

SCOUTING FOR SEEDLING DISEASES AND ROOT ROT IN CEREAL CROPS

Seedling diseases can often be missed when scouting a field, especially if you're just walking through the crop and looking at the foliage. This is because root rot occurs below the soil's surface and seedling blight cannot be noticed above ground at its early stages of development. To monitor the effect of seedling diseases on cereal crops, plant stand counts should be taken in various areas of the field at two different stages (1 leaf and 3 leaf) as the crop matures.

In addition, some of the plants should be dug up and washed off to help identify seedling diseases. If you dig up a normal healthy plant, it will have white/cream-coloured sheath/coleoptile and white roots after being washed.

Some of the most common diseases you will likely encounter in cereals are:

COMMON ROOT ROT, SEEDLING BLIGHT

Problematic pathogens are *Cochliobolus sativus* and *Fusarium* spp.

C. sativus and *Fusarium* spp. are both seed- and soil-borne diseases. They can cause reduced tillers and fewer seeds per head, and cause plants to be more susceptible to other leaf diseases with pre-mature ripening in cereals.

These diseases occur sporadically throughout a field, with brown lesions forming on coleoptiles and roots becoming brown in colour.

C. Sativus and *Fusarium* spp. root rot can be tough to distinguish. *C. Sativus* will generally start out as lesions on the coleoptile of the plant. *Fusarium* spp. can be distinguished by pink appearing on parts of the plant (present on the outside or sometimes observed by splitting the plant open). You may be able to tell if it was a seed- or soil-borne infection by the location of the infection.

BROWNING ROOT ROT

Problematic pathogen is *Pythium* spp.

This disease occurs in patches in low lying and wet areas of a field. Plants and roots become stunted with the roots turning brown (in some cases lower leaves will turn yellow). Root development may be impaired (i.e., short roots). To protect against these seedling diseases, it is recommended that a seed treatment (e.g., Raxil® PRO SHIELD) with contact and systemic activity registered to protect against these diseases be used. The correct application rate with very good coverage is important for best results.

For more information on this topic, contact Brittnye Kroeker, SeedGrowth Specialist – Parkland, 204-281-1394, Brittnye.Kroeker@bayer.com



Seedling Blight



The three plants on the left show the start of common root rot (*C. Sativus*). While the plant on the right has a whiter root system with no brown lesions.

