P. striiformis</i>), powdery mildew (<i>Blumeria graminis</i> syn. <i>Erysiphe graminis</i>)	304 mL	For suppression of Fusarium head blight and ergot, apply <i>Prosaro PRO</i> as a preventative spray within the time period when 70 to 100% of the barley main stem heads are fully emerged, to 3 days after full head emergence. Application at this timing will also control the listed leaf diseases.
	Suppression of Fusarium head blight (<i>Fusarium graminearum</i> syn. <i>Gibberella zeae</i>), ergot (<i>Claviceps purpurea</i>)		
Oats	Control of stem rust (<i>Puccinia graminis</i>), stagonospora (<i>Septoria</i>), leaf blotch and black stem (<i>Stagonospora avenae</i> syn. <i>Septoria avenae</i>), crown rust (<i>Puccinia coronata</i>)	304 mL	Leaf and Stem Diseases: Apply as a preventive foliar spray when the earliest disease symptoms appear on the leaves and stems. Fields should be observed closely for early disease symptoms, particularly when susceptible varieties are planted and/or under prolonged conditions favorable for disease development. For suppression of fusarium head blight and ergot, apply as a preventative spray within the time period from when at least 75% of the oat panicles on the main stem are fully emerged to when 50% of the panicles on the main stem are in flower.
	Suppression of Fusarium head blight (<i>Fusarium graminearum</i> syn. <i>Gibberella zeae</i>), ergot (<i>Claviceps purpurea</i>)		
Wheat (spring, winter and durum), triticale (spring and winter)	Control of rusts – leaf, stem and stripe (<i>Puccinia triticina</i> , <i>P. graminis</i> , <i>P. striiformis</i>), leaf and glume blotch (<i>Septoria tritici</i> , <i>Stagonospora nodorum</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), powdery mildew (<i>Blumeria graminis</i> syn. <i>Erysiphe graminis</i>), spot blotch (<i>Cochliobolus sativus</i>)	304 mL	For suppression of Fusarium head blight and ergot, apply as a preventative spray within the time period from when at least 75% of the wheat heads on the main stem are fully emerged to when 50% of the heads on the main stem are in flower. Optimal application timing is when first flowers emerge on the main heads. Application at this timing will also control the listed leaf diseases.
	Suppression of Fusarium head blight (<i>Fusarium graminearum</i> syn. <i>Gibberella zeae</i>), ergot (<i>Claviceps purpurea</i>)		

*A registered non-ionic surfactant must be used with this product (such as *Agral 90* or *AgSurf*) at 0.125% v/v.

Application Information:

- Water Volume:
 - **Ground:** minimum 40 L per acre.
 - **Aerial:** minimum 20 L per acre.

How it Works:

The active ingredients prothioconazole and tebuconazole are triazole fungicides with broad spectrum systemic activity. The active ingredient fluopyram is a carboximide (SDHI) fungicide with systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT apply more than once per season.
- **Preharvest interval:** DO NOT apply within 36 days of harvest.
- **Restricted Entry Interval:** DO NOT re-enter treated areas until 12 hours after application.
- **Re-cropping:** Treated areas may be replanted with any crop specified on this label and soybean as soon as practical after the last application. For all other crops, observe a 120 days re-cropping interval.
- **Storage:** Store this product away from food or feed. DO NOT contaminate water, food, or feed by storage or disposal. DO NOT store below freezing. If stored for 1 year or longer, shake well before using. Store the tightly closed container away from feeds, seeds, fertilizer, plants and foodstuffs. DO NOT use or store in or around the home. Keep the product in the original container during storage.
- **Environment:** Toxic to birds, small wild mammals, aquatic organisms, and non-target terrestrial plants. Observe spray buffer zones. See label for specific details on buffer zones. DO NOT apply directly to water or to areas where surface water is present. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Hazard Rating:

Keep out of reach of children.

Prothioconazole and Tebuconazole

Fungicide Group
3

Prosaro XTR, StarPro, Soraduo, Duplex, Shalimar, VIKING Tromso, Advantage Prothio +Teb 250 EC, Fusaro, Maxunitech Prothio + Teb EC

Company:

Bayer (*Prosaro XTR* – PCP#32824)

Albaugh (*StarPro* – PCP#34349)

Adama Canada (*Soraduo A* – PCP#34367; *Soraduo B* – PCP#34368)

Loveland Products Canada Inc distributed by Nutrien Ag Solutions (*Duplex A* – PCP#35153; *Duplex B* – PCP#35154)

Sharda CropChem (*Shalimar* – PCP#34357)

Viking Crop Production Partners Inc. (*VIKING Tromso Fungicide* – PCP#34794)

Advantage Crop Protection Inc. (*Advantage Prothio +Teb 250 EC* – PCP#34975)

NewAgco Inc. (*Fusaro* – PCP#34693)

Maxunitech North America, Inc. (*Maxunitech Prothio + Teb EC* – PCP#34128)

Formulation:

Prosaro XTR: 125 g/L prothioconazole and 125 g/L tebuconazole, formulated as an emulsifiable concentrate.

- Container sizes – 6.5 L, 104 L tote

StarPro, Shalimar, Maxunitech Prothio + Teb EC and Advantage Prothio +Teb 250 EC: 125 g/L prothioconazole and 125 g/L tebuconazole, formulated as an emulsifiable concentrate.

- Container size: 2 x 6.5 L

VIKING Tromso Fungicide, Fusaro: 125 g/L prothioconazole and 125 g/L tebuconazole, formulated as an emulsifiable concentrate.

- Container size: 2 X13 L, 104 L, 625 L

Soraduo: The Soraduo package contains 2 components. *Soraduo A* – 250 g/L Prothioconazole formulated as an emulsifiable concentrate (Container size – 9.71 L) and *Soraduo B* – 430 g/L Tebuconazole formulated as a suspension concentrate (container size – 5.65 L).

Duplex: The *Duplex* package contains 2 components. *Duplex A* – 250 g/L Prothioconazole formulated as an emulsifiable concentrate. (Container size – 9.71 L) and *Duplex B* – 430 g/L Tebuconazole formulated as a suspension concentrate (container size – 5.65 L).

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate for <i>Prosaro XTR</i> , <i>Shalimar</i> , <i>StarPro</i> , <i>Advantage Prothio + Teb 250 EC</i> , <i>Fusaro</i> , <i>Maxunitech Prothio + Teb EC</i> and <i>VIKING Tromso Fungicide per acre</i>	Application Rate for <i>Soraduo</i> and <i>Duplex</i> per acre		Application Timing
Wheat*	Control of septoria leaf blotch (<i>Septoria tritici</i>), glume blotch (<i>S. tritici</i> , <i>Stagonospora nodorum</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), leaf rust (<i>Puccinia recondita</i>), stem rust (<i>Puccinia graminis</i>), stripe rust (<i>Puccinia striiformis</i>), powdery mildew (<i>Erysiphe graminis</i>)	325 mL			FHB: apply within the time period from when at least 75% of the heads on the main stem are fully emerged to when 50% of heads on the main stem are in flower. For <i>Soraduo</i> and <i>Duplex</i> , use higher rate when disease pressure is expected to be high. Application at this timing will also control the listed leaf diseases.
	Suppression of fusarium head blight (FHB) (<i>Fusarium graminearum</i>)		121-162 ml/ac <i>Duplex A</i> + 70-94 ml/ac <i>Duplex B</i>	121-162 ml/ac <i>SORADUO™ A</i> + 70-94 ml/ac <i>SORADUO™ B</i>	
Barley*	Control of net blotch (<i>Pyrenophora teres</i>), scald (<i>Rhynchosporium secalis</i>), spot blotch (<i>Cochliobolus sativus</i>), septoria leaf blotch (<i>Septoria passerinii</i>), leaf rust (<i>Puccinia hordei</i>), stem rust (<i>Puccinia graminis</i>), stripe rust (<i>Puccinia striiformis</i>), powdery mildew (<i>Erysiphe graminis</i>)	325 mL			FHB: apply within the time period when 70 to 100% of barley heads on the main stem are fully emerged to 3 days after full head emergence. For <i>Soraduo</i> and <i>Duplex</i> , use higher rate when disease pressure is expected to be high. Application at this timing will also control the listed leaf diseases.
	Suppression of fusarium head blight (FHB) (<i>Fusarium</i> spp.)		121-162 ml/ac <i>Duplex A</i> + 70-94 ml/ac <i>Duplex B</i>	121-162 ml/ac <i>SORADUO™ A</i> + 70-94 ml/ac <i>SORADUO™ B</i>	
Triticale (spring and winter) - only if triticale is on the label	Control of Leaf & Glume Blotch (<i>Septoria tritici</i> , <i>Stagonospora nodorum</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), leaf rust (<i>Puccinia recondita</i>), stem rust (<i>Puccinia graminis</i>), stripe rust (<i>Puccinia striiformis</i>), powdery mildew (<i>Erysiphe graminis</i>), Spot Blotch (<i>Cochliobolus sativus</i>)	325 mL			For suppression of Fusarium Head Blight, apply Maxunitech Prothio + Teb EC as a preventative spray within the time period from when at least 75% of the heads on the main stem are fully emerged to when 50% of the heads on the main stem are in flower. Application at this timing will also control the listed leaf diseases.
	Suppression of fusarium head blight (<i>Gibberella zeae</i> / <i>Fusarium graminearum</i>)				

Crop	Diseases	Application Rate for <i>Prosaro XTR</i> , <i>Shalimar</i> , <i>StarPro</i> , <i>Advantage Prothio +Teb 250 EC</i> , <i>Fusaro</i> , <i>Maxunitech Prothio + Teb EC</i> and <i>VIKING Tromso Fungicide per acre</i>	Application Rate for <i>Soraduo</i> and <i>Duplex</i> per acre	Application Timing
Oat (only if oat is on the label)	Control of crown rust (<i>Puccinia coronata</i>), stem rust (<i>Puccinia graminis</i>), stagonospora leaf blotch (<i>Stagonospora nodorum</i>), black stem (<i>Stagonospora avenae</i> syn. <i>Septoria avenae</i>)	325 mL		Apply as a preventative foliar spray when the earliest disease symptoms appear on leaves and stems. Fields should be observed closely for early disease symptoms, particularly when susceptible varieties are planted and/or under prolonged conditions favorable for disease development

*Soraduo and Duplex is for suppression of fusarium head blight only.

Application Information:

- DO NOT apply during periods of dead calm or when winds are gusty. Ensure uniform coverage.
- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - **Aerial:** Follow detailed label recommendations for aerial application for each product.

How it Works:

The active ingredients prothioconazole and tebuconazole are demethylation inhibitors with broad-spectrum systemic activity. To be used as a preventative fungicide application. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 1 application of this product per season.
- **Grazing:** DO NOT allow livestock to graze or feed green forage to livestock prior to 6 days after treatment. Straw cut after harvest may be fed or used for bedding.
- **Preharvest interval:** 36 days
- **Restricted Entry Interval:** DO NOT re-enter treated fields until 12 hours post-application.
- **Re-cropping:** Treated areas may be replanted with any crop specified on the label and soybean as soon as practical after last application. For oat, DO NOT plant back within 30 days of application. For all other crops, DO NOT plant back until 120 days after application. Tebuconazole is persistent and will carryover. It is recommended that any products containing tebuconazole not be used in areas treated with this product during the previous season.
- **Storage:** DO NOT store in or around the home. DO NOT store at temperatures below freezing. Keep in original tightly closed container and store away from feeds, seeds, fertilizer, plants and food stuffs. Keep away from sources of heat. Shake well before using if stored for more than 1 year. DO NOT contaminate water, food, or feed by storage or disposal.
- **Environment:** Toxic to birds, small wild animals, aquatic organisms, and non-target plants. As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests. DO NOT apply to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff is hazardous to aquatic organisms in neighbouring areas. To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil, or clay. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body. Follow buffer zones as per the product label.
- **Rainfast:** 1 hour

Hazard Rating:

Danger – Eye Irritant



Caution – Skin Irritant

Refer to the Introduction for an explanation of the symbols.

Fungicide Group

3

Prothioconazole

*Proline 480 SC, Holdfast, Soratel, Joust, Pavise 480SC, Advantage Prothioconazole 480 SC, Taj, VIKING Prothioconazol, Rambler, Maxunitech Prothioconazole 480SC***Company:**Bayer (*Proline 480 SC* – PCP#28359)WinField United Canada (*Holdfast* – PCP#34013)ADAMA Canada (*Soratel* – PCP#34155)Nufarm Agriculture (*Joust* – PCP#34800)Albaugh (*Pavise 480SC* – PCP#34769)Advantage Crop Protection Inc. (*Advantage Prothioconazole 480 SC* – PCP#34978)Viking Crop Production Partners Inc. (*VIKING Prothioconazole* – PCP#35109)Sharda Crop Chem (*Taj* – PCP#35163)NewAgco Inc. (*Rambler* – PCP#35048)Maxunitech North America, Inc. (*Maxunitech Prothioconazole 480SC* – PCP#34735)**Formulation:****Proline 480 SC:** 480 g/L prothioconazole formulated as a suspension concentrate.

- Container size – 5.1 L

Holdfast: 480 g/L prothioconazole formulated as a suspension concentrate.

- Container size – 2 x 101 L

Soratel: 250 g/L prothioconazole formulated as emulsifiable concentrate.

- Container size – 2 x 9.6 L

Joust: 250 g/L prothioconazole formulated as emulsifiable concentrate.

- Container size – 2 x 9.71 L

Pavise 480SC: 480 g/L prothioconazole formulated as a suspension concentrate.

- Container size – 2 x 5.1 L

Advantage Prothioconazole 480 SC: 480 g/L prothioconazole formulated as a suspension concentrate.

- Container size – 2 x 10.2 L

Taj: 480 g/L prothioconazole formulated as a suspension concentrate.

- Container size – 2 x 5.1 L

VIKING Prothioconazole: 480 g/L prothioconazole formulated as a suspension concentrate.

- Container size – 2 x 10 L, 120 L

Rambler: 480 g/L prothioconazole formulated as a suspension concentrate.

- Container size – 2 x 10 L, 120 L

Maxunitech Prothioconazole 480SC: 480 g/L prothioconazole formulated as a suspension concentrate.

- Container size – 2 x 5.1 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)		Application Timing
		480 g/L products	250 g/L products	
Wheat	Control of septoria leaf blotch (<i>Septoria tritici</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), leaf rust (<i>Puccinia recondita</i>)	127 mL ¹	240 mL ³	Apply as a preventative foliar spray when the earliest disease symptoms appear on leaves and stems. A second application may be made after 7 days.
	Control of glume blotch (<i>Stagonospora nodorum</i>)	127 to 170 mL ¹		Apply within the time period when at least 75% of heads on the main stem are fully emerged to when 50% of heads on the main stem are in flower. For FHB, use higher rate when disease pressure is expected to be high or to provide the highest level of mycotoxin reduction.
	Suppression of fusarium head blight (FHB) (<i>Fusarium</i> spp.)	127 to 170 mL ¹	240 to 320 mL	
Pearl millet, proso millet, rye, triticale, Buckwheat	Control of foliar rusts caused by <i>Puccinia</i> spp.	127 to 170 mL	-	Apply as a preventative foliar spray when disease symptoms appear.
	Suppression of fusarium head blight (<i>Fusarium</i> spp.) – except buckwheat	127 to 170 mL ¹	-	Apply as a preventative spray.
Barley	Control of net blotch (<i>Pyrenophora teres</i>), scald (<i>Rhynchosporium secalis</i>), spot blotch (<i>Cochliobolus sativus</i>)	85 to 127 mL ¹	240 mL ³	Apply as a preventative foliar spray when the earliest disease symptoms appear on leaves and stems. A second application may be made after 7 days.
	Suppression of fusarium head blight (FHB) (<i>Fusarium</i> spp.)	127 to 170 mL ¹	240 to 320 mL	Apply within the time period when 70 to 100% of barley heads on the main stem are fully emerged to 3 days after full head emergence. Use higher rate when disease pressure is expected to be high or to provide the highest level of mycotoxin reduction.
Oats	Control of crown rust (<i>Puccinia coronata</i>)	127 mL ¹	240 mL ³	Apply as a preventative foliar spray when the earliest disease symptoms appear on leaves and stems. A second application may be made after 7 days.
Corn	Control of Grey Leaf Spot (<i>Cercospora zea-maydis</i>) and suppression of Fusarium and Gibberella ear rots (<i>Fusarium</i> spp. and <i>Gibberella</i> spp.) and suppression of the stalk rot pathogens <i>Fusarium</i> spp., <i>Gibberella</i> spp. and <i>Colletotrichum</i> spp. which may cause stalk lodging.	170 mL ¹	240 to 320 ml (follow product label)	For optimum suppression of Fusarium Ear Rot, apply from silking (tip of stigmata visible) to silk browning (stigmata drying).
	Control of Rusts (<i>Puccinia sorghi</i> , <i>Puccinia polysora</i>), Eyespot (<i>Kabatiella zea</i> or <i>Aureobasidium zea</i>), and Northern Blight (<i>Setosphaeria turcica</i>)	127 mL (170 mL for Maxunitech Prothioconazole 480SC)	-	For leaf diseases, apply as a preventive foliar spray when the earliest disease symptoms appear on the leaves and stems.

