

Fusarium Response Plan: Alberta Response Plan for Fusarium Head Blight

Fusarium head blight (FHB), caused by *Fusarium graminearum* is the most destructive fungal disease of wheat and barley in Canada. Movement of *F. graminearum* into Alberta from Saskatchewan and Manitoba threatens to cause significant economic losses to producers and the grain industry. This fungal disease can greatly decrease yield, quality and generate mycotoxins.

The FHB Response Plan was developed as a co-operative effort between government and industry, including commissions and cereal producers, and is intended to give guidance and outline strategies for dealing with the threat of *F. graminearum* to Alberta. The current focus is on voluntary compliance, education, minimal regulatory components, and research leading to effective disease control procedures, in order to keep uninfested areas disease-free and to control the disease in the few areas where *F. graminearum* is present at trace levels. The causal agent, *F. graminearum*, is now included as a pest under the Alberta Agricultural Pests Act.

The Response Plan outlines the responsibilities of each partner:

- Alberta Agriculture, Food and Rural Development will co-ordinate the provincial program, distribute updates, prepare factsheets and agri-news releases, provide advice and assistance for training producers, participate in FHB disease surveys, and provide municipal service boards with technical information, photographic material, and examples of infested material.
- The Alberta Grain Commission will distribute FHB updates to stakeholders and the cereal industry. Agriculture Service Boards will monitor their municipality for *F. graminearum*, provide recommendations and information on *F. graminearum* prevention and issue disease control notices, if required.
- The Alberta Research Council will test and confirm suspected