

Value of Seed Treatments

Speakers:

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Gregory Sekulic	<i>Canola Council of Canada</i>
Kevin Zaychuk	<i>20/20 Seed Labs Inc.</i>
Brett Graham	<i>Syngenta Canada</i>
Serena Klippenstein	<i>Manitoba Pulse & Soybean Growers</i>
Nathan Klassen	<i>Bayer Canada</i>
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Objectives:

To discuss the benefits of seed treatment on

- 1- Canola
- 2- Soybean
- 3- Wheat

Collaborator: Syngenta Canada

Demonstration Treatments:

1. Canola Fungicide CK @ 3 seedlings/ft² (30 seedlings/m²)
2. Canola Insecticide + Fungicide @ 3 Seedlings/ft² (30 seedling/m²)
3. Canola Fungicide CK @ 5 seedlings/ft² (50 seedlings/m²)
4. Canola Insecticide + Fungicide @ 5 Seedlings/ft² (50 seedlings/m²)
5. Full package protection (SR:5lbs an acre)
6. Westar (NO HERBICIDE), (SR: 5lbs an acre)
7. Westar BL seed treatment (no herbicide) (SR:5lbs an acre)
8. Soybean, untreated
9. Soybean, treated
10. Wheat, untreated
11. Wheat, treated

Demonstration Summary:

Some farmers consider seed treatments an insurance policy to try and ensure their crop has every opportunity to germinate and establish healthy plants. Others see them as another added cost they don't need, especially if they haven't had any serious disease issues for a while. Invariably though, once a farmer has had a disease problem costing a significant amount of yield, seed treatments become standard practice. As is often the case, it's "once bitten, twice shy" when it comes to seed treatments.

"A lot of people who don't use seed treatments get away with it for a lot of years, and then suddenly have a problem where they have too much smut or they'll get common root rot or

take all root rot. They then realize they should maybe have applied a seed treatment,” says Harry Brook, a crop specialist with Alberta Agriculture and Forestry. “Seed treatments are a significant cost, so probably the best way to think them is as insurance, and it’s up to individual farmers to assess their risk based on their crop rotation, the conditions at seeding and how comfortable they are with the amount of risk that’s involved.”

Common root rot can be especially problematic because it affects most cereal crops. If farmers are growing another cereal crop this year, and had common root rot in the same field last year, they should certainly pencil in a seed treatment. Shorter crop rotations — such as wheat/canola — in general are at higher risk for disease problems.

“A longer, varied crop rotation means there is less chance of disease organisms building up,” says Brook. “With a short, minimally varied crop rotation we’re setting ourselves up for disease issues because the more we grow the same crop, the more opportunities there are for pathogens that attack that crop to multiply and flourish. That increases the risk of disease and crop failure, so it might be more advantageous to use seed treatments.” But for farmers who have a long rotation, and a smaller number of acres to seed — so they can allow time for the soil to warm up and become moist — a seed treatment may not pay every year.

Coping with smut and bunt used to be part of growing cereals on the Prairies, but fungicide seed treatments are now very effective in killing these pathogens. Invariably, says Brook, whenever he talks to farmers who have seen a lot of smut or bunt in their crops they haven’t bothered with a seed treatment. “The problem is if you are planting untreated seed with smut spores on the seed, you are going to get smut,” says Brook. “If you’ve never had smut and you’ve got very warm soils — around 7 C to 8 C and there’s good moisture so you can seed shallow, then the big advantage of disease prevention through a seed treatment is removed.”

Infections due to fusarium, including *F. graminearum*, are another big issue that cereal farmers seem to be dealing with on a regular basis. The first defence against this disease should always be using clean seed, says Pratisara Bajracharya, a pathologist with Manitoba Agriculture & Resource Development.