Crop	Diseases	Application Rate (per acre)		Application Timing
		480 g/L products	250 g/L products	
Canola, rapeseed, oriental mustard, <i>Brassica carinata</i> [if oriental mustard (<i>Brassica juncea</i>) and <i>Brassica carinata</i> indicated on label]	Control of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	127 to 150 mL ²	240 to 280 mL	Apply at 20 to 50% bloom stage (prior to petal fall). Use high rate if history of heavy disease or if dense crop stand. For Soratel, a second application at a rate of 240 ml/acre may be applied 7-10 days later, up to full bloom, if disease persists or weather conditions are favorable for disease development. When conditions favoring disease are severe, use the shorter interval.
Soybean, if on label	Control of frogeye leaf spot (<i>Cercospora sojina</i>)	85 mL	160 mL	Apply when first disease symptoms are found or when the risk of infection is imminent.
Chickpea	Control of ascochyta blight (<i>Ascochyta rabiei</i>)	127 to 170 mL ²	240 to 320 mL	Apply at first sign of disease. Repeat applications every 10 to 14 days. Use high rate when conditions favour disease or when growing susceptible varieties.
	Suppression of Grey mould (<i>Botrytis cinerea</i>)	170 mL	-	
Lentil	Control of ascochyta blight (<i>Ascochyta sp.</i>) Control of white mould (<i>Sclerotinia sclerotiorum</i>) if on label.	127 to 170 mL ²	240 to 320 mL	Apply at the beginning of flowering or at the first sign of disease as per indicated on label. A maximum of 340 mL/acre can be applied per crop year for lentil for 480 g/L products and 647 mL/acre for 250 mL/acre products. After the initial application, 1 additional application may be made 10 to 14 days afterwards if conditions remain favourable for continued or increased disease development. Apply the higher rate when conditions favour disease development or when growing less disease resistant varieties. Maximum of two applications per year.
	Suppression of grey mould (<i>Botrytis cinerea</i>) if on label.	170 mL	-	
	Suppression of anthracnose (<i>Colletotrichum lentis</i>) if on label.	129 to 170 mL ²	-	
Field pea (Soratel only)	Suppression of ascochyta blight (<i>Ascochyta sp.</i>), control of white mould (<i>Sclerotinia sclerotiorum</i>)	-	240 to 320 mL	
Flax (linseed), borage	Control of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	127 to 150 mL ²	240 to 280 mL	Apply at 20 to 50% bloom. Best protection will be achieved when the fungicide is applied prior to petals beginning to fall, allowing the maximum number of petals to be protected. Use high rate in fields with a history of heavy disease pressure or for dense crop stands.
Sunflower (excluding those for export), safflower	Suppression of sclerotinia head rot (<i>Sclerotinia sclerotiorum</i>)	170 mL ¹	-	Apply when crop is in 10 to 50% disk flower bloom stage.
	If on label: Sunflower rust (<i>Puccinia helianthi</i>) Safflower rust (<i>Puccinia carthami</i>)	170 mL	320ml	Apply when average rust severity reaches 1% on the upper four fully expanded leaves prior to or during bloom

¹ Apply with non-ionic surfactant, e.g. AgSurf or Agral 90 at 0.125% v/v. Consult the products labels.

² May be applied with the lowest rate of non-ionic surfactant, e.g. AgSurf or Agral 90. Consult the products labels.

³ Joust: When used in wheat, barley and oat, apply with a non-ionic surfactant (AgSurf, Agral 90, Enhance, or Carrier at 0.125%). The lowest labelled rate of adjuvant (Enhance, Carrier, AgSurf or Agral 90) may be tank-mixed with Joust in canola, flax, chickpea, lentil, corn, soybean, sunflower, safflower, and sugar beet.

Application Information:

- DO NOT apply during periods of dead calm or when winds are gusty. Ensure uniform coverage.
- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - **Aerial:** minimum of 20 L per acre when the product is registered for aerial applications. Follow detailed label recommendations for aerial application. *Joust* is not registered for aerial applications.

How it Works:

The active ingredient prothioconazole is a triazole fungicide with broad-spectrum systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - *Corn, flax, borage, sunflower, soybean, safflower* – DO NOT exceed 1 application of this product per season.
 - *Wheat, barley, oat, canola, lentil* – DO NOT exceed 2 applications of this product per season.
 - *Chickpea* – DO NOT exceed 3 applications of this product per season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:**
 - *Barley, wheat, oat, rye, triticale, millet* – 30 days
 - *Canola, Rapeseed, Oriental Mustard, flax, borage* – 36 days
 - *Chickpea, lentil, field pea* – 7 days
 - *Corn* – 14 days
 - *Soybean* – 20 days
 - *Sunflower, safflower* – 45 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 24 hours of application.
- **Re-cropping:** May be re-planted with any crop specified on the label as soon as practical. For crops not listed, wait 30 days.
- **Storage:** DO NOT store at temperatures below freezing. Keep in original tightly closed container and store away from feeds, seeds, fertilizer, plants and food stuffs. Keep away from sources of heat. Shake well before using if stored for more than 1 year. Do not use or store in or around the home.
- **Environment:** Toxic to aquatic organisms and non-target terrestrial plants. Observe spray buffer zones specified on label under DIRECTIONS FOR USE. 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 because of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.
- **Rainfast:** 1 hour
- **Aerial Application:** DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply when wind speed is greater than 16 km/h at 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 rotor-span.

Hazard Rating:



Caution – Poison

Refer to the Introduction for an explanation of the symbols.

Prothioconazole and Pyraclostrobin

Fungicide Group
3, 11

Spaxor, VIKING Vaasa

Company

NewAgco Inc. [Spaxor (Rambler – PCP # 35048, Spade – PCP #32927)]

VIKING Crop Production Partners Inc. "[VIKING Vaasa (VIKING Prothioconazole – PCP#35109, VIKING Pyraclostrobin PCP#34795)]

Formulation

Spaxor is a co- pack of Rambler and Spade. Rambler (480 g/L Prothioconazole formulated as suspension concentrate), Spade (250 g/L Pyraclostrobin formulated as emulsifiable concentrate), container size: co-pack 10L of Rambler, 13L of Spade

VIKING Vaasa is a co- pack of VIKING Prothioconazole and VIKING Pyraclostrobin. VIKING Prothioconazole (480 g/L Prothioconazole formulated as suspension concentrate), VIKING Pyraclostrobin (250 g/L Pyraclostrobin formulated as emulsifiable concentrate), container size: co-pack 10L of VIKING Prothioconazole, 13L of VIKING Pyraclostrobin

Crops, Diseases, Rates and Timing:

Crop*	Disease**	Rate per acre	Crop stage and other timing information***
Wheat	Control of Septoria leaf spot (<i>Septoria tritici</i> , <i>Leptosphaeria nodorum</i>), Tan spot (<i>Pyrenophora tritici-repentis</i>), Leaf rust (<i>Puccinia recondita</i>), Spot blotch (<i>Cochliobolus sativus</i>), Stripe rust (<i>Puccinia striiformis</i>), Powdery mildew (<i>Erysiphe graminis</i> f. sp. <i>tritici</i>)	Spaxor (162.5 mL Spade + 125 mL Rambler) VIKING Vaasa (162.5 mL VIKING Pyraclostrobin + 125 mL VIKING Prothioconazole)	Early disease symptoms or immediately after flag leaf emergence
Barley	Control of Net blotch (<i>Pyrenophora teres</i>), Spot blotch (<i>Cochliobolus sativus</i>), Stripe rust (<i>Puccinia striiformis</i>), Scald (<i>Rhynchosporium secalis</i>)		Early disease symptoms or immediately after flag leaf emergence
Oats	Control of Crown rust (<i>Puccinia coronata</i>)		Early disease symptoms or immediately after flag leaf emergence
Chickpeas	Ascochyta blight (<i>Ascochyta</i> spp.)		Apply at the first sign of disease
Lentils	Anthracnose (<i>Colletotrichum</i> spp.), Ascochyta blight (<i>Ascochyta</i> spp.)		At the beginning of flowering OR at the onset of symptoms
Dry field peas	Mycosphaerella blight (<i>Mycosphaerella</i> spp.)		
Dry beans <i>Phaseolus</i> spp.	Anthracnose (<i>Colletotrichum</i> spp.), Powdery mildew (<i>Erysiphe</i> spp.), Rust (<i>Uromyces</i> spp.)		
Dry beans <i>Vigna</i> spp.	Anthracnose (<i>Colletotrichum</i> spp.), Mycosphaerella blight (<i>Mycosphaerella</i> spp.), Powdery mildew (<i>Erysiphe</i> spp.), Rust (<i>Uromyces</i> spp.)		

Crop*	Disease**	Rate per acre	Crop stage and other timing information***
Dry beans <i>Lupinus</i> spp.	Mycosphaerella blight (<i>Mycosphaerella</i> spp.), Powdery mildew (<i>Erysiphe</i> spp.)		At the beginning of flowering OR at the onset of symptoms
Faba beans	Mycosphaerella blight (<i>Mycosphaerella</i> spp.), Powdery mildew (<i>Erysiphe</i> spp.)		
Soybeans	Frog eye leaf spot (<i>Cercospora sojina</i>)		Apply at the first sign of disease

Application information

- Water Volume:
 - **Ground:** Minimum water volume 40 L/acre
 - **Air:** Minimum water volume 20 L/acre

How it Works

Prothioconazole: is a broad-spectrum systemic fungicide for the control or suppression of listed Ascomycetes, Basidiomycetes and Deuteromycetes diseases on the crops listed earlier. Pyraclostrobin: is a broad-spectrum foliar fungicide belonging to the strobilurin chemical class. It acts by inhibition of mitochondrial respiration. This leads to a reduction of the available ATP quantity in the fungal cell. It is used for control or suppression of fungal diseases on registered crops. For more information refer to "Fungicide Modes of Action".

Tank Mixes:

According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Maximum number of applications:** Do not make more than one sequential application of *Spaxor* or *VIKING Vaasa*. Do not make more than a total of two applications of *Spaxor* or *VIKING Vaasa* per season.
- **Rainfall:** Avoid application when heavy rain is in forecast.
- **Rainfast:** One hour
- **Pre-harvest Intervals:** 30 days after application for barley, rye, wheat, dry beans (*Phaseolus*, *Vigna* and *Lupinus* spp.), faba beans, lentils, dry field peas, soybean and chickpeas. 7 days for succulent shelled beans and peas.
- **Re-entry:** 24 hours
- **Grazing:** None specific.
- **Re-cropping interval:** Treated areas may be replanted with any crop specified on this label as soon as practical after the last application. For crops not listed on this label, do not plant back within 30 days of last application.
- **Aerial Application:** Follow the label carefully. 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 rotor span.
- **Storage:** Store this product away from food and feed. Keep away from direct sunlight. Keep away from fire or open flame or other sources of heat. Do not store at temperatures below freezing. If stored for 1 year or longer, shake well before using. Store the tightly closed container away from feeds, seeds, fertilizer, plants and foodstuffs. Do not use or store in or around the home. Keep in original container during storage.
- **Environment:** Toxic to aquatic organisms, non-target terrestrial plants and small wild mammals. Observe spray buffer zones specified under DIRECTIONS FOR USE. To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Hazard Rating:



Poison. Treat symptomatically.

Pyraclostrobin

Headline EC*, Spade, Raclos, Preach, VIKING Pyraclostrobin, Tide Pyraclostrobin Shield, Pyraline 250

*NOTE: This product is no longer manufactured but product still remains in the distribution system. This product may be removed from future editions.

Company:

BASF Canada (Headline EC – PCP#27322)

NewAgco Inc. (Spade – PCP#32927)

Albaugh (Raclos – PCP#34615)

Sharda Cropchem Limited (Preach – PCP#33928)

Viking Crop Production Partners Inc. (VIKING Pyraclostrobin Fungicide – PCP#34795)

Tide International Canada Inc. (Tide Pyraclostrobin Shield – PCP#35577)

Vincere Agri Solutions Ltd. (Pyraline 250 – PCP#35597)

Formulations:

Headline EC – 250 g/L of pyraclostrobin formulated as an emulsifiable concentrate.

- Container sizes – case (2 x 6.5 L), 120 L shuttle, 400 L tote

Spade – 250 g/L of pyraclostrobin formulated as an emulsifiable concentrate.

- Container size – case (2 x 13 L)

Preach and Raclos and Pyraline 250 – 250 g/L of pyraclostrobin formulated as an emulsifiable concentrate.

- Container size – case (2 x 6.5 L)

VIKING Pyraclostrobin Fungicide – 250 g/L of pyraclostrobin formulated as an emulsifiable concentrate.

- Container size – 2 X 13 L

Tide Pyraclostrobin Shield – 250 g/L of pyraclostrobin formulated as an emulsifiable concentrate.

- Container size – 6.5-1000 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Wheat	Control of tan spot (<i>Pyrenophora tritici-repentis</i>), septoria leaf blotch (<i>Septoria tritici</i> , <i>S. nodorum</i>), leaf rust (<i>Puccinia recondita</i>)	121 to 242 mL	Apply single application immediately after flag leaf emergence. Use higher rate to obtain extended protection. If disease persists or weather conditions are favourable for disease development, apply a second application 10 to 14 days later with a fungicide that contains a different mode of action. To maximize yields in cereals, it is important to protect the flag leaf from disease.
	Control of powdery mildew (<i>Erysiphe graminis</i> f. sp. <i>tritici</i>), spot blotch (<i>Cochliobolus sativus</i>), stripe rust (<i>Puccinia striiformis</i>)	161 to 242 mL	
Barley	Control of net blotch (<i>Pyrenophora teres</i>)	121 to 242 mL	
	Control of scald (<i>Rhynchosporium secalis</i>), spot blotch (<i>Cochliobolus sativus</i>), stripe rust (<i>Puccinia striiformis</i>)	161 to 242 mL	
Rye	Control of leaf rust (<i>Puccinia recondita</i>)	121 to 242 mL	
	Control of powdery mildew (<i>Erysiphe graminis</i>)	161 to 242 mL	
Oat (only if on label)	Control of crown rust (<i>Puccinia coronata</i>)	121 to 161 mL	
Canola, rape-seed, canola quality <i>Brassica juncea</i> , mustard (oilseed and condiment) (if on label)	Control of black spot (<i>Alternaria brassicae</i> , <i>A. raphani</i>), blackleg (<i>Leptosphaeria maculans</i>)	121 to 161 mL	Apply in tank mix with supported canola herbicides to control blackleg at the 2 to 6-leaf (rosette) stage. Apply to control alternaria black spot at 20 to 50% bloom (suppression) to early pod stage (90% bloom) for control. <i>Headline EC</i> can be tank-mixed with <i>Lance WDG Fungicide</i> at 20 to 50% flower to control sclerotinia stem rot and suppress black spot.

