

# Nufarm Propiconazole

## PROPICONAZOLE 418 g/L EC

One case treats 160 acres at full rate, 2 jugs/case.

### MAJOR CROPS

- Barley
- Canary seed
- **Canola**
- Chickpea
- Dry bean
- Faba bean
- Field pea
- Lentil
- Oats
- Soybean
- Spring wheat (including durum)
- Winter wheat

### DISEASES CONTROLLED

- Bean rust (*Uromyces* spp.)
- **Blackleg** (*Leptosphaeria maculans*)
- Cercospora leaf spot (*Cercospora kikuchii*)
- Crown rust (*Puccinia coronata*)
- Leaf rust (*Puccinia triticina*, *Puccinia hordei*)
- Net blotch (*Pyrenophora teres*)
- Powdery mildew (*Erysiphe* spp., *Blumeria graminis*, *Microsphaera diffusa*)
- Scald (*Rhynchosporium secalis*)
- Septoria leaf/Glume blotch (*Septoria* spp.)
- Septoria leaf mottle\* (*Septoria triseti*)
- Spot blotch (*Cochliobolus sativus*)
- Stem rust (*Puccinia graminis*)
- Stripe rust (*Puccinia striiformis*)
- Tan spot (*Pyrenophora tritici-repentis*)

\*suppression only

### TANK MIXES

- Multiple herbicide and insecticide tank-mix partners are available. Please consult tank-mix partner label.

### BENEFITS

- Dependable, proven disease control
- Broad-spectrum curative and preventative activity
- Control rust and leaf disease in cereals and blackleg in canola with one convenient product
- Simple, convenient all-in-one packaging
- Industry leading tank-mix flexibility and crop safety
- Mixes safely with bromoxynil
- No adjuvant required

### MIXING ORDER

- 1) Fill tank ½ full of water.
- 2) Add Nufarm Propiconazole.
- 3) Fill remainder of tank with water.

For tank mixes with other products use the WALES Procedure. Nufarm Propiconazole is an EC formulation.

**1.800.868.5444**

**Nufarm.ca**

This content is for informational purposes only. Always read and follow label directions.

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**Nufarm**

**Grow a better tomorrow.**

# Blackleg

*(Leptosphaeria maculans)*

## MAIN CROPS AFFECTED

- Canola
- Mustards

## OTHER SUSCEPTIBLE CROPS

- Other Brassica species

## BLACKLEG OCCURRENCE

- Blackleg is caused by two pathogens *Leptosphaeria maculans* and *Leptosphaeria biglobosa*. *L. maculans* is highly virulent and responsible for the characteristic stem cankers, stem girdling and early season leaf lesions seen in canola, which can result in significant yield loss. *L. biglobosa* is weakly virulent and widespread throughout Western Canada; *L. biglobosa* causes leaf lesions late in the season and very rarely results in yield loss.
- *L. maculans* survives on stubble and residue from previous canola crops and susceptible weed species (including volunteer canola, shepherd's-purse and many others). It infects new canola crops at the seedling stage and causes progressively more severe symptoms as the crop develops. Stem cankers and stem girdling caused by *L. maculans* restrict the ability of water and nutrients to move from the roots up into the plant, this results in incomplete development, reduced yield, premature senescence and increased risk of lodging.
- Any events during the growing season that cause wounds to stem or leaf tissue can increase blackleg infection. Hail, high winds, damage from sprayer tracks and insect feeding can all increase the severity of infection by *L. maculans*.
- Shifts within blackleg populations have resulted in an increase of races of blackleg capable of overcoming our genetic resistance resources. Similar to using the same group of herbicide over and over, using the same resistance genes creates selection pressure on the blackleg population and favours an increase in races that are partially or fully able to overcome the applied genetic resistance mechanisms.
- Blackleg infection builds through the year with initial infection from infected crop residue and secondary infections from newly developed lesions spreading the disease up each individual plant and throughout the plant canopy.

## BLACKLEG LOSSES – BY THE NUMBERS

- **50%**. Yield losses levels reported in infected fields in Western Canada.
- **35-95%**. The percentage of fields with blackleg infections any given year. Based on surveys completed in each western provincial canola growing regions.

## BLACKLEG MANAGEMENT – BY THE NUMBERS

- **3-4**. The minimum numbers of years between canola crops in a crop rotation to maintain current levels, or begin to decrease levels of blackleg.
- **100%**. Use rate for varieties deemed to be R (resistant) or MR (moderately resistant) to blackleg.
- **2 or more**. Rotate between different canola cultivars in order to use different genetic resources against the blackleg population in each field.
- **2-leaf to bolt**. Fungicide applications timing that will help control blackleg especially in high risk situations – short rotations, MR or lower varieties seeded, canola crop residue present, weather conducive to disease development and high yield environments.

## PROPICONAZOLE PERFORMANCE ON BLACKLEG

- **Preventative**. An application of the systemic fungicide Propiconazole provides preventative activity in the plant and should be applied prior to disease development.
- **Long lasting**. Applications of Propiconazole should be made during the vegetative growth stage from the 2-leaf stage to just prior to bolting. This is the longest window of application in the industry. Strobilurin fungicide products can only be applied from 2-6 leaf stage.
- **Increase yield**. Propiconazole trials under moderate blackleg pressure resulted in up to 15% yield increase over untreated. (Bradley et al. 2006)

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