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InVigor[®]

Canola Symposium

Vercoras- InVigor Hybrid Seed Treatment

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Vercoras®

Seed Treatment

- Frontline insecticide along with four fungicide active ingredients deliver broad-spectrum protection against both flea beetles and key diseases, including blackleg.
 1. First complete seed treatment designed to control airborne blackleg for protection through critical early season infection period.
 2. Frontline insecticide provides base protection against flea beetles.
 3. Four fungicide active ingredients deliver broad-spectrum protection against key seed and soil-borne diseases.

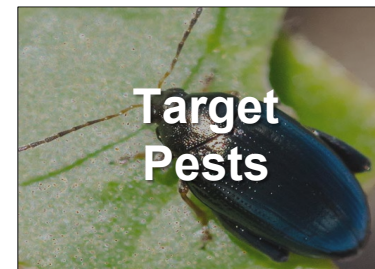


Insecticide: Clothianidin (Gr. 4)

Fungicides: Metalaxyl (Gr. 4), Fluxapyroxad (Gr. 7), Fluopyram (Gr. 7), Pyraclostrobin (Gr. 11)



■ Canola



■ Flea beetle
■ Fusarium
■ Rhizoctonia
■ Pythium
■ Alternaria
■ Airborne blackleg
■ Seedborne blackleg

Vercoras: Background on the Innovation

Industry leading active ingredients

Pyraclostrobin + Xemium + Metalaxyl

11

7

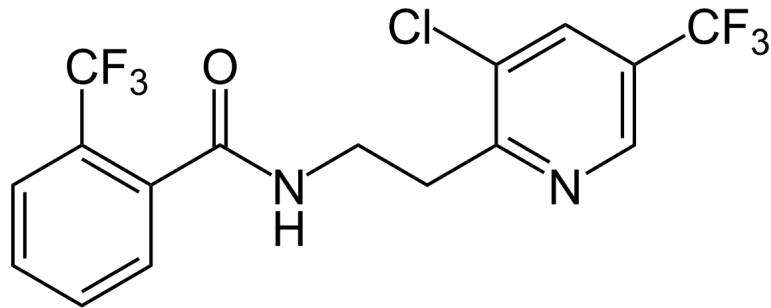
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Clothianidin

4

+ Fluopyram

Group 7
SDHI
Fungicide



New innovation for
blackleg management
in canola

- **Strong base disease and insect control.**
 - ▶ Consistent protection against seed and soil-borne diseases & flea beetles.
- **Fluopyram provides early season protection against multiple blackleg races in canola.**
 - ▶ Providing protection through critical early season establishment period.
- **How the blackleg control works.**
 - ▶ Fluopyram is taken up by the roots and translocates to the cotyledons and early leaves, protecting the plant from airborne blackleg infection during initial growth stages.

Seedborne Blackleg vs Airborne Blackleg: What's the difference?



Source: BASF Internal, 2020

Seedborne Blackleg

- Caused by infected seed
- Base canola seed treatments typically protect against seedborne blackleg



Source: Canola Council of Canada, 2021.

Airborne Blackleg

- Caused by spores released from infected stubble or residue and deposited on the plant
- Early infection by airborne spores is the main cause of later season stem infection and yield loss by blackleg

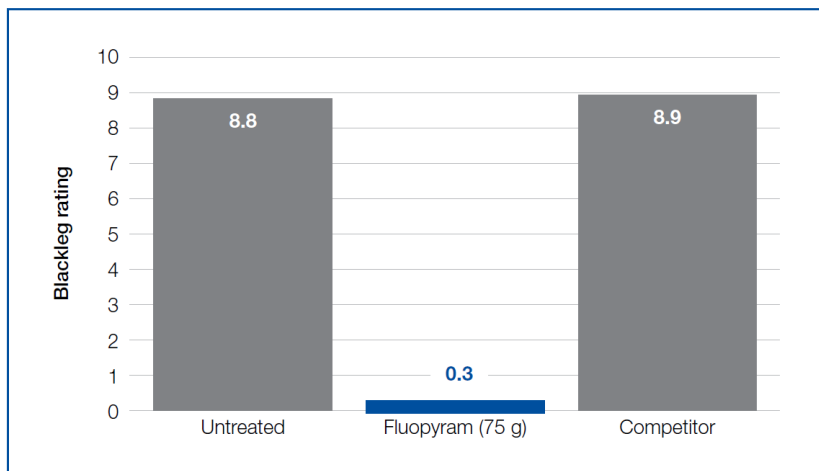
Vercoras: Addition of Fluopyram for Blackleg Control