Crop	Diseases	Application Rate (per acre)	Application Timing
Corn	Control of common rust (<i>Puccinia sorghi</i>), grey leaf spot (<i>Cercospora zeae-maydis</i>)	161 to 242 mL	Begin all applications prior to disease development. If disease persists or weather conditions are favourable for disease development, apply a second time 10 to 14 days later with a fungicide that contains a different mode of action. Use higher rate and shorter interval when disease pressure is high.
Chickpea	Control of ascochyta blight (<i>Ascochyta rabiei</i>)	161 to 242 mL <i>Headline EC</i> must be tank-mixed with 0.14 to 0.17 kg/acre <i>Lance WDG</i>	Apply a tank-mix of <i>Headline EC</i> with <i>Lance</i> at the beginning of flowering or the onset of symptoms. Ascochyta blight can develop quickly once established so early detection is essential. DO NOT apply sequential applications of this tank-mix; alternate to a fungicide with a mode of action other than Group 7 or 11 for at least one application.
Lentil	Control of anthracnose (<i>Colletotrichum truncatum</i>), ascochyta blight (<i>Ascochyta lentis</i>)	161 mL	Apply at the beginning of flowering or at the onset of symptoms for more aggressive diseases (anthracnose in lentils). If disease persists or weather conditions are favourable for disease development, apply a second application 10 to 14 days later with a fungicide that contains a different mode of action.
Field pea	Control of mycosphaerella blight (<i>Mycosphaerella</i> spp., <i>Ascochyta</i> spp.), powdery mildew (<i>Erysiphe</i> spp.)	161 mL	
	Suppression of downy mildew (<i>Peronospora viciae</i> f.sp. <i>psii</i>)	161 to 242 mL	
Dry bean	Control of anthracnose (<i>Colletotrichum lindemuthianum</i>), powdery mildew (<i>Erysiphe</i> spp.), rust (<i>Uromyces</i> spp.)	161 mL	
Faba bean	Control of ascochyta blight (<i>Ascochyta fabae</i>), powdery mildew (<i>Erysiphe</i> spp.)	161 mL	
Sunflower (if on label)	Suppression of rust (<i>Puccinia helianthi</i>)	161 mL	For optimum disease suppression, apply prior to disease development. If disease persists or weather conditions are favourable for disease development, apply a second application 10 to 14 days later with a fungicide that contains a different mode of action.
Flax (including low-linolenic acid varieties) (if on label)	Control of pasmo (<i>Septoria linicola</i>)	121 to 161 mL	Apply at the mid flower stage (7 to 10 days after the initiation of flowering). If disease persists or weather conditions are favourable for disease development, apply a second application 10 to 14 days later with a fungicide that contains a different mode of action.
Alfalfa (for seed production)	Control of common leaf spot (<i>Pseudopeziza medicaginis</i>)	161 mL	Apply at the beginning of flowering (10 to 30% bloom) or at the onset of disease.
Bluegrasses; fescues; rye-grasses (for seed production)	Control of leaf rust (<i>Puccinia recondita</i>), stem rust (<i>P. graminis</i>) Suppression of powdery mildew (<i>Erysiphe graminis</i>)	161 to 271 mL	Apply prior to disease development. If disease conditions exist, apply again 12 to 14 days later with a fungicide that contains a different mode of action. Use higher rate and shorter interval when high disease pressure.

Crop	Diseases	Application Rate (per acre)	Application Timing
Potato*	Control of early blight (<i>Alternaria solani</i>)	182 to 271 mL	Apply prior to row closure or when conditions become favourable for disease development. Apply on a 7 to 14 day interval. Under high disease pressure, use higher rate or tank mix <i>Headline EC</i> with <i>Bravo 500</i> . It is recommended that no more than 1 application of <i>Headline EC</i> or <i>Spade</i> is made before switching to a fungicide with an alternate mode of action.
	Control of late blight (<i>Phytophthora infestans</i>)	182 to 271 mL	Apply prior to row closure or when conditions become favourable for disease development. Apply on a 5 to 7 day interval. Under high disease pressure, use higher rate or tank mix <i>Headline EC</i> with <i>Bravo 500</i> . If using a tank-mix, apply on a 7 to 10 day interval. DO NOT make more than 1 application of <i>Headline EC</i> or <i>Spade</i> before switching to a fungicide with an alternate mode of action.
Timothy hay**	Control of brown stripe (<i>Cercosporidium graminis</i>), leaf streak (<i>Drechslera phlei</i>), purple eye spot (<i>Cladosporium phlei</i>)	161 to 271 mL	Apply prior to disease development. Use higher rate when disease pressure is high. If disease persists or weather conditions are favourable for disease development, apply a second time 14 days later, with a fungicide with a different mode of action. In absence of an alternative fungicide registered for the specific diseases to be treated, for resistance management purposes, the maximum number of applications is limited to one. DO NOT apply more than 162 mL/acre by aerial application.
Soybean	Control of frog-eye leaf spot (<i>Cercospora sojina</i>)	161 to 242 mL	Apply at the beginning of flowering. If disease persists or weather conditions are favourable for disease development, apply a second time 10 to 14 days later with a fungicide that contains a different mode of action.

*BASF Canada does not recommend use of *Headline EC* alone on potato due to potential for fungicide resistance.

**Minor use label expansion. Follow the product label. Do not apply *VIKING Pyraclostrobin Fungicide* on Timothy hay.

Application Information:

- **Water Volume:**
 - **Ground:** Use a minimum water volume of 40 L per acre on oilseeds, cereals, pulses, alfalfa and grasses; use 80 L per acre on potatoes. Ensure thorough coverage of foliage.
 - **Aerial:** Use a minimum water volume of 20 L per acre. Ensure thorough coverage of foliage. DO NOT apply more than 160 mL per acre by aerial application.
 - **Pivot or Sprinkler irrigation (Headline EC):** DO NOT exceed 0.64 cm (1/4 inch) (63,500 L) per hectare. DO NOT apply registered tank mixes in potato, chickpea, and canola by pivot or sprinkler irrigation. Apply only through overhead sprinkler systems including centre pivot and lateral move containing low pressure drop nozzles following label.

How it Works:

The active ingredient pyraclostrobin is a strobilurin fungicide with broad spectrum contact and systemic activity. To be used as a preventative application when environmental conditions are favourable for disease development. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Spade: no registered tank mixes.

VIKING Pyraclostrobin Fungicide: no registered tank mixes.

Herbicides: *Headline EC* at a rate of 120 to 160 mL per acre can be tank mixed with *Ares* on Clearfield canola, *Liberty Herbicide* (150SN or 200SN) in glufosinate ammonium tolerant canola (e.g.: LibertyLink canola), and registered glyphosate herbicides in glyphosate-tolerant canola (e.g.: Roundup Ready). *Tide Pyraclostrobin Shield* can be tank mixed with the following canola herbicides at registered rates and timings: *POAST® ULTRA* Liquid Emulsifiable Herbicide in canola; registered glyphosate herbicides in glyphosate tolerant canola (e.g. Roundup® Ready).

Fungicides: On chickpea, *Headline EC* and *Tide Pyraclostrobin Shield* at a rate of 160 to 240 mL per acre must be applied in tank-mix with 145 to 170 grams per acre *Lance* for control of ascochyta blight. On potatoes, *Headline EC* at rates of 180 to 270 mL per acre may be applied in tank-mix with

Bravo 500 following label rates, additional use recommendations, restrictions, and precautions for the control of late blight. On canola, *Headline EC* and *Tide Pyraclostrobin Shield* can be tank mixed with *Lance Fungicide* at 142 grams per acre at 20 to 50% flowering to control sclerotinia stem rot and suppress black spot.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Note:** BASF Canada does not recommend use of *Headline* alone on potato due to potential for resistance.
- **Maximum number of applications:** DO NOT exceed 1 sequential application of *Headline EC* or *Spade* per season. Any subsequent applications of this product must be in combination with a fungicide that contains a different mode of action.
 - **Alfalfa** – DO NOT exceed 1 application per season.
 - **Canola, rapeseed, canola quality Brassica juncea, mustard, flax, dry bean, faba bean, lentil, field pea, chickpea, bluegrass, fescue grass, ryegrass, corn, sunflower** – DO NOT exceed 2 applications of this product per season.
 - **Potato** – DO NOT exceed 3 applications per season.
- **Grazing:** DO NOT graze treated corn crops within 6 days of last application. DO NOT feed alfalfa hay or forage to livestock. All other crops listed can be grazed or fed to livestock.
- **Rainfast:** 1 hour after application.
- **Preharvest interval:**
 - **Barley, rye, wheat, oat** – apply no later than the end of flowering
 - **Corn** – 7 days
 - **Pulses** – 30 days
 - **Forage grasses** – 14 days
 - **Alfalfa** – not applicable
 - **Oilseeds** – 21 days
 - **Potatoes** – 3 days
 - **Soybean** – 21 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** Crops listed on label may be planted immediately following last application. Wait 14 days before planting all other crops.
- **Storage:** Store in tightly closed original container in a cool, dry, locked, well-ventilated area without a floor drain. DO NOT freeze. Keep away from food, feed, and fertilizer.
- **Environment:** Highly toxic to aquatic organisms. Avoid overspray or drift to sensitive habitats. Maintain specified buffer zones. DO NOT spray non-target terrestrial or aquatic habitats. Do not contaminate water during cleaning or disposal.

Hazard Rating:



Danger – Poison Fatal if swallowed. Severely irritating to eyes and skin. Contains aromatic petroleum distillates. Wear gloves, coveralls, and eye protection.

Refer to the Introduction for an explanation of the symbols.

Pyraclostrobin and Tebuconazole

Fungicide Group
3, 11

Tornado Pro, VIKING Drobak

Company:

NewAgco Inc. [*Tornado Pro* (*Tornado* – PCP#33995, *Spade* – PCP#32927)]

VIKING Crop Production Partners Inc. "[*VIKING Drobak* (*VIKING Pyraclostrobin* – PCP#34795, *VIKING Tebuconazole* PCP#34770)]

Formulation:

- *Tornado Pro* (*Tornado* – 250 g/L tebuconazole formulated as an emulsion in water, container sizes – 9.8 L and *Spade* – 250 g/L pyraclostrobin as an emulsifiable concentrate, container sizes – 7.7 L
- *VIKING Drobak* (*VIKING Tebuconazole* – 250 g/L tebuconazole formulated as an emulsion in water, container sizes – 12 L, 96 L and *VIKING Pyraclostrobin* – 250 g/L pyraclostrobin as an emulsifiable concentrate, container sizes – 9.6 L, 77 L)

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Wheat (spring, winter, durum)	Stem rust, leaf rust, stripe rust, septoria leaf blotch, tan spot	<i>Tornado Pro</i> (150 mL <i>Tornado</i> + 120 mL <i>Spade</i>)	Apply immediately after flag stage or at the first sign or very early stage of disease, especially if weather conditions are conducive to disease development.
Barley	Net blotch, spot blotch, scald, stem rust, leaf rust, stripe rust, septoria leaf blotch, powdery mildew	<i>VIKING Drobak</i> (150 mL <i>VIKING Tebuconazole</i> + 120 mL <i>VIKING Pyraclostrobin</i>)	

Application Information:

- **Water Volume:**
 - **Ground:** minimum of 40 L per acre.
 - **Aerial:** minimum of 20 L per acre.

How it Works:

The active ingredient tebuconazole is a triazole demethylation inhibitor (DMI) fungicide with systemic broad-spectrum activity. The active ingredient pyraclostrobin is a strobilurin fungicide with broad spectrum contact and systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 1 application per season.
- **Preharvest interval:** DO NOT apply within 36 days of harvest.
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** Treated areas may be replanted following harvest with any crop listed on the label. DO NOT replant treated areas for 120 days after last application for crops not listed on the label.
- **Storage:** Store in a cool, dry, locked, well ventilated area without floor drain and prevent cross contamination with other pesticides, fertilizers, food and feed.
- **Environment:** Any products containing tebuconazole should not be used in areas treated with this product during the previous season. This product is toxic to birds, small wild animals, aquatic organisms and non-target plants. Avoid overspray or drift to sensitive habitats. Maintain specified buffer zones. DO NOT spray non-target terrestrial or aquatic habitats. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Hazard Rating:

Tornado /VIKING Tebuconazole:

 Danger Poison – Corrosive to Eyes

Spade /VIKING Pyraclostrobin:

 Danger – Poison – Corrosive to Eyes

 Danger – Eye and Skin Irritant

Refer to the Introduction for an explanation of the symbols.

Pyrimethanil

Company:

Bayer (*Scala SC* – PCP#28011)

Sharda CropChem (*Shape SC* – PCP#34661)

Formulation:

400 g/L pyrimethanil formulated as a suspension concentrate.

- Container size – 6.07 L

Crops, Diseases and Timing:

Control of early blight (*Alternaria solani*) on potato. Apply when plants are 15 to 20 cm high or when disease threatens. Repeat applications at 7 to 14 day intervals or as necessary to maintain disease control. If severe disease conditions exist, use the 7 day interval. Minimum spray interval is 7 days. Ensure complete coverage.

Rates:

Apply at 300 mL per acre as a tank mix with *Bravo ZN*.

Application Information:

- **Water Volume:**
 - **Ground:** minimum of 120 L per acre.
 - **Aerial:** minimum of 14 L per acre.

How it Works:

The active ingredient pyrimethanil is an anilinopyrimidine fungicide with contact and systemic activity. To be used as a preventative fungicide application. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Fungicides: To be applied ONLY as a tank mix with *Bravo ZN*. Follow mixing instructions provided on the label.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 3 applications of this product per season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** 7 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** A 30 day plant-back interval is required for potatoes and wheat and 130 days for all other crops.
- **Storage:** DO NOT allow product to freeze. If stored more than 1 year, shake well before using. Store in tightly closed container away from fertilizer, seeds, feed or food.
- **Environment:** Maintain a 1 m buffer zone between areas sprayed and aquatic systems. Toxic to aquatic organisms. DO NOT apply where runoff is likely to occur.

Hazard Rating:



Caution Poison – Skin Irritant

Refer to the Introduction for an explanation of the symbols.

Quadris Top

Fungicide Group
3, 11

Company:

Syngenta Canada (PCP#30518)

Formulation:

200 g/L azoxystrobin and 125 g/L difenoconazole formulated as a flowable suspension concentrate.

- Container size – 2 x 10.125 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Potato	Control of early blight (<i>Alternaria solani</i>)	229 to 405 mL	Apply on a 7 to 14 day interval, starting prior to disease establishment.
Potato <i>continued</i>	Suppression of brown spot (<i>Alternaria alternata</i>), black dot (<i>Colletotrichum coccodes</i>)	229 to 405 mL	Apply prior to disease. Apply no more than 1 application to target these diseases. If disease pressure is high, use the highest rate.
	Suppression of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	405 mL	Apply at full bloom. Repeat applications at intervals of 7 to 10 days.

Application Information:

- **Water Volume:**
 - **Ground:** Use sufficient water volume to obtain adequate coverage. Use minimum 60 L per acre.
 - **Aerial:** Use sufficient water volume to obtain adequate coverage. Use minimum 60 L per acre.

How it Works:

The active ingredient azoxystrobin belongs to a strobilurin group of fungicides and difenoconazole is a triazole fungicide. Together they provide broad spectrum preventative and systematic. To be used as a preventative and curative fungicide application. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed three applications per season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** 14 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas until 12 hours after application.
- **Re-cropping:** DO NOT plant any other crop for a period of 60 days following application to the preceding crop unless *Quadris Top* or *Inspire* are registered for that crop.
- **Storage:** Store in cool, dry place. DO NOT store food, beverages or tobacco products in storage area.
- **Environment:** This product is toxic to aquatic organisms (or invertebrates), fish and mammals. Observe buffer zones outlined in the label.

Hazard Rating:



Caution – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Quash SC

Fungicide Group
3

Company:

Valent Canada distributed by Nufarm Agriculture Inc. (PCP#33081)

Formulation:

480 g/L of metconazole formulated as a soluble concentrate.

- Container size – 2 x 4.8 L jugs

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Canola	Control of sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	59 to 118 mL	20 to 50% bloom. Under high disease pressure, use the application rate of 118 mL/acre. DO NOT make more than one application per year.
Dry bean, Field pea, Chickpea, Lentil	Control of powdery mildew (field peas only) Suppression of white mold, ascochyta blight (chickpeas and lentils only)	118 mL	20 to 50% bloom stage, before disease symptoms are visible. Make a second application at full bloom a minimum 7 days after the first application. DO NOT apply more than 236 mL/acre per year.
Potato	Control of early blight (<i>Alternaria solani</i>)	73 to 118 mL	Apply prior to infection for preventative control. If conditions favor disease development, make additional applications at 7 to 10 day intervals. DO NOT apply more than 354 mL/acre per year.
	Suppression of white mold (<i>Sclerotinia sclerotiorum</i>)	118 mL	
Sunflower	Control of rust (<i>Puccinia helianthi</i>) Suppression of sclerotinia head rot (<i>Sclerotinia sclerotiorum</i>)	118 mL	Apply when conditions favor disease development and prior to infection. DO NOT apply more than 236 mL/acre per year.

Application Information:

- **Water Volume:**
 - **Ground:** minimum 81 L per acre.
 - **Aerial:** minimum 20 L per acre.

