

## Do Seed Treatments Work?

Do you like beer? Can you imagine a world without it? On a hot summer day, or an evening at the local hockey rink, beer is likely as to be found as coffee. What about a juicy steak or pork chops? There is nothing like beer and a bbq in the middle of August. However if we don't take due diligence to combat soil and seed borne fungal pathogens prior to this year's seeding, it may be expensive to enjoy our favorite backyard pastime.

Do seed treatments work? The simple answer is – Yes. However, several factors are involved that reduces their ability to protect from disease or make them appear ineffective.

Is the disease in your field? This will depend on the disease, location, and history. If no disease exists in your field there is no benefit, but if it's there the benefit is striking. There are several diseases that a seed treatment will help control depending on the crop and the treatment selected.

Take-all, Smuts, *Fusarium's*, *Ascochyta* and *Aphanomyces* are all different diseases with differing lifecycles that may or may not be present in your soils.

I think for all intents and purposes, given the weather conditions of 2016, the likelihood that a disease is present in your soil this coming year are quite high. Especially so, if you have short rotations defined as rotating between just two species, such as cereal and canola. If you have greater than three species then the risk is lower for most root diseases but not all.

Use clean seed to aid in managing seed borne pathogens. Get your seed tested at an accredited lab for disease to determine if the type of disease and levels of diseased seed are manageable.

Ensure proper calibration of application equipment so that the correct amount of fungicide is applied. Under application will reduce the effectiveness of control and may increase the risk of fungicide resistance.

Seeding depth and seeding timing. Seeds that sit in cold wet soil for extended periods before emerging are at greater risk for developing a root disease than those that emerge out of the ground more quickly. Also, seeds that are deeper have more exposed hypocotyl to the soil increasing the risk of disease development. Try to seed as shallowly as possible, 3/4" – 1" for most cereals.

Proper fertility will also assist the plants in early spring to "pop" out of the ground. Seed placed phosphorous at safe seed rates will assist emergence in cooler soils, especially in combination with a fungicide.

*Fusarium graminearum* (Fg) is the disease causing havoc in the western provinces. It especially loves moist conditions and reared its head last year and is poised to be a problem this upcoming season. It affects most grasses and there are only a few resistant strains available. Fg causes floret sterility at best and at worst, causes *Fusarium* damaged kernels (FDK). Due to a toxin produced by the fungus, FDK levels are used to determine its suitability for human and livestock consumption. Malt barley can have zero FDK, and five FDK per hundred is the limit for feed. Whether you purchase seed wheat or use your bin run seed, have your seed tested, use a seed treatment, and follow best management practices as described above.

Otherwise a beer might cost \$6 a can from the liquor store and not the pub.