

# WHAT SEED- AND SOIL-BORNE DISEASES SHOULD I PROTECT MY CEREALS AGAINST IN WESTERN CANADA?

Seed is most vulnerable to diseases before emergence and before the plant's own defense mechanisms kick in when photosynthesis begins. Seed treatments effectively protect seed against seed- and soil-borne diseases before plant emergence. The most common diseases to protect against in cereals are:

// Seed-borne *Fusarium graminearum* (Number 1)

// *Cochliobolus sativus*

// Seed- and soil-borne *Fusarium* spp.

// *Pythium* spp.

// Smut

## WHAT ABOUT RHIZOCTONIA IN CEREALS IN CANADA?

There are 13 different AG groups and several subgroups of Rhizoctonia worldwide. Each strain has a preferred host crop or host range. Fortunately, AG 8, the group that can have a significant yield impact on cereals, does not exist in Western Canada. However Rhizoctonia AG group AG 2-1, can have a significant yield impact on crops such as canola, pulses, and soybeans in Canada. Research in labs and fields has shown that AG 2-1 does not impact emergence or yield in cereals.



Source: Research plot inoculated with Rhizoctonia AG2-1 (2015).  
Top right untreated canola: Significant impact on emergence and yield.  
Bottom right untreated no wheat: No impact on emergence or yield observable.  
Both plots on the left were treated with fungicide seed treatment.

Impact of RHIZO AG2.1 on canola vs. wheat



Source: Inoculated growth chamber trials (2015).

"A difference in wheat emergence was not observed between seed planted in medium inoculated with Rhizoctonia AG2-1 and pathogen-free medium." – Krista Anderson, 2015.

When it comes to protecting against seedling diseases in cereals, growers should select a seed treatment that provides proven contact and systemic protection against key yield-impacting diseases. Uniform coverage, as well as accurate application rates, are important for getting the best results from your seed treatment.

For more information on this topic, contact Scott Barr, SeedGrowth Specialist – North Saskatchewan, 1 306-491-1750, or on Twitter @AltabarrScott



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