How it Works:

The active ingredient metconazole is a broad spectrum triazole demethylation inhibitor (DMI) fungicide with systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - **Canola** – DO NOT exceed more than 1 application of this product per year.
 - **Dry bean, field pea, chickpea, lentil, sunflower** – DO NOT exceed 236 mL per acre of this product per year.
 - **Potato** – DO NOT exceed 354 mL per acre of this product per year.
- **Preharvest interval:**
 - **Canola** – 45 days
 - **Dry bean, field pea, chickpea, lentil, sunflower** – 21 days
 - **Potato** – 8 days
- **Restricted Entry Interval:**
 - **Canola, potato** – DO NOT re-enter treated areas within 12 hours of application.
 - **Peas** – DO NOT re-enter treated areas within 24 hours of application.
- **Re-cropping:** DO NOT plant any other crop for a period of 30 days unless *Quash* is registered for that use.
- **Storage:** Store in a cool, dry, secure place

- **Environment:** Toxic to aquatic organisms, non-target terrestrial plants, birds, and small wild mammals. To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil or clay.
- **Oral LD50 (Rats):** 1750 mg per kg.
- **Dermal LD50 (Rabbits):** >5000 mg per kg.

Hazard Rating:

 Warning – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Quilt

Fungicide Group
3, 11

Company:

Syngenta Canada (PCP#28328)

Sharda CropChem Limited (*Fungtion SC* – PCP#32878)

Formulation:

75 g/L azoxystrobin and 125 g/L propiconazole formulated as a suspension concentrate.

- Container sizes – 2 x 10.125 L case and 101.25 L tote

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Dry bean	Anthracnose (<i>Colletotrichum truncatum</i>)	405 to 607 mL	Make first application before disease is established and no later than the onset of flowering. A second application 14 days later may be needed if conditions persist. Apply the high rate under conditions of high disease pressure.
	Powdery mildew (<i>Microsphaera diffusa</i> , <i>Erysiphe</i> spp.)	405 mL	Make first application at the first sign of disease. A second application 14 days later may be needed if conditions persist.
Lentil Soybean	Anthracnose (<i>Colletotrichum truncatum</i>)	405 to 607 mL	Make first application before disease is established and no later than the onset of flowering. A second application 14 days later may be needed if conditions persist. Apply the high rate under conditions of high disease pressure.
	Powdery mildew (<i>Erysiphe</i> spp.)	405 mL	Make first application at the first sign of disease. A second application 14 days later may be needed if conditions persist.
Chickpea Faba bean	Powdery mildew (<i>Erysiphe</i> spp.)	405 mL	Make first application at the first sign of disease. A second application 14 days later may be needed if conditions persist. Apply the high rate under conditions of high disease pressure.
Field pea	Mycosphaerella blight (<i>Mycosphaerella pinodes</i>)	405 to 607 mL	Apply during the rosette stage between 2 nd true leaf and bolting.
	Powdery mildew (<i>Erysiphe pisi</i> , <i>Microsphaera diffusa</i>)	405 mL	
Canola	Blackleg (<i>Leptosphaeria maculans</i>)	405 mL	Apply during the rosette stage between 2 nd true leaf and bolting.
Soybean	Frogeye leaf spot (<i>Cercospora sojina</i>)	405 to 607 mL	Make the first application at growth stage R3 (early pod set) and 14 days late at approximately growth stage R5.
Barley	Net blotch (<i>Pyrenophora teres</i>)	202* to 405 mL	At first sign of disease starting at the two leaf stage. Use the higher rate if there is a history of high disease pressures in the field and/or field conditions favour disease.

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Barley	Net blotch (<i>Pyrenophora teres</i>), septoria leaf blotch (<i>Septoria</i> spp.), scald (<i>Rhynchosporium secalis</i>), tan spot (<i>Pyrenophora tritici-repentis</i>)	304 mL	Apply between stem elongation and half-head emergence. For stripe rust, use the higher rate if there is a history of high disease pressures in the field and/or field conditions favour disease development.
	Stripe rust (<i>Puccinia striiformis</i>)	304 to 405 mL	
	Leaf rust (<i>Puccinia hordei</i>)	405 mL	
Wheat	Tan spot (<i>Pyrenophora tritici-repentis</i>), septoria leaf blotch (<i>Septoria</i> spp.)	202* to 405 mL	At first sign of disease starting at the two leaf stage. Use the higher rate if there is a history of high disease pressures in the field and/or field conditions favour disease.
Wheat <i>continued</i>	Septoria leaf blotch (<i>Septoria</i> spp.), tan spot (<i>Pyrenophora tritici-repentis</i>)	304 mL	Apply between stem elongation and half-head emergence. For stripe rust and leaf rust in wheat, use the higher rate if there is a history of high disease pressures in the field and/or field conditions favour disease development.
	Stripe rust (<i>Puccinia striiformis</i>), leaf rust (<i>Puccinia triticina</i>)	304 to 405 mL	
Rye	Scald (<i>Rhynchosporium secalis</i>), septoria leaf blotch (<i>Septoria</i> spp.), tan spot (<i>Pyrenophora tritici-repentis</i>)	304 mL	
	Stripe rust (<i>Puccinia striiformis</i>)	304 to 405 mL	
Triticale	Septoria leaf blotch (<i>Septoria</i> spp.), tan spot (<i>Pyrenophora tritici-repentis</i>)	304 mL	
Oat	Septoria leaf blotch (<i>Septoria</i> spp.), net blotch (<i>Pyrenophora teres</i>)	304 mL	Apply between stem elongation and half-head emergence.
	Crown rust (<i>Puccinia coronata</i>)	304 to 405 mL	For crown rust, use the higher rate if there is a history of high disease pressures in the field and/or field conditions favour disease development.
Field, sweet, and popping corn (including seed production)	Rust (<i>Puccinia sorghi</i>), northern leaf blight (<i>Setosphaeria turcicum</i>) Suppression of anthracnose leaf blight (<i>Colletotrichum graminicola</i>)	304 to 405 mL	Make first application at the first sign of disease, followed by a second application 14 days after the first, if environmental conditions are favourable for disease development.
Fescue, grown for seed production	Stem eyespot and leaf spot complex (<i>Didymella festucae</i>) and leaf spot (<i>Pyrenophora</i> spp., <i>Dreschslera</i> spp.)	405 mL	Begin applications when conditions are favourable for disease infection and prior to disease symptom appearance. In commercial fescue for seed production, the first application is to be made preventively prior to tiller leaves expansion; the second application 14 days later.

*Suppression only at rates less than 304 mL per acre.

Application Information:

- **Water Volume:**
 - **Ground:** Apply in a minimum of 18 L of water per acre for legume vegetables and soybean. Apply in a minimum of 40 L of water per acre for other crops.
 - **Aerial:** Follow the recommendations on label for each use. Apply a minimum of 18 L of water per acre. DO NOT apply on fescue using aerial application equipment.

How it Works:

The active ingredient azoxystrobin is a methoxyacrylate compound (strobilurin) with broad spectrum contact and systemic activity. The active ingredient propiconazole is a triazole fungicide with broad-spectrum systemic activity. To be used as a preventative and curative fungicide application. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Insecticides: *Quilt* can be tank-mixed with insecticide *Matador 120EC* for foliar disease and insect control in cereals. Consult each label for pests controlled, precautions, and specific application instructions

According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - *Canola* – DO NOT exceed 1 application of this product per season.
 - *Soybean, dry bean, faba bean, chickpea, field pea, lentil, barley, wheat, rye, triticale, oat, corn and Fescue* – DO NOT exceed 2 applications of this product per season.
- **Grazing:**
 - *Fescue* – DO NOT graze or harvest treated forage, and hay for livestock feed. Follow the instructions on label for other uses.
- **Preharvest interval:**
 - *Soybean and dry legume vegetables, canola* – 30 days
 - *Succulent podded and shelled legume vegetables* – 15 days
 - *Soybean hay and dry pea hay* – 14 days
 - *Fescue* – Make the last application at least 20 days before seed matures; seed not for human or animal consumption
 - *Wheat, barley, rye, triticale, and oat* – 45 days
 - *Field corn, sweet corn, and popcorn* – 14 days
- **Restricted Entry Interval:** DO NOT re-enter treated fields within 12 hours of application.
- **Re-cropping:** Oat and rye may be planted 45 days after *Quilt* application. DO NOT plant any other crop intended for food, grazing, or any component of animal feed or bedding within 105 days of *Quilt* application to the preceding crop unless the second crop appears on the *Quilt* label.
- **Storage:** Store in a cool, dry, well ventilated area away from feed and foodstuffs, and out of reach of children and animals. DO NOT store at temperatures below freezing. Keep in original container, tightly closed, during storage.
- **Environment:** Azoxystrobin is persistent and will carry over. *Quilt* is toxic to aquatic organisms and is extremely phytotoxic to certain apple varieties. Avoid spraying when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelterbelt), or aquatic habitat. DO NOT contaminate irrigation or drinking water supplies by cleaning of equipment or disposal of wastes. Avoiding spray drift is the responsibility of the applicator.

Hazard Rating:



Caution – Poison and Skin Irritant

Refer to the Introduction for an explanation of the symbols.

Ranman 400SC

Fungicide Group
21

Company:

ISK Biosciences Corporation; distributed by Belchim Crop Protection Canada (PCP#30716)

Formulation:

400 g/L cyazofamid formulated as a suspension concentrate.

- Container sizes – 500 mL, 200 L

Crops, Diseases and Timing:

Control of late blight (*Phytophthora infestans*) on potato. Begin applications on a 7 day schedule when warning systems forecast disease infection periods or at row closure. Use the low rate under low disease pressure and increase the rate as disease pressure and/or crop development increases, up to the maximum rate. For late blight tuber rot control, ensure that the last 2 to 3 applications prior to desiccation are made at the maximum rate following resistance management practices.

Rates:

40 to 80 mL per acre. *Ranman 400SC* should be tank mixed with a non-ionic or organo-silicone surfactant (such as Sylgard 309 at 60 mL per acre).

Application Information:

- DO NOT make sequential applications. After one application alternate with at least one application of fungicide with a different mode of action.
- **Water Volume:**
 - **Ground:** Apply in a minimum of 20 L of water.
 - **Aerial:** Use sufficient volume to obtain coverage of the foliage, 80 to 240 L per acre.

How it Works:

The active ingredient cyazofamid is a cyanoimidazole fungicide with contact activity. To be used as a preventative fungicide application. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 6 applications of this product per season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** 7 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** A plant back interval of 30 days is required.
- **Storage:** Store product in original container in a secured dry place separate from other pesticides, fertilizer, food and feed.
- **Environment:** 20 m (fixed wing) and 15 m (helicopter) buffer zones for aerial applications in proximity of terrestrial habitats. For freshwater and marine habitats buffer zones for aerial are the same as field sprayer applications.

Hazard Rating:

None listed.

Reason 500SC

Company:

Gowan Canada (PCP#27462)

Formulation:

500 g/L fenamidone formulated as a suspension concentrate.

- Container size – 2 L

Crops, Diseases and Timing:

Control of early blight (*Alternaria solani*) and late blight (*Phytophthora infestans*) on potato. Begin application when plants are 15 to 20 cm high or when disease threatens. Apply a fungicide with a different mode of action within 7 to 10 days after each application using the shorter interval when conditions favor disease development. Ensure even application.

Rates:

Apply at 80 mL per acre (200 mL/ha) as a tank mix with either *Dithane DG** at 500 grams per acre (1.25 kg/ha) or *Bravo 500* at registered rates.

*When using other formulations of mancozeb, adjust application rates to apply 375 grams active ingredient per acre (935 g active ingredient/ha).

Application Information:

- **Water Volume:**
 - **Aerial:** Use minimum of 14 L per acre (35 L/ha) at a pressure no less than 300 kPa.

How it Works:

The active ingredient fenamidone is a strobilurin fungicide with contact activity. To be used as a preventative and inhibitive (spore germination and antisporeulant) fungicide application. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

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 the label. In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Gowan Company at 1-800-960-4318 for information before applying any tank mix that is not specifically recommended on the label.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 6 applications of this product per season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** 14 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas until residues have dried.
- **Re-cropping:** A 30 day plant-back interval is required for potato and all other crops.
- **Storage:** DO NOT allow product to freeze. If stored more than 1 year, shake well before using. Keep away from fire, open flame or other sources of heat. Store in tightly closed container away from fertilizer, seeds, feed or food
- **Environment:** For ground application maintain a 1 m buffer zone between areas sprayed and aquatic systems. For aerial application allow a 5 m buffer. Toxic to fish and other aquatic organisms; DO NOT apply where runoff is likely to occur.

Hazard Rating:



Caution Poison – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Regalia Maxx

Fungicide Group
Not classified, bio-fungicide

Company:

Marrone Bio Innovations (PCP#30199)

Formulation:

20% extract of *Reynoutria sachalinensis* formulated as a suspension concentrate.

- Container size – 4 x 5 L

Crops, Diseases and Timing:

Partial suppression of septoria leaf blotch (*Septoria tritici*) in wheat. Apply preventatively or when disease systems first appear after initial jointing. Repeat applications in 7 to 14 day intervals depending upon crop growth and disease pressure.

Rates:

0.25% v/v in 160 to 240 L of water per acre.

Application Information:

- DO NOT apply by air. When environmental conditions and plant stage are conducive to rapid disease development use *Regalia Maxx* in a rotational program with other registered fungicides.
- **Water Volume:**
 - **Ground:** minimum of 160 to 240 L per acre.

How it Works:

Reynoutria sachalinensis is a plant extract to induce the plants' natural defense mechanisms against certain fungal and bacterial disease. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** No maximum number of applications specified.
- **Grazing:** No restrictions listed.
- **Preharvest Interval:** May be applied up to the day of harvest.
- **Restricted Entry Interval:** DO NOT re-enter into treated areas until the spray is dried.
- **Re-cropping:** No restrictions listed.
- **Storage:** Store in original tightly closed container.
- **Environmental Hazards:** DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Hazard Rating:

None listed.

Revus

Company:

Syngenta Canada (PCP#29074)

Formulation:

250 g/L mandipropamid formulated as a suspension concentrate.

- Container size – 4 x 3.78 L

Crops, Diseases and Timing:

Control of late blight (*Phytophthora infestans*) on potato. Begin applications prior to disease development. Continue applications on 7 to 10 day intervals, following resistance management guidelines.

Rates:

0.17 to 0.24 L per acre. The use of a non-ionic adjuvant (0.25% v/v) is recommended.

Application Information:

- **Water Volume:**
 - **Ground:** Use a minimum water volume of 40 L per acre. In situations where dense canopy or pest pressure is high, use greater water volumes.
 - **Aerial:** Use a minimum water volume of 18 L per acre.
 - **Nozzles:** DO NOT apply using any type of ultra low volume (ULV) spray system.

How it Works:

The active ingredient mandipropamid is a carboxylic acid amide (CAA) fungicide with contact and systemic activity. To be used as a preventative and inhibitive (prevents spore germination) fungicide application. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Fungicides: *Bravo ZN*

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - DO NOT exceed 4 applications of this product per season.
 - DO NOT exceed 2 consecutive applications of this product.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** 14 days
- **Restricted Entry Interval:** DO NOT re-enter treated area within 12 hours of application.
- **Re-cropping:** DO NOT plant any crop which is not registered for use with *Revus* for a period of 30 days after the last application.
- **Storage:** Store in a cool dry place away from food, beverages, and tobacco products.
- **Environment:** To reduce runoff into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Runoff into aquatic habitats may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Hazard Rating:



Caution – Poison



Warning – Skin Irritant
Potential Skin Sensitizer

Refer to the Introduction for an explanation of the symbols.

