

10 COMMANDMENTS FOR FUSARIUM MANAGEMENT

- **1. EDUCATE, COMMUNICATE**. You can't control what you don't know: go to all of those information meetings, read all the articles, & call your local agronomist. Understanding the disease triangle is key to fighting fusarium. If you don't understand the disease life cycle & what conditions favor the disease & why a multi- pronged approach to control is required, you'd best find out!
- **2. TEST.** your seed. Now that most areas of Alberta have Fusarium, seed testing should be used as a tool to select the best seed to ensure a healthy uniform crop. Request a seed health report including disease screening to assist in selecting the best seed treatment to control seed borne disease beyond & including fusarium. Using disease free seed only slows the spread of the disease. Fusarium can spread by a spore in the wind, or by infected crop residue & feed/bedding, hence disease-free seed on its own is not a strong defense mechanism.
- **3. TREAT.** all cereal and corn intended for use as seed in Alberta with a fungicide seed treatment that includes the Fusarium on the label. ONLY use registered label rates.
- **4. ROTATE.** Continuous or short rotation cereals or corn allow for a build-up of F. graminearum on infested fields. Leave at least two years between host crops (all cereals, corn). Avoid corn in rotation with cereals. Corn is also a host of F. graminearum; spores can be easily spread from corn fields to cereal fields. Broad leaf crops (pulses, canola) help to break pathogen build up when properly used in a strategic rotation.
- **5. SEGREGATE.** Field location can be an important consideration as F. graminearum can move from one field to the next. If practical, avoid planting small grain cereals immediately adjacent to cereal or corn fields where elevated levels of F. graminearum are known or suspected to occur.
- **6. COMPENSATE.** Increase seeding rates to promote a more uniform stand, reduced tillering and a shorter flowering period. This approach helps reduce the flowering period, which is the growth stage most at risk for infection. Uniform flowering helps improve foliar fungicide efficacy because most, if not all, of the crop will be at the key growth stage for application.
- **7. MANAGE RISK.** Stagger planting dates to avoid having all cereals on the farm flowering synchronously and potentially being exposed to weather conducive to disease development at the same time. Humid weather during flowering (anthesis) in wheat or heading in barley favours infection.
- **8. SELECT VARIETIES WITH CARE**. Grow varieties with the best available levels of resistance; however, this practice will not completely eliminate the risk of FHB. Consult annual variety guides (ALBERTA SEED GUIDE MAGAZINE) or www.seed.ab.ca for more information.
- **9. PROTECT WITH FOLIAR**. When an elevated risk of FHB is suspected, use a well-timed fungicide application at RECOMMENDED RATES for FHB management. Pay attention to coverage; skimping on water volumes typically is risky. Disease forecasting systems are available in Alberta through the ACIS website. Check out the vast amount of information at https://agriculture.alberta.ca/acis/m#!fusarium.
- **10. SANITIZE.** Same as washing your hands! Remove any loose crop residue from all equipment before leaving an infested field. Control volunteer cereals and grassy weeds on infested land, including headlands. Remove feed and/or livestock bedding from fields to reduce the risk of spreading the pathogen through infected straw/feed.