Airborne blackleg efficacy on InVigor® hybrid canola



Source: BASF Internal RCD Trial on InVigor L255PC hybrid, Saskatoon, SK, 2020

Fluopyram performance for blackleg control



Source: BASF Third-Party Research Trial, Saskatoon, SK, 2019, n=2

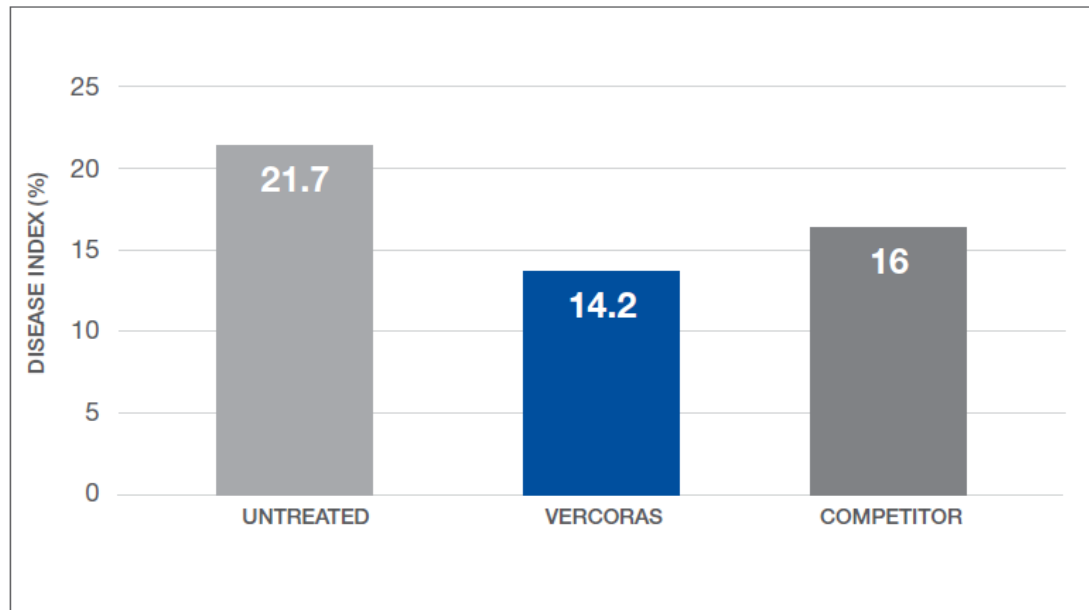
Blackleg Cotyledon Demo



Source: BASF Greenhouse Demo, 2021

Vercoras: Strong Disease Control Package

2020 Fusarium challenged trials disease index



Source: BASF Internal RCD Trials, Edmonton, AB, Saskatoon, SK and Winkler, MB, 2020, n=5