RevyPro

Fungicide Group
3

Company:

BASF Canada (PCP#34671)

Formulation:

50 g/L Mefentrifluconazole and 100 g/L Prothioconazole formulated as emulsifiable concentrate

- Container size – case (2 x 8.1 L)

Crops, Diseases, Rates and Timing:

Crop*	Disease**	Application Rate (per acre)	Application Timing***
Chickpea	Control of ascochyta blight (<i>Ascochyta spp.</i>), white mould (<i>Sclerotinia sclerotiorum</i>), suppression of grey mould (<i>Botrytis cinerea</i>), suppression of powdery mildew	405 mL	Apply RevyPro at the beginning of flowering or at the onset of symptoms. Apply a second time 10-14 days later if disease persists or if weather conditions are favourable for disease development.
Dry Bean	Control of anthracnose (<i>Colletotrichum lindemuthianum</i>), Ascochyta blight (<i>Ascochyta sp.</i>) suppression of white mould (<i>Sclerotinia sclerotiorum</i>) suppression of grey mould (<i>Botrytis cinerea</i>), suppression of powdery mildew (<i>Erysiphe sp.</i>)	405 mL	Apply RevyPro at the beginning of flowering or at the onset of symptoms. Apply a second time 10-14 days later if disease persists or if weather conditions are favourable for disease development.
Field pea	Control of mycosphaerella blight (<i>Mycosphaerella pinodes</i>), ascochyta blight (<i>Ascochyta spp.</i>), white mould (<i>Sclerotinia sclerotiorum</i>), suppression of powdery mildew (<i>Erysiphe pisi</i>), suppression of grey mould (<i>Botrytis cinerea</i>)	405 mL	Apply RevyPro at the beginning of flowering or at the onset of symptoms. Apply a second time 10-14 days later if disease persists or if weather conditions are favourable for disease development.
Faba bean	Control of ascochyta blight (<i>Ascochyta spp.</i>), white mould (<i>Sclerotinia sclerotiorum</i>), suppression of grey mould/Chocolate spot (<i>Botrytis cinerea</i>), suppression of powdery mildew (<i>Erysiphe sp.</i>)	405 mL	Apply RevyPro at the beginning of flowering or at the onset of symptoms. Apply a second time 10–14 days later if disease persists or if weather conditions are favourable for disease development.
Lentil	Control of ascochyta blight (<i>Ascochyta spp.</i>), anthracnose (<i>Colletotrichum lentis</i>), white mould (<i>Sclerotinia sclerotiorum</i>), suppression of grey mould (<i>Botrytis cinerea</i>), suppression of powdery mildew (<i>Erysiphe sp.</i>)	405 mL	Apply RevyPro at the beginning of flowering or at the onset of symptoms. Apply a second time 10–14 days later if disease persists or if weather conditions are favourable for disease development.

*See label for complete list of registered crops.

**RevyPro is effective on Group 11 (strobilurin, QoI) fungicide-resistant isolates of *Colletotrichum lentis*, *C. lindemuthianum*, *Mycosphaerella pinodes* and *Ascochyta rabiei*.

***Apply fungicide containing alternative mode of actions if second application is required.

Application Information:

- Water Volume:
 - **Ground:** minimum water volume 40 L/acre.
 - **Air:** minimum water volume 20 L/acre.

How it Works:

The active ingredients, mefentrifluconazole and prothioconazole, are broad spectrum triazole demethylation inhibitor (DMI) fungicides with systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Refer to the product label for tank mixing compatibility. According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Maximum number of applications:** Do not make more than two (2) sequential applications of *RevyPro* before alternating to a non-Group 3 fungicide registered for the same use. Where possible, rotate the use of *RevyPro* or other Group 3 fungicides with different groups that control the same pathogens for optimal disease resistance management.
- **Rainfall:** Avoid application when heavy rain is in forecast.
- **Pre-harvest Intervals:** 21 days after application for all labelled crops.
- **Re-entry:** 12 hours.
- **Grazing:** All crops on label can be grazed or fed to livestock following a minimum of 21 days after application.
- **Re-cropping interval:** All crops on label may be planted immediately after the last application. Crops not on this label must not be planted within 1 month after the last application.
- **Storage:** Store in original container. Store this product away from food or feed. Protect from freezing.
- **Environment:** Toxic to aquatic organisms and non-target terrestrial plants. Observe spray buffer zones specified under DIRECTIONS FOR USE on label. Mefentrifluconazole is persistent and may carry over. It is recommended that any products containing mefentrifluconazole not be used in areas treated with this product 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. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated and the edge of the water body.

Hazard Rating:

 Warning – Eye Irritant, Skin Irritant

Ridomil Gold Products

Fungicide Group
4

Company:

Syngenta Canada

- (*Ridomil Gold/Bravo* – PCP#26443; *Ridomil Gold SL/Bravo* – PCP#29239; *Ridomil Gold 480EC* – PCP#25384; *Ridomil Gold 480SL* – PCP#28474)

*Ridomil Gold/Bravo, Ridomil Gold SL/Bravo/
Ridomil Gold 480EC/Ridomil Gold 480SL*

Fungicide Group
M5

*Ridomil Gold/Bravo,
Ridomil Gold SL/Bravo*

Formulations:

Ridomil Gold/Bravo – 500 g/L chlorothalonil and 480 g/L metalaxyl-M.

- Container size – 8.83 L jug twin-pak

Ridomil Gold SL/Bravo – 500 g/L chlorothalonil and 480 g/L metalaxyl-M formulated as a soluble concentrate.

- Container size – 8.83 L jug twin-pak

Ridomil Gold 480EC – 480 g/L metalaxyl-M formulated as an emulsifiable concentrate.

- Container size – 4 x 3.78 L jugs

Ridomil Gold 480SL – 480 g/L metalaxyl-M formulated as a solution.

- Container sizes – 10 x 0.5 L or 4 x 3.78 L jugs

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate	Application Timing
Potato	<i>Ridomil Gold/Bravo, Ridomil Gold SL/Bravo:</i> Early blight (<i>Alternaria solani</i>), late blight (<i>Phytophthora infestans</i>), late blight tuber rot, botrytis vine rot (<i>Botrytis cinerea</i>) Suppression of pythium leak (<i>Pythium</i> spp.) and pink rot (<i>Phytophthora erythroseptica</i>)	<i>Ridomil Gold/Bravo, Ridomil Gold SL/Bravo:</i> One 8.83 L jug treats 10 acres. The entire contents of the jug must be added to the spray tank or an improper mixture will result.	Begin preventive applications early in the season when conditions are favorable for disease (before infection), no later than when the plant foliage meets within the row uniformly across the field. Apply a second and third application at 14 day intervals. Other registered contact fungicides should be applied 7 days after each application.
	<i>Ridomil Gold 480EC, Ridomil Gold 480SL:</i> Suppression of pink rot (<i>Phytophthora erythroseptica</i>) as in-furrow treatment.	<i>Ridomil Gold 480EC, Ridomil Gold 480SL:</i> 4 mL/100 m row, applied in-furrow at planting.	

Application Information:

- **Water Volume:**
 - **Ground:** use sufficient water to ensure thorough coverage of foliage. Use a water volume of 90 to 640 L per acre.
 - **In-furrow treatment:** use a minimum of 12 L per acre. For tank mixes with *Quadris* water volume should be 20 to 56 L per acre.
 - **Aerial:** use a minimum water volume of 20 L per acre.

How it Works:

The active ingredient metalaxyl is an acylalanine fungicide with systemic activity. The active ingredient chlorothalonil is a chloronitrile fungicide with contact activity. To be used as a preventative fungicide application. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

Ridomil Gold/Bravo, Ridomil Gold SL/Bravo: None registered.

Ridomil Gold 480EC, Ridomil Gold 480SL: May be tank mixed with *Quadris* for in-furrow treatment to control rhizoctonia stem rot, stolon canker, black scurf and suppression of pink rot.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:**
 - **Ground/aerial** (*Ridomil Gold/Bravo, Ridomil Gold/SL Bravo*) – DO NOT exceed 3 applications of this product per season.
 - **In-furrow** (*Ridomil Gold 480EC, Ridomil Gold 480SL*) – DO NOT exceed 1 application of this product per season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** 14 days for *Ridomil Gold SL/Bravo*
- **Restricted Entry Interval:** *Ridomil Gold 480EC, Ridomil Gold 480SL* – DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** A plant back interval of 30 days for root crops is required after the in-furrow application.
- **Storage:** Protect from excessive heat.
- **Environment:** DO NOT apply where runoff is likely to occur. DO NOT use on coarse textured gravelly soils, soils with less than 2% organic matter or in areas where the water table may be high. Avoid application by ground or air near or around bodies of water. DO NOT contaminate streams or ponds by spray drift, by cleaning equipment, or disposal of wastes. A buffer zone of 100 m for aerial application and 15 m for ground application should be observed to protect water bodies.

Hazard Rating:

Ridomil Gold/Bravo, Ridomil Gold SL/Bravo:



Warning Poison – Eye Irritant

Ridomil Gold 480EC:



Caution Poison. Warning – Eye Irritant

Ridomil Gold 480SL:



Caution Poison. Warning – Eye Irritant, Skin Irritant

Refer to the Introduction for an explanation of the symbols.

Roxar*

*NOTE: As of January 1, 2025, www.keepitclean.ca indicates that the use of this product on certain crop types may have market access concerns. Please see Introduction for more information AND consult potential grain buyers before using this product.

Company:

UPL AgroSolutions Canada (PCP#32200)

Formulations:

210 g/L tetraconazole formulated as a micro emulsion.

- Container size – 2 x 8.5 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate*	Application Timing
Wheat (durum, winter, spring)	Control of tan spot (<i>Pyrenophora tritici-repentis</i>), stem rust (<i>Puccinia graminis</i>), stripe rust (<i>Puccinia striiformis</i>)	135 mL	For optimum results, begin applications preventatively and repeat as needed on a 14 to 21 day interval. For leaf and stem diseases, apply prior to disease development from tillering up to late head emergence before flowering.
	Suppression of septoria leaf spot and glume blotch (<i>Septoria tritici</i>)		
	Suppression of Fusarium head blight (<i>Fusarium graminearum</i>)	212 mL	Apply when at least 75% of the heads on the main stem have emerged to when 50% of the heads on the main stem are in flower.

*Roxar can be applied with a non-ionic surfactant at 0.2-0.25% v/v. See label for further information.

Application Information:

- **Water Volume:**
 - **Ground:** minimum water volume of 40 L per acre.
 - **Aerial:** minimum water volume of 20 L per acre.

How it Works:

The active ingredient tetraconazole is a demethylation inhibitor with systemic and contact activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT apply more than 270 mL per acre of *Roxar* in a single season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:**
 - *Wheat and barley harvested for grain* – 40 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:**
 - *Wheat, barley, dried shelled pea and bean, canola, corn, sugar beet* – can be planted immediately after the last application.
 - *All other crops* – a 30 day plant interval must be observed prior to planting.
- **Storage:** Store this product away from food or feed.
- **Environmental Restrictions:** Toxic to aquatic organisms. Observe buffer zones as specified on the label. To reduce runoff from treated areas into aquatic habitats avoid application to ears with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is in the forecast.

Hazard Rating:

None registered.

Sercadis

Fungicide Group

7

Company:

BASF Canada (PCP#31697)

Formulation:

300 g/L fluxapyroxad formulated as a suspension concentrate.

- Container size – 2 x 1.35 L

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Potato	Rhizoctonia canker (<i>Rhizoctonia</i> spp.)	135 mL	Apply in-furrow.
	Early blight (<i>Alternaria solani</i>)	68-135 mL	Apply to foliage prior to disease development.
	Sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	135 mL	Apply at the beginning of flowering. Apply a second time 7 to 14 days later if disease persists or weather conditions are favorable for disease development.

Application Information:

- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - **Aerial:** minimum 20 L per acre.

How it Works:

The active ingredient fluxapyroxad is a carboxamide (SDHI) fungicide with system activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

In foliar applications always tank mix *Sercadis* with an alternate mode of action effective against the targeted disease. In foliar applications, the use of a non-ionic surfactant at 0.125 v/v is recommended. According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 3 applications of this product per season
- **Grazing:** No restrictions listed.
- **Preharvest Interval:** 7 days
- **Restricted Entry Interval:** Re-entry interval after application is 12 hours.
- **Re-cropping:** Tuberous and corm vegetables, sugar beets, legume vegetables, fruiting vegetables, pome fruits, stone fruits, cereal and oilseeds may be planted immediately following the last application. A plan-back interval of one year is required for all other crops.
- **Storage:** Store this product away from food or feed.
- **Environmental Hazards:** Observe buffer zones specified on label. The use of this chemical may result in contamination of ground water, particularly in areas where soils are permeable (for example sandy soils) and/or the depth of the water table is shallow.
- **Toxicity:** Toxic to aquatic organisms and small mammals

Hazard Rating:

Warning – Contains the Allergen Soy

Serenade OPTI

Fungicide Group

44

Company:

Bayer (PCP#31666)

Formulation:

Serenade OPTI: 1.31×10^{10} CFU/g *Bacillus subtilis* (QST 713 strain) formulated as a wettable powder

- Container size – 2.72 kg

Crops, Diseases, Rates and Timing:

Crop	Diseases Suppressed	Application Rate (per acre)	Application Timing
Dry bean, chickpea, lentil, field pea	White mould (<i>Sclerotinia sclerotiorum</i>), grey mould (<i>Botrytis cinerea</i>)	0.7 to 1.3 kg	Product should be applied prior to or in the early stages of disease development; repeat applications on 7 to 10 day intervals if conditions for disease persist.
Soybean	White mould (<i>Sclerotinia sclerotiorum</i>)	0.2 to 0.8 kg	Use maximum label rates and shortened spray intervals for conditions conducive to rapid disease development. When conditions are conducive to heavy disease pressure, use in a rotational program with other registered fungicides.
	Brown spot (<i>Septoria glycines</i>)	0.04 to 0.2 kg	
	Frogeye leaf spot (<i>Cercospora sojina</i>)	0.04 to 0.2 kg	
Potato	Sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	0.4 to 1.3 kg	Begin application soon after emergence and when conditions are conducive to disease development. Repeat as necessary on a 7 to 10 day interval.
	Early blight (<i>Alternaria solani</i>)	0.4 to 0.9 kg	
	Silver scurf (<i>Helminthosporium solani</i>)	7 to 14 g per tonne	For post-harvest application to aid in the control of silver scurf. See label for details.
Canola, flax, borage, camelina, mustard	Sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	0.1 to 0.4 kg	Begin application at 20 to 30% bloom. A second application may be made 7 to 10 days later, at approximately 50% bloom and prior to significant petal fall, if conditions for disease development remain favourable. Use higher rates in fields with a history of heavy disease pressure.
Caraway, coriander, fenugreek	Botrytis grey mould (<i>Botrytis cinerea</i>), white mould (<i>Sclerotinia sclerotiorum</i>)	0.7 to 1.3 kg	Begin application when environmental conditions are conducive to disease development. Repeat as necessary on a 7 to 10 day interval.

Application Information:

- **Water Volume:**
 - Use water volumes to give good canopy penetration and coverage of plant parts to be protected. Ground application only for all crops, except canola (ground or air).

How it Works:

Bacillus subtilis is a bacterium that works as a bio-fungicide to prevent infection of labeled diseases by multi-site biochemical activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** No restrictions listed.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** Can be applied up to and including the day of harvest.
- **Restricted Entry Interval:** No restrictions listed.
- **Re-cropping:** No restrictions listed.

- **Storage:** Maximum storage period of two years at room temperatures up to 25°C. Store in a dry area inaccessible to children. Store in original container.
- **Environment:** DO NOT contaminate water, food, or feed by storage and disposal.

Hazard Rating:

None listed.

Potential Skin Sensitizer

Serifel

Fungicide Group
BM02

Company:

BASF Canada (PCP # 30054)

Formulation:

Bacillus amyloliquefaciens strain MBI 600 – not less than 5.5×10^{10} viable spores per gram formulated as wettable Powder.

- Container size – 2 kg jugs

Crops, Diseases, Rates and Timing:

Crop	Diseases Suppressed	Application Rate (per acre)	Application Timing
Potatoes	Suppression of Early blight (<i>Alternaria solani</i>)	0.1 to 0.2 kg	For early blight, begin applications shortly after emergence or transplanting but prior to disease development and continue on 7- to 10-day intervals if conditions are favourable for disease development.
	Late blight (<i>Phytophthora infestans</i>)	0.2 kg	Begin applications prior to infection and continue on 5- to 7-day intervals if conditions are favourable for disease development.
	Suppression of Rhizoctonia stem canker/black scurf (<i>Rhizoctonia solani</i>)	0.1 to 0.2 kg	Use in furrow to suppress soilborne Rhizoctonia canker or black scurf.

Application Information:

- **Water Volume:**
 - **Ground and in-furrow:** 20 L/ac minimum
 - **Aerial:** Do NOT apply by air
 - Apply *Serifel* in sufficient water to ensure thorough coverage for optimum disease control. Maintain agitation of the product during the application process. The product mixture should be applied shortly after mixing. DO NOT store mixed suspensions of *Serifel* overnight.

