

10 COMMANDMENTS FOR FUSARIUM MANAGEMENT

- 1. EDUCATE, COMMUNICATE.** Understanding the disease life cycle & the conditions that favor the disease is key to fighting fusarium. Information is available at grower meetings, at field tours, & in magazine/newspaper articles. Connecting with local agronomists is a great way to gain understanding regarding local conditions & how multi-pronged management strategies work the best.
- 2. TEST.** 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. PROTECT.** Consider utilizing a seed treatment as an integrated pest management tool in known infection areas, when using susceptible varieties, or when growing conditions favor the development of the disease (irrigation). Carefully follow label directions. Consider professional application.
- 4. ROTATE.** Continuous or short rotation of 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 easily spread from corn to cereal fields. Strategic rotation plans that utilize broad leaf crops (pulses, canola) can reduce pathogen build up.
- 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 foliar fungicide 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#lfusarium>.
- 10. SANITIZE.** 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. Corn stubble or grazing areas may require extra attention to ensure residue does not spread.