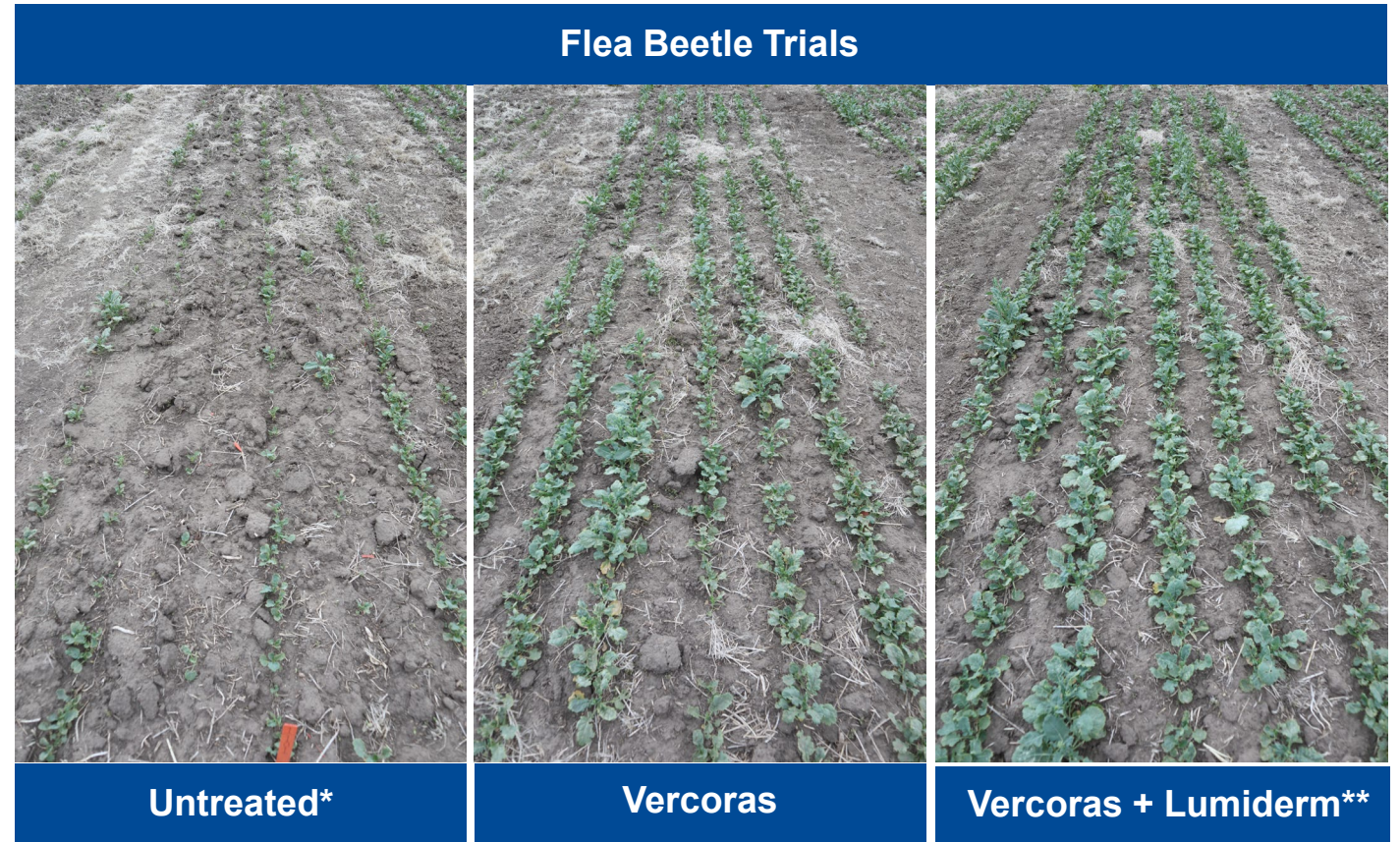
Fusarium challenged trials



Source: BASF Internal RCD Trial, Saskatoon, SK, 2020

Insecticide Control & Managing Flea Beetles

- The Clothianidin component of Vercoras provides base protection against flea beetles.
- In medium to heavy pressure situations and for enhanced crucifer and striped flea beetle protection as well as control of early season cutworms we recommend the addition of Lumiderm™.
- Combination remains an excellent option to protect InVigor seed.



Source: BASF Internal RCD Trial, Saskatoon, SK, 2021.

*Fungicide Base Only

**Lumiderm at 400 g rate



Benefits of Vercoras & Early Season Blackleg Control

- 1. Four fungicide active ingredients ensure strong disease control** across multiple seed and soil borne pathogens.
 - 2. Frontline flea beetle protection** with Clothianidin contained within Vercoras.
 - 3. Control of airborne blackleg** an additional layer of defense for multiple blackleg races to ensure proper establishment and reduce potential for stem infection later in season.
 - 4. Complements strong InVigor genetics** with robust disease control in addition to stewardship benefits as blackleg continues to be remain an important industry / trade topic for canola.
- **Available exclusively on InVigor hybrid canola for the 2022 season.**



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