How it Works:

Serifel is an agricultural biological fungicide product formulated as a wettable powder for the suppression or partial suppression of various fungal diseases.

Tank Mixes:

None registered.

Restrictions:

- **Rainfall:** Avoid application when heavy rain is forecast. If heavy rainfall or irrigation occurs shortly after application, reapplication of *Serifel* may be necessary.
- **Grazing:** There are no livestock feeding restrictions for *Serifel* treated plants and produce.
- **Pre-harvest Intervals:** 0 days for all labeled crops.
- **Re-cropping:** There are no crop rotation or plant back restrictions.
- **Re-entry:** 4 hours or until sprays have dried.
- **Storage:** To prevent contamination, store this product away from food or feed. Store in a dry area for up to 3 years from Date of Manufacture .
- **Environment:** To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Hazard Rating:

None listed.

Potential Skin Sensitizer

Sphaerex

Fungicide Group

3

Company:

BASF (PCP#34263)

Formulation:

112.5 g/L metconazole and 187.5 g/L prothioconazole formulated as an emulsifiable concentrate.

- Container size – 8.65 L, 139 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Barley	Control of net blotch (<i>Pyrenophora teres</i>), scald (<i>Rhynchosporium secalis</i>), leaf rust (<i>Puccinia hordei</i>), stripe rust (<i>Puccinia striiformis</i>), powdery mildew (<i>Erysiphe graminis</i> f.sp. <i>hordei</i>)	162 to 215 mL	Prior to disease development or at onset of disease.
	Suppression of Fusarium head blight (<i>Fusarium graminearum</i>), spot blotch (<i>Cochliobolus sativus</i>) and Ergot (<i>Claviceps purpurea</i>)	215 mL	Apply when 75 to 100% of main stem barley spikes are emerged until 3 days after full spike emergence using sprayer nozzles configured to provide excellent coverage of the cereal head.
Oats	Control of crown rust (<i>Puccinia coronata</i>), septoria leaf blotch (<i>Septoria avenae</i>)	162 to 215 mL	Prior to disease development or at onset of disease.
	Suppression of Fusarium head blight (<i>Fusarium graminearum</i>) and Ergot (<i>Claviceps purpurea</i>)	215 mL	Apply when oats are in anthesis stage (GS 61-69), that is at early panicle stage when anthers are yellow to white stage. Use sprayer nozzles configured to provide excellent coverage of the panicles.
Rye and triticale	Control of leaf rust (<i>Puccinia recondita</i>) stripe rust (<i>Puccinia striiformis</i>) powdery mildew (<i>Erysiphe graminis</i>)	162 to 215 mL	Prior to disease development or at onset of disease.
	Suppression of Fusarium head blight (<i>Fusarium graminearum</i>) and Ergot (<i>Claviceps purpurea</i>)	162 to 215 mL	Apply when rye or triticale are in anthesis stage; that is at early heading stage when anthers are yellow to white stage.
Wheat (all types)	Control of tan spot (<i>Pyrenophora tritici-repentis</i>), septoria leaf spot (<i>Septoria tritici</i> or <i>S. nodorum</i>), leaf rust (<i>Puccinia recondita</i>), stripe rust (<i>Puccinia striiformis</i>), stem rust (<i>Puccinia graminis</i>), powdery mildew (<i>Erysiphe graminis</i> f. sp. <i>tritici</i>), septoria glume blotch (<i>Stagonospora nodorum</i>)	162 to 215 mL	Prior to disease development or at onset of disease.
	Suppression of Fusarium head blight (<i>Fusarium graminearum</i>), spot blotch (<i>Cochliobolus sativus</i>) and Ergot (<i>Claviceps purpurea</i>)	215 mL	Apply when crop is at 20% flowering using sprayer nozzles configured to provide excellent coverage of the cereal head

Application Information:

- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - **Aerial:** 12 L per acre for aerial applications targeting fusarium head blight in cereals. Use 20 L per acre for applications targeting ergot. Review and follow the product label prior to the application.

How it Works:

The active ingredients, metconazole and prothioconazole, are broad spectrum triazole demethylation inhibitor (DMI) fungicides with systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 1 application of this product per season.
- **Grazing:** All crops can be grazed or fed to livestock.
- **Preharvest interval:** 30 days.
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 24 hours of application.
- **Re-cropping:** A plant back interval of 35 days is required for all crops not listed on the label.
- **Storage:** DO NOT ship or store near food, feed, seed and fertilizers. Store in original tightly closed container. Protect from freezing.
- **Environment:** TOXIC to aquatic organisms. Observe buffer zones specified under Directions for Use.
 - To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.
 - Avoid application when heavy rain is forecast.
 - Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.
 - This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Hazard Rating:

 Warning – Skin Irritant

Refer to the Introduction for an explanation of the symbols.

Tanos

Fungicide Group
11, 27

Company:

Corteva Agriscience (PCP#27435)

Formulation:

25% famoxadone and 25% cymoxanil formulated as a dry flowable.

- Container size – 4 x 3.4 kg

Crops, Diseases and Timing:

Potato – Early blight (*Alternaria solani*) and late blight (*Phytophthora infestans*). Make the first application following one or two applications of a preventative broad spectrum fungicide such as chlorothalonil or mancozeb. A minimum 12 day application interval must pass between the first and second application of *Tanos*. A minimum 24 day application interval must pass between the second and third application of *Tanos*. Fungicides other than *Tanos* may be used as necessary to protect the crop during these intervals.

Rates:

225 to 340 grams per acre.

Application Information:

- **Water Volume:**
 - **Ground:** Use sufficient water to obtain thorough coverage. With a conventional sprayer use no less than 100 to 120 L per acre. With an air-assisted sprayer use no less than 44 L per acre.
 - **Aerial:** minimum 20 L per acre.

How it Works:

The active ingredient cymoxanil is a cyanoacetamide-oxime fungicide with locally systemic activity. The active ingredient famoxadone is a strobilurin fungicide with broad spectrum activity. To be used as a preventative, curative and inhibitive (against sporulation) fungicide application. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Tank mix solutions containing boron may affect product solubility. When using boron containing solutions, add the correct amount of *Tanos* first and boron containing solution last. According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 3 applications of this product per season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** 14 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 24 hours of application.
- **Re-cropping:** Crops that are on the product label may be planted back at any time. A 30-day plantback interval is required for cereal grains. All other crops may be planted following a 1 year interval.
- **Storage:** Store product closed in original container only. Protect against humid air and water. Avoid contact with food, drink and livestock feed material.
- **Environment:** Toxic to fish and aquatic organisms. Observe prescribed buffer zones. Toxic to birds, mammals and harmful to beneficial arthropods. Minimize off-target drift to reduce the effects on wildlife at the field boundary. DO NOT apply to areas prone to run-off.

Hazard Rating:



Warning Poison – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Tebuconazole

Fungicide Group
3

*Palliser/Folicur 250 EW/Toledo 250 EW/Hornet 432 F/Orius 430 SC/Advantage Tebuconazole 250/Tebbie/
FBN Tebuconazole 250*

Company:

Bayer (*Palliser* – PCP#30491), (*Folicur 250 EW* – PCP#29820)

Albaugh (*Toledo 250 EW* – PCP#33719)

Nufarm Agriculture Inc. (*Hornet 432 F* – PCP#32500)

ADAMA Canada (*Orius 430 SC* – PCP#33673)

Advantage Crop Protection Inc. (*Advantage Tebuconazole 250* – PCP#33887)

Sharda CropChem Canada (*Tebbie* – PCP#33901)

Farmer's Business Networks, Canada, Inc (*FBN Tebuconazole 250 Fungicide* – PCP#33779)

NewAgco Inc. (*Tornado* – PCP#33995)

Viking Crop Production Partners Inc. (*VIKING Tebuconazole Fungicide* – PCP#34770)

Formulations:

Palliser – 432 g/L tebuconazole formulated as a suspension.

- Container size – 9.46 L

Hornet 432 F – 432 g/L tebuconazole formulated as a suspension.

- Container size – 2 x 9.46 L

Orius 430 SC – 430 g/L tebuconazole formulated as a suspension.

- Container size – 9.44 L

*Folicur 250 EW** – 250 g/L tebuconazole formulated as an emulsion in water.

- Container size – 8.1 L

Advantage Tebuconazole 250 – 250 g/L tebuconazole formulated as an emulsion in water.

- Container size – 96 L drum and 1000 L tote

Tebbie – 250 g/L tebuconazole formulated as an emulsion in water.

- Container sizes – 8.1 L jugs to 129.6 L drums

Toledo 250 EW – 250 g/L tebuconazole formulated as an emulsion in water.

- Container size – 8.1 L

FBN Tebuconazole 250 Fungicide – 250 g/L tebuconazole formulated as an emulsion in water.

- Container sizes – 4.04 L jugs to 405 L drums

Tornado – 250 g/L tebuconazole formulated as an emulsion in water.

- Container sizes – 2 x 8.1 L, 500 L, 1000 L

VIKING Tebuconazole Fungicide – 250 g/L of tebuconazole formulated as an emulsion in water.

- Container size – 2 x 8 L, 500 L, 1000 L

***NOTE:** This product is no longer being manufactured and will be removed from the book in 2024.

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)				Application Timing
		<i>Palliser*/ Hornet 432 F *</i>	<i>Orius 430 SC*</i>	<i>Folicur 250 EW/ Toledo 250 EW/ VIKING Tebuconazole Fungicide</i>	<i>Advantage Tebuconazole 250/ Tebbie/FBN Tebuconazole 250/Tornado</i>	
Wheat**	Suppression of fusarium head blight (<i>Fusarium graminearum</i>) Control of septoria glume blotch (<i>Stagonospora nodorum</i>)	120 mL	118 mL	202 mL	200 mL	Timing of application is critical: Apply within the time period from when at least 75% of the wheat heads on the main stem are fully emerged to when 50% of the heads on the main stem are in flower. Spray coverage is essential for optimum efficacy: Spray equipment must be set to provide good coverage to heads (e.g. forward and backward mounted nozzles, or nozzles that have a two-directional spray).
Wheat** <i>continued</i>	Control of tan spot (<i>Pyrenophora tritici-repentis</i>), septoria leaf blotch (<i>Septoria tritici</i>), leaf rust (<i>Puccinia triticina</i>), stem rust (<i>Puccinia graminis</i>), stripe rust (<i>Puccinia striiformis</i>)	90 to 120 mL	89 to 118 mL	152 mL to 202 mL	150 mL to 200 mL	Apply at the first sign or very early stage of disease, up to the end of the flowering stage. Use the higher rate when weather conditions are conducive for disease.
	Control of powdery mildew (<i>Erysiphe graminis</i>)	120 mL	118 mL	202 mL	200 mL	

Crop	Diseases	Application Rate (per acre)				Application Timing
		<i>Palliser</i> */ <i>Hornet 432 F</i> *	<i>Orius 430 SC</i> *	<i>Folicur</i> 250 EW/ <i>Toledo</i> 250 EW/ <i>VIKING</i> <i>Tebuconazole</i> Fungicide	<i>Advantage</i> <i>Tebuconazole</i> 250/ <i>Tebbie/FBN</i> <i>Tebuconazole</i> 250/ <i>Tornado</i>	
Barley**	Control of net blotch (<i>Pyrenophora teres</i>), spot blotch (<i>Cochliobolus sativus</i>), scald (<i>Rhynchosporium secalis</i>), leaf rust (<i>Puccinia hordei</i>), stem rust (<i>Puccinia graminis</i>), stripe rust (<i>Puccinia striiformis</i>), septoria leaf blotch (<i>Septoria passerinii</i>), powdery mildew (<i>Erysiphe graminis</i>)	90 to 120 mL	89 mL to 118 mL	152 mL to 202 mL	150 mL to 200 mL	Apply at the first sign or very early stage of disease, (for <i>Advantage Tebuconazole 250 EW</i> only, up to the end of the flowering stage.). Use the higher rate when weather conditions are conducive for disease.
Oat	Control of crown rust (<i>Puccinia coronata</i>), stem rust (<i>Puccinia graminis</i>)	90 mL	89 mL	152 mL	150 mL	Apply at the first sign or very early stage of disease, (for <i>Advantage Tebuconazole 250 EW</i> only, up to the end of the flowering stage.). Use the higher rate when weather conditions are conducive for disease.
	Control of Stagonospora (<i>Septoria</i>) leaf blotch; black stem (<i>Stagonospora avenae</i> ; teleomorph – <i>Phaeosphaeria avenaria</i> f. sp. <i>avenaria</i>)	Not registered	Not registered	152 mL to 202 mL	150 mL to 200 mL	
Soybean	Control of frogeye leaf spot (<i>Cercospora sojina</i>) Suppression of powdery mildew (<i>Microsphaera diffusa</i>)	Not registered	Not registered	152 mL to 202 mL	150 mL to 200 mL	Apply when first symptoms of disease can be found or risk of infection is imminent. Use the higher rate when disease pressure is severe.

**Palliser*, *Hornet 432 F* and *Orius 430 SC* are recommended to be used with a registered non-ionic surfactant, such as *Agral 90* or *AgSurf*, at 1.25 L per 1000 L of spray solution.

Application Information:

- **Water Volume:**
 - **Ground:** minimum 40 L per acre. Ensure thorough coverage of all wheat heads. Avoid excessive water volumes (maximum 80 L per acre) at flowering time because this can increase the risk of infection.
 - **Aerial:** minimum 19 L per acre (20 L per acre for *Orius 430 SC*).

How it Works:

The active ingredient tebuconazole is a triazole demethylation inhibitor (DMI) fungicide with systemic broad-spectrum activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

VIKING Tebuconazole Fungicide: no registered tank mixes.

Herbicides: In spring wheat only, *Palliser* or *Hornet 432 F* may be tank-mixed with *Buctril M* for leaf diseases and respective weeds controlled (consult labels).

Insecticides: None registered.

Fungicides: None registered.

According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed one application of this product per season.
- **Grazing:** DO NOT allow livestock to graze or feed green forage to livestock prior to 6 days after treatment. Straw cut after harvest may be fed or used for bedding.
- **Preharvest interval:**
 - *Soybean* – 20 days
 - *Barley, oat and wheat* – 36 days; (for *Advantage Tebuconazole 250 EW* and *Tebbie* only – 20 days)
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** Treated areas may be replanted immediately following harvest with any crop listed on the respective label. For crops not listed on these labels, DO NOT replant treated areas for 120 days after last application.
- **Storage:** Store in a cool, dry place and prevent cross contamination with other pesticides, fertilizers, food and feed.
- **Environment:** Any products containing tebuconazole should not be used in areas treated with this product during the previous season (use only in alternate years). This product is toxic to birds, small wild animals, aquatic organisms, and non-target plants.
 - DO NOT apply directly to water, or to areas where surface water is present. Maintain a buffer zone of 30 m near aquatic areas. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Hazard Rating:



Danger – Skin Irritant



Caution – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

TiLMOR 240 EC

Company:

Bayer (PCP#33825)

Formulation:

80 g/L of prothioconazole and 160 g/L of tebuconazole formulated as an emulsifiable concentrate.

- Container size – 10.12 L

Crops, Diseases, Rates and Timing:

Crop	Diseases Suppressed	Application Rate (per acre)	Application Timing
Wheat (spring, winter, durum)	Control of leaf rust (<i>Puccinia recondita</i>), stem rust (<i>P. graminis</i>), stripe rust (<i>P. striiformis</i>), leaf and glume blotch (<i>Zymoseptoria</i> syn. <i>Septoria tritici</i> , <i>Parastagonospora</i> syn. <i>Stagonospora nodorum</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), powdery mildew (<i>Erysiphe graminis</i>)	253 mL/acre	Apply to leaf foliage at the first sign or very early stage of disease, especially if weather conditions are conducive to disease development, up to the end of the flowering stage.
Wheat (spring, winter, durum), cont'd	Suppression of fusarium head blight (<i>Gibberella zeae</i> / <i>Fusarium graminearum</i>)	253 mL/acre	Apply within the time period from when at least 75% of the wheat heads on the main stem are fully emerged to when 50% of the heads on the main stem are in flower.
Barley	Net blotch (<i>Pyrenophora teres</i>), spot blotch (<i>Cochliobolus sativus</i>), scald (<i>Rhynchosporium secalis</i>), leaf blotch (<i>Septoria passerinii</i>), leaf rust (<i>Puccinia hordei</i>), stem rust (<i>P. graminis</i>) and stripe rust (<i>P. striiformis</i>), powdery mildew (<i>Erysiphe graminis</i>)		Apply at the very early stages of disease development.
Oats	Crown rust (<i>Puccinia coronata</i>), stem rust (<i>Puccinia graminis</i>), stagonospora (<i>septoria</i>), leaf blotch and black stem (<i>Phaeosphaeria</i> [syn. <i>Leptosphaeria</i>], <i>avenaria</i> , f. sp. <i>avenaria</i> , asexual state <i>Stagonospora avenae</i> syn. <i>Septoria avenae</i>)		

Application Information:

- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - **Aerial:** minimum 20 L per acre.

How it Works:

The active ingredient tebuconazole is a triazole demethylation inhibitor (DMI) fungicide with systemic broad-spectrum activity. The active ingredient prothioconazole is a triazole fungicide with broad-spectrum systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

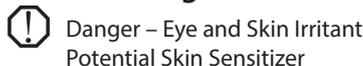
None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 1 application of this product per season. *Prosaro XTR Fungicide* may be applied sequentially after an application of *TiLMOR 240 EC Fungicide*. Please refer to respective product labels for specific use directions, pertinent recommendations, restrictions and precautions.
- **Preharvest interval:**
 - *Wheat, barley and oats* – 36 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** Treated areas may be replanted with any crop listed on the label as well as soybean as soon as practical after the last application. For all other crops, do not plant back within 120 days of last application.
- **Storage:** DO NOT store at temperatures below freezing. Keep in original tightly closed container and store away from feeds, seeds, fertilizer, plants and food stuffs. Keep away from sources of heat. Shake well before using if stored for more than 1 year.

- **Environment:** Toxic to birds, small wild animals, aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under Spray Buffer Zones.
- **Rainfast:** 1 hour

Hazard Rating:



Refer to the Introduction for an explanation of the symbols.

Fungicide Group
3, 7, 11

Trivapro

Trivapro is a co-pack of Trivapro A and Trivapro B. At the rates of application for Trivapro, not all diseases listed in the labels of the individual component (Trivapro A and Trivapro B) will be controlled. Please refer to the table below.

Company:

Syngenta Canada (Trivapro A – PCP#32184, Trivapro B – PCP#32185)

Formulations:

Trivapro A: 75 g/L azoxystrobin and 125 g/L propiconazole formulated as a suspension.

- Container sizes – 2 x 8.1 L (case), 320 L (bulk)

Trivapro B: 100 g/L benzovindiflupyr formulated as an emulsifiable concentrate.

- Container sizes – 2 x 2.43 L (case), 4 x 2 x 12 L (bulk)

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate	Application Timing
Barley, wheat (all types), oat, rye, triticale	Barley net blotch (<i>Pyrenophora teres</i>), tan spot (<i>Pyrenophora tritici-repentis</i>), septoria leaf spot (<i>Septoria</i> spp.), barley scald (<i>Rhynchosporium secalis</i>), barley leaf rust (<i>Puccinia hordei</i>), wheat leaf rust (<i>Puccinia triticina</i>), stripe rust (<i>Puccinia striiformis</i>), crown Rust (<i>Puccinia coronata</i> var. <i>avenae</i>), stem rust (<i>Puccinia graminis</i>), leaf rust (<i>Puccinia recondita</i>)	40 acres per case or 800 acres per bulk pack This delivers 0.4 L/acre of Trivapro A and 0.12 L/acre of Trivapro B	Apply between stem elongation and head half emergence
Corn	Control of rust (<i>Puccinia sorghi</i>), Northern corn leaf blight (<i>Setosphaeria turcicum</i>), grey leaf spot (<i>Cercospora zea-maydis</i>)	40 acres per case or 800 acres per bulk pack This delivers 0.4 L/acre of Trivapro A and 0.12 L/acre of Trivapro B	Begin application prior to disease onset when conditions are conducive for disease development. Make applications no closer than 7 days apart.
Soybean	Powdery mildew (<i>Microsphaera diffusa</i> , <i>Erysiphe pisi</i> , <i>E. polygoni</i>), anthracnose (<i>Colletotrichum truncatum</i>)	40 acres per case or 800 acres per bulk pack This delivers 0.4 L/acre of Trivapro A and 0.12 L/acre of Trivapro B	Make the first application prior to disease establishment.

Application Information:

- **Water Volume:**
 - **Ground:** minimum 76 L per acre.
 - **Aerial:** minimum 17.5 L per acre.
- DO NOT apply during periods of dead calm.

How it Works:

The active ingredient azoxystrobin is a methoxyacrylate compound (strobilurin) with broad spectrum contact and systemic activity. The active ingredient propiconazole is a triazole fungicide with broad spectrum systemic activity. The active ingredient benzovindiflupyr is a succinate dehydrogenase inhibitor (SDHI) fungicide with broad spectrum activity. Refer to “Fungicide Modes of Action” in the Plant Disease Control section for more information.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 2 application per season and DO NOT exceed for than one application per season in forage and hay cereal crops.
 - Azoxystrobin is persistent and will carryover. It is recommended that this product not be used in areas treated with azoxystrobin during the previous season.
 - Benzovindiflupyr is persistent and may carryover. It is recommended that any products containing benzovindiflupyr not be used in areas treated with this product during the previous season.
- **Grazing:** DO NOT graze treated fields or feed treated forage to livestock.
- **Preharvest interval:**
 - **Corn** – 14 days for grain and sweet corn, and 30 days for forage
 - **Cereals** – 45 days for grain and straw, 30 days for forage and hay
 - **Soybean** – 30 days, 15 days for edible podded legume vegetables (Crop subgroup 6A), and 14 days for soybean hay
- **Restricted Entry Interval:** DO NOT re-enter treated area within 12 hours after application.
- **Re-cropping:** Azoxystrobin is persistent and can carryover. Oat and rye should not be planted within 40 days of application. All other crops intended for food and feed should not be planted within 105 days of application of *Trivapro*.
- **Storage:** DO NOT freeze.
- **Environment:** This product is toxic to fish and aquatic organisms. Observe buffer zones outlined in the label.

Hazard Rating:



Poison

Warning – Eye and Skin Irritant

Danger – Corrosive to Eyes and Skin

Refer to the Introduction for an explanation of the symbols.

Twinline

Fungicide Group
3, 11

Company:

BASF Canada (PCP#30337)

Formulation:

130 g/L pyraclostrobin and 80 g/L metconazole formulated as a liquid.

- Container sizes – case (2 x 8.1L), 64 L drum, 128 L shuttle, or 400 L tote

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Wheat, triticale	Control of tan spot (<i>Pyrenophora tritici-repentis</i>), septoria leaf blotch (<i>Septoria tritici</i> or <i>Stagonospora nodorum</i>), leaf rust (<i>Puccinia recondita</i>), spot blotch (<i>Cochliobolus sativus</i>), stripe rust (<i>Puccinia striiformis</i>), powdery mildew (<i>Erysiphe graminis</i> f. sp. <i>tritici</i>)	150 to 200 mL	Prior to disease development or at onset of disease. Optimal application timing is at the flag leaf stage. Use the 202 mL/acre rate to obtain extended protection with maximum yield benefits.
Barley	Control of net blotch (<i>Pyrenophora teres</i>), spot blotch (<i>Cochliobolus sativus</i>), scald (<i>Rhynchosporium secalis</i>), stripe rust (<i>Puccinia striiformis</i>)	150 to 200 mL	Prior to disease development or at onset of disease. Optimal application timing is at the flag leaf stage. Use the 202 mL/acre rate to obtain extended protection with maximum yield benefits.
Oat	Control of crown rust (<i>Puccinia coronata</i>)		
Rye	Control of leaf rust (<i>Puccinia recondita</i>), powdery mildew (<i>Erysiphe graminis</i>)		
Barley, rye, wheat (all types), triticale	Suppression of fusarium head blight (<i>Fusarium graminearum</i>) and control of all leaf diseases controlled by lower application rates.	456 mL	When weather is warm and wet at head emergence and flowering. For wheat and rye apply at 20% flowering, for barley apply between full head emergence to up to 3 days after full emergence of the main stem.

Application Information:

- **Water Volume:**
 - **Ground:** minimum of 40 L per acre.
 - **Aerial:** minimum of 20 L per acre.

How it Works:

The active ingredient metconazole is a broad spectrum triazole demethylation inhibitor (DMI) fungicide with systemic activity. The active ingredient pyraclostrobin is a strobilurin fungicide with broad spectrum contact and systemic activity. Best utilized as a preventative application when environmental conditions are favourable for disease development. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

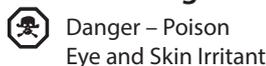
Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 2 applications of this product per season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:** Apply no later than end of flowering.
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 6 days.
- **Re-cropping:** A plant back interval of 35 days is required for all crops not listed on the label.
- **Storage:** Store in original tightly closed container. Protect from freezing.
- **Environment:** Avoid run-off from treated areas into aquatic areas. Toxic to aquatic organisms, non-target terrestrial plants and small wild animals.
 - For ground application, buffer zones must be 1 m for protection of terrestrial habitats and aquatic habitats greater than 1 m deep and buffer zones must be 5 m from aquatic habitats less than 1 m deep.
 - For aerial application, buffer zones must be 10 m for protection of terrestrial habitats and aquatic habitats greater than 1 m deep and buffer zones must be 250 m from aquatic habitats less than 1 m deep.

Hazard Rating:



Refer to the Introduction for an explanation of the symbols.

Veltyma

Fungicide Group
3, 11

Company:

BASF (PCP#34166)

Formulation:

200 g/L mefentrifluconazole and 200 g/L pyraclostrobin formulated as a suspension concentrate.

- Container size – 8.1 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Potato	Control of early blight (<i>Alternaria solani</i>), black dot (<i>Colletotrichum coccodes</i>) Suppression of brown spot (<i>Alternaria alternata</i>)	202 mL	Begin applications prior to row closure or when conditions are favourable for disease development. Apply an additional application at an interval of 7 to 14 days if disease persists or weather conditions are favourable.
Corn	Control of common rust (<i>Puccinia sorghi</i>), eyespot (<i>Kabatiella zeae/Aureoasidium</i>), gray leaf spot (<i>Cercospora zeae-maydis</i>), northern leaf blight (<i>Exserohilum turcicum/Setosphaeria turcica</i>) Tar spot (<i>Phyllachora maydis</i>)	202 mL	Begin applications prior to disease development. Apply a second time 10 to 14 days later if disease persists.

Crop	Diseases	Application Rate (per acre)	Application Timing
Soybean	Control of cercospora blight and purple seed stain (<i>Cercospora kikuchii</i>), septoria brown spot (<i>Septoria glycines</i>)	152 to 202 mL	Apply prior to disease development when conditions are favourable. If disease persists, a second application can be applied 10 to 14 days later.
	Control of frogeye leaf spot (<i>Cercospora sojina</i>), pod and stem blight (<i>Diaporthe phaseolorum</i> var. <i>sojae</i> / <i>Phomopsis longicolla</i>) Tar spot (<i>Phyllachora maydis</i>)	202 mL	

Application Information:

- **Water Volume:**
 - **Ground:** minimum of 40 L per acre.
 - **Aerial:** 8 L/acre for aerial applications targeting foliar diseases. Use 20 L/acre for applications targeting Gibberella ear rots on corn. Follow the instructions on the label.

How it Works:

The active ingredient, mefentrifluconazole, is a broad spectrum triazole demethylation inhibitor (DMI) fungicide with systemic activity. The active ingredient pyraclostrobin is a strobilurin fungicide with broad spectrum contact and systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 1 L per acre of this product per season.
- **Grazing:** No restrictions listed.
- **Preharvest interval:**
 - **Potato** – 7 days
 - **Corn, soybean** – 21 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas for 12 hours.
- **Re-cropping:** A plant back interval of 35 days is required for all crops not listed on the label.
- **Storage:** Store in original container. To prevent contamination, store away from food or feed.
- **Environment:** Oral LD50 (rats) = >500 to 2000 mg/kg. Dermal LD50 (rats) = >5000 mg/kg.
 - Toxic to aquatic organisms, non-target terrestrial plants, and small wild mammals. Observe spray buffer zones specified under Directions for Use.
 - The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g. sandy soil) and/or the depth to the water table is shallow. To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.
 - Avoid application when heavy rain is forecast.
 - Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Hazard Rating:



Caution Poison – Skin Irritant

Refer to the Introduction for an explanation of the symbols.

Velum Prime

Fungicide Group
7

Company:

Bayer (PCP#32108)

Formulation:

500 g/L of Fluopyram formulated as a suspension concentrate.

- Container size – 2 x 4.04 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate* (per acre)	Application Timing
Potato	Early blight (<i>Alternaria solani</i>) and black dot (<i>Colletotrichum coccodes</i>)	202 mL [4.5 mL/100m row (based on 90 cm row spacing)]	When using fungicides for late blight control throughout the season, utilize actives that also have activity on early blight. Spray specified dosage in a 10-15 cm band in-furrow at planting and cover with soil. For best results direct the in-furrow spray to the seed and soil. Apply in 20-61 L of water per acre. For transplanted crops: Post-planting drench, or hill drench. Transplant water drench with mechanical planting. Transplant water drench with hand planting.

Application Information:

- **Water Volume:**
 - **Ground:** Soil Applications using ground equipment, minimum of 20 L per acre.

How it Works:

The active ingredient fluopyram is a carboxamide fungicide with systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT apply more than 202 g fluopyram per acre per year, regardless of formulation or method of application (soil or foliar). To limit the potential for development of disease resistance to this fungicide class do not make more than 2 sequential applications of *Velum Prime* or any other Group 7 containing fungicide.
- **Grazing:** DO NOT allow livestock to graze treated area for 7 days after application.
- **Preharvest interval:** 7 days (all crops on label).
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** DO NOT replant to alfalfa for 14 days after application. All other crops may be replanted immediately following the last application of *Velum Prime*.
- **Storage:** Store this product away from food or feed. DO NOT store below freezing. If stored for 1 year or longer, shake well before using.
- **Environment:** Toxic to aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under directions for use. Toxic to birds.

Hazard Rating:

None listed.

Velum Rise

Company:

Bayer (PCP#34871)

Formulation:

250 g/L Fluopyram and 106 g/L Penflufen formulated as Suspension Concentrate.

- Container size – 8.1 L jug (one jug treats 20 acres)

Crops, Diseases, Rates and Timing:

Crop	Disease / Pest	Rate	Application Timing
Potato	Control of soil-borne black scurf, control of stem and stolon canker caused by <i>Rhizoctonia solani</i>	400 mL/ac or 9mL/100 m of row (based on 90cm row spacing)	Apply as an in-furrow spray at planting following the label instructions.
	Suppression of early blight, black dot, white mold (<i>Sclerotinia sclerotiorum</i>), root lesion and other pathogenic nematodes *		

* Black dot (*Colletotrichum coccodes*) and plant pathogenic nematodes are some of the causal agents of the potato early dying (PED disease complex).

Application Information:

- **Water Volume:**
 - **Ground:** Apply using minimum water volume of 16 to 60 L/acre. as an in-furrow spray at time of seeding. For best results, mount the spray nozzle to direct the spray as a 15-20 cm band onto the seed pieces in the furrow just before the seed is covered. Best control of soil-borne and seed-borne *Rhizoctonia solani* is obtained if the in-furrow treatment with *Velum Rise* is preceded by a seed piece treatment with *Emesto Silver* at registered rates.
 - **Do not apply by air.**

How it Works:

The active ingredient fluopyram is a carboxamide fungicide with systemic activity. Refer to “Fungicide Modes of Action” in the Plant Disease Control section for more information. Penflufen is a loco-systemic carboxamide fungicide which inhibits mitochondrial respiration by inhibiting succinate dehydrogenase (SDHI), an enzyme in the electron transport system.

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.

Restrictions:

- **Maximum number of applications:** To limit the potential for development of disease resistance to this fungicide class do not make more than 2 sequential applications of any Group 7 containing fungicide before rotating with a fungicide from a different Group registered for the same use. When *Velum Rise* is applied as a soil application use another mode of action for the first foliar fungicide application.
- **Fluopyram:** Do not apply more than 500 g/ha (202 g/ac.) fluopyram per year, regardless of formulation or method of application (soil or foliar).
- **Penflufen:** Do not apply more than 160 g/ha (65 g/ac.) penflufen per year, regardless of formulation or method of application (seed-piece treatment or in-furrow).
- **Re-entry:** 12 hours after application.
- **Pre-harvest Intervals:** Not Applicable
- **Grazing:** Do not allow livestock to graze treated area for 7 days after application.
- **Re-cropping interval:** Do not replant to alfalfa for 14 days after application. Potatoes and other tuberous and corm vegetables, sugarbeets, crops of crop groups 3-07 (bulb vegetables), 6 (legume vegetables, succulent or dried), 15 (cereal grains) and 20 (oilseeds) may be rotated anytime following the last application of *Velum Rise*. All other crops may be replanted 30 days following the last application of *Velum Rise*.

- **Storage:** Store this product away from food or feed. Do not store below freezing. If stored for 1 year or longer, shake well before using. Do not use or store in or around the home. Keep the product in the original container during storage.
- **Environment:** Toxic to aquatic organisms and non-target terrestrial plants. Toxic to birds. Observe buffer zones and other precautions specified under directions for use on the product label.

Hazard Rating:

Caution, Poison

Viatude

Fungicide Group
3, 11

Company:

Corteva Agriscience (PCP#34672)

Formulation:

187.5 g/L of picoxystrobin and 62.5 g/L of prothioconazole formulated as suspension concentrate.

- Container size – 2 x 8.91 L case, 95.04 L drum

Crops, Diseases, Rates and Timing:

Crop	Disease	Application Rate (per acre)	Application Timing
Canola	Control of sclerotinia stem rot (white mould) (<i>Sclerotinia sclerotiorum</i>)	295 – 340 mL	Begin applications before or at onset of infection to control sclerotinia. Use the higher rate when disease pressure is high. Make 2 applications per season, 14 days apart when disease pressure is high.
Soybean	Suppression of sclerotinia rot (white mould) (<i>Sclerotinia sclerotiorum</i>), brown spot (<i>Septoria glycines</i>), and frog-eye leafspot (<i>Cercospora sojina</i>).	295 – 340 mL	Begin applications prior to or at onset of disease development. Use higher rate when disease pressure is high. Make 2 applications per season, 14 days apart under high disease pressure

Application Information:

- **Water Volume:**
 - **Ground:** Apply using a minimum water volume of 61 L/ac.
 - **Air:** Apply using a minimum water volume of 20 L/ac.

How it Works:

The active ingredient picoxystrobin is a broad spectrum strobilurin fungicide and is to be used as a preventative application when environmental conditions are favorable for disease development. Picoxystrobin has preventative and locally systemic activity. Prothioconazole is a triazole fungicide with broad spectrum activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered. According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Maximum number of applications:** Canola and Soybean – maximum 2 applications of *Viatude* per season.
- **Rainfall:** Avoid application when heavy rain is forecast.
- **Pre-harvest Intervals:** Canola – 36 days, Soybean – 20 days.
- **Re-entry:** Do not re-enter treated areas within 24 hours of application.
- **Re-cropping interval:** Treated areas may be replanted immediately after harvest with any crop appearing on the label. All other crops not on the label may be planted 30 days following the last application of *Viatude*.
- **Storage:** Store product in original container away from food or feed. Do not freeze, use an appropriately heated storage.

- **Environment:** Toxic to earthworms. Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland. Toxic to aquatic organisms. Observe spray buffer zones specified on the label under *Spray Buffer Zones*. 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. 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.

Hazard Rating:

None listed.

Potential Skin Sensitizer.

Zampro

Fungicide Group
40, 45

Company:

BASF Canada (PCP#30321)

Formulation:

225 g/L dimethomorph and 300 g/L ametoctradin formulated as a suspension concentrate.

- Container size – 4 x 4.14 L

Crops, Diseases, Rates and Timing:

Crop	Diseases Controlled	Application Rate (per acre)	Application Timing
Potato	Late blight (<i>Phytophthora infestans</i>)	320 to 400 mL	Begin applications prior to disease development and continue on a 5 to 10 day interval. Use the higher rate and shorter interval when disease pressure is high. The addition of a spreading/penetrating adjuvant is recommended to improve disease control performance.
	Tuber blight (<i>Phytophthora infestans</i>)	400 mL	When used in accordance to label recommendations, <i>Zampro</i> also reduces tuber blight when applied immediately prior to or after vine kill.

Application Information:

- **Water Volume:**
 - **Ground:** minimum 80 L per acre.
 - **Aerial:** minimum 20 L per acre.

How it Works:

The active ingredient dimethomorph is a carboxylic acid amide fungicide with contact, systemic and antispore activity. The active ingredient ametoctradin is a quinone x inhibitor fungicide with contact and antispore activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 3 applications of this product per season.
- **Grazing:** No restrictions listed.
- **Preharvest Interval:** 4 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** A plant back interval of 30 days is required for all crops not listed on the label.
- **Storage:** Store in original tightly closed container. Protect from freezing.
- **Environmental Hazards:** Avoid run-off from treated areas into aquatic areas. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
- **Toxicity:** Toxic to aquatic organisms.

Hazard Rating:

 Warning Poison – Eye Irritant

Refer to the Introduction for an explanation of the symbols.

Zetigo PRM

**Fungicide Group
11, 21**

Company:

Corteva Agriscience (PCP # 34701)

Formulation:

50 g/L florylpicoxamid and 100 g/L pyraclostrobin formulated as emulsifiable concentrate

- Container size: 2 x 9.72 L case, 103.69 L drums

Crops, Diseases, Rates and Timing:

Crop	Disease	Rate per acre	Crop stage and other timing information
Lentil	Control of Anthracnose (<i>Colletotrichum truncatum</i>), Ascochyta blight (<i>Ascochyta fabae</i> f. sp. <i>lentis</i>), Botrytis Grey mould (<i>Botrytis cinerea</i>), Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)	324 to 405 mL	The first application must be applied before disease is established and no later than the onset of flowering, whichever comes first. A second application with an alternate fungicide can be made 10-14 days after the first application, when disease pressure is severe or when agronomic or weather conditions are conducive to disease development or movement. Within the rate range, use the higher rate under conditions conducive to high disease pressure.
Chickpeas	Control of ascochyta blight (<i>Ascochyta rabiei</i>), botrytis grey mould (<i>Botrytis cinerea</i>)	324 to 405 mL	The first application must be applied before disease is established and no later than the onset of flowering, whichever comes first. A second application with an alternate fungicide can be made 10-14 days after the first application, when disease pressure is severe or when agronomic or weather conditions are conducive to disease development or movement. Within the rate range, use the higher rate under conditions conducive to high disease pressure.
	Suppression of White mould (<i>Sclerotinia sclerotiorum</i>)	324 to 405 mL	
Field Peas	Control of Anthracnose (<i>Colletotrichum truncatum</i>), Ascochyta/Mycosphaerella blight (<i>Mycosphaerella pinodes</i> , <i>Ascochyta pisi</i> and <i>Phoma medicaginis</i>), Powdery mildew (<i>Erysiphe pisi</i>), Botrytis Grey mould (<i>Botrytis cinerea</i>)	324 to 405 mL	The first application must be applied before disease is established and no later than the onset of flowering, whichever comes first. A second application with an alternate fungicide can be made 10-14 days after the first application, when disease pressure is severe or when agronomic or weather conditions are conducive to disease development or movement. Within the rate range, use the higher rate under conditions conducive to high disease pressure.
	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)	324 to 405 mL	
Faba Beans	Control of Chocolate spot (<i>Botrytis cinerea</i>)	324 to 405 mL	Apply at first sign of disease or at the beginning of flowering (whichever occurs first). Within the rate range, use the higher rate under conditions conducive to high disease pressure.
	Suppression of white mould (<i>Sclerotinia sclerotiorum</i>)	324 to 405 mL	
Canola	Control of Blackleg (<i>Leptosphaeria maculans</i>), Alternaria leaf spot or black spot (<i>Alternaria brassicae</i>)	324 to 405 mL	For control of blackleg, apply preventatively at the 2 to 6-leaf (rosette) stage. Within the rate range, use the higher rate under conditions conducive to high disease pressure.
	Suppression of Sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>)	324 to 405 mL	Apply prior to the onset of disease, typically around the 20 - 50% bloom stage.

Crop	Disease	Rate per acre	Crop stage and other timing information
Wheat (spring, durum, winter)	Control of stripe rust or yellow rust (<i>Puccinia striiformis</i>) Brown rust/ Leaf rust (<i>Puccinia triticina</i>) Septoria leaf spot (<i>Septoria tritici</i> or <i>Leptosphaeria nodorum</i>) Tan spot (<i>Pyrenophora tritici-repentis</i>)	243 to 405 mL	At the first sign of disease, usually at the beginning of stem elongation (BBCH 29) or when conditions are favourable for disease development. To maximize yield it is important to protect the flag leaf from disease. Therefore, the optimum time to apply a single application of Zetigo PRM Fungicide is immediately after flag leaf emergence (BBCH 37-39). Do not apply after flowering (BBCH 59).
Barley	Control of net blotch (<i>Pyrenophora teres</i>)	295 to 405 mL	At the first sign of disease, usually at the beginning of stem elongation (BBCH 29) or when conditions are favourable for disease development. To maximize yield it is important to protect the flag leaf from disease. Therefore, the optimum time to apply a single application of Zetigo PRM Fungicide is immediately after flag leaf emergence (BBCH 37-39). Do not apply after flowering (BBCH 59).
	Control of Scald (<i>Rhynchosporium commune</i>)	267 to 405 mL	

Application information

- **Water Volume:**
 - **Ground:** 61L/ac minimum for lentils, field peas, chickpeas, and faba beans. 40L/ac minimum for canola, wheat, and barley.
 - **Air:** 20L/ac for cereals ONLY (wheat, and barley). Do not apply *Zetigo PRM* to lentils, field peas, chickpeas, faba beans, or canola by air.

How it Works

Zetigo PRM Fungicide is for use in pulses (lentils, field peas, chickpeas, faba bean), canola, wheat and barley. *Zetigo PRM* Fungicide is quickly absorbed into plant tissue and is locally systemic with translaminar movement. *Zetigo PRM* Fungicide should be included in a protective spray program and used in a rotation program with other fungicides. The active ingredient florylpicoxamid is a picolinamide fungicide with broad spectrum locally systemic activity. The active ingredient pyraclostrobin is a strobilurin fungicide with broad spectrum contact and systemic activity. To be used preventatively when environmental conditions are favorable for disease development. For more information refer to "Fungicide Modes of Action"

Tank Mixes:

Do not tank mix with copper-based fungicides. According to the Pest Management Regulatory Agency of Health Canada's Guidance Document on Tank Mix Labelling (March 2023), unlabelled tank mixes of this product are permitted only if the label of this product and the label of the product it might be mixed with include at least general wording on their respective labels indicating they may be mixed with other pesticides. When tank mixes are permitted, apply mixes according to the most restrictive use limitations for either product.

Restrictions:

- **Maximum number of applications:** Maximum 1 application per season, all crops (lentils, chickpeas, field peas, faba beans, canola, wheat, and barley). Alternate the use of *Zetigo PRM* Fungicide with a fungicide of a different mode of action.
- **Re-entry:** 12 hours
- **Pre-harvest Intervals:** Lentils, chickpeas, field peas, faba beans – 30 days. Canola – 21 days. Wheat and barley – 30 days.
- **Grazing:** DO NOT cut field pea vines and hay within 7 days of application. DO NOT graze or feed treated canola forage to livestock. DO NOT permit livestock to graze field or harvest forage or cut hay within 8 days of application for wheat and 12 days of application for barley.
- **Re-cropping interval:** Crops listed on the *Zetigo PRM* Fungicide label may be planted immediately following the last application (see label). All other crops can be planted 30 days after the last application.
- **Aerial Application:** Registered for aerial applications on cereals (wheat and barley) ONLY. DO NOT apply *Zetigo PRM* to lentils, field peas, chickpeas, faba beans, or canola by air.
- **Rainfall:** Avoid application when heavy rain is forecast.
- **Storage:** Store this product away from food or feed. Store in original containers in a secure, dry heated storage. Do not allow contamination of seeds, plants, fertilizers, or other pesticides. Do not contaminate food, feedstuffs, or domestic water supplies. If containers are damaged or spill occurs, use the product immediately or contain the spill with absorbent materials and dispose of waste.

- **Environment:** Toxic to aquatic organisms. Observe spray buffer zones specified under Spray Buffer Zones. This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Toxic to earthworms. Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland. Toxic to aquatic organisms. Observe spray buffer zones specified on the label under Spray Buffer Zones. 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. 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.

Hazard Rating:

None listed.

Potential Skin Sensitizer

Zolera FX*

Fungicide Group
3, 11

*NOTE: As of January 1, 2025, www.keepitclean.ca indicates that the use of this product on certain crop types may have market access concerns. Please see Introduction for more information AND consult potential grain buyers before using this product.

Company:

UPL AgroSolutions Canada (PCP#33367)

Formulation:

200 g/L fluoxastrobin and 200 g/L tetraconazole formulated as a micro emulsion.

- Container size – 2 x 5.7 L

Crops, Diseases, Rates and Timing:

Crop	Diseases	Application Rate (per acre)	Application Timing
Field pea	Control of powdery mildew (<i>Erysiphe pisi</i>), suppression of sclerotinia white mould (<i>Sclerotinia sclerotiorum</i>)	142 to 223 mL	For optimum results, begin applications preventatively and continue as needed on a 7 to 14 day interval. Use the highest rate and the shortest interval when conditions favour high disease pressure. For management of listed Ascochyta disease use the highest rate.
	Control of Mycosphaerella blight (<i>Mycosphaerella pinodes</i>), suppression of Ascochyta leaf and pod spot (<i>Ascochyta pisi</i>)	223 mL	
Lentil	Suppression of sclerotinia white mould (<i>Sclerotinia sclerotiorum</i>), suppression of anthracnose (include Group 11 resistant biotypes) in lentils	142 to 223 mL	For optimum results, begin applications preventatively and continue as needed on a 7 to 14 day interval. Use the highest rate and the shortest interval when conditions favour high disease pressure. For management of listed Ascochyta disease use the highest rate.
	Suppression of Ascochyta leaf and pod spot (<i>Ascochyta lentis</i>)	223 mL	
Dry bean, faba bean	Suppression of anthracnose (<i>Colletotrichum lindemuthianum</i>), sclerotinia white mould (<i>Sclerotinia sclerotiorum</i>)	142 to 223 mL	For management of listed Ascochyta disease use the highest rate.
Chickpea	Suppression of sclerotinia white mould (<i>Sclerotinia sclerotiorum</i>)	142 to 223 mL	
Corn	Control of common rust (<i>Puccinia sorghi</i>), grey leaf spot (<i>Cercospora maydis</i>) Suppression of northern corn leaf blight (<i>Setosphaeria turcica</i> , anamorph: <i>Exserohilum turcicum</i>)	202 mL	Apply preventatively between V4 (4 leaf collar) and dough stage (R4).

Application Information:

- **Water Volume:**
 - **Ground:** minimum 40 L per acre.
 - **Aerial (corn only):** minimum 20 L per acre.

How it Works:

The active ingredient fluoxastrobin is a systemic fungicide that works by interfering with respiration in plant pathogenic fungi, and is a potent inhibitor of spore germination and mycelial growth. The active ingredient, tetraconazole, is a broad spectrum triazole demethylation inhibitor (DMI) fungicide with systemic activity. Refer to "Fungicide Modes of Action" in the Plant Disease Control section for more information.

Tank Mixes:

None registered.

Restrictions:

- **Resistance management:** Refer to "Pathogen Resistance" in the Plant Disease Control section for more information.
- **Maximum number of applications:** DO NOT exceed 2 applications per season for pulses or 1 application per season for corn.
- **Grazing:** No restrictions listed.
- **Preharvest Interval:**
 - *Pulses* – 14 days
 - *Grain corn* – 30 days
- **Restricted Entry Interval:** DO NOT re-enter treated areas within 12 hours of application.
- **Re-cropping:** All crops on the *Zolera FX* label (cereals, pulses, canola, corn) may be planted immediately following harvest. Alfalfa and forage grasses may be planted following a 30 day plant back interval. Sunflowers may be planted following a 180 day plant back interval. For all other crops, DO NOT plant back within one year of the last field application.
- **Storage:** Store this product away from food or feed.
- **Environmental Hazards:** Toxic to aquatic organisms. Observe buffer zones as specified on the label. To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Hazard Rating:

Potential Skin Sensitizer

Refer to the Introduction for an explanation of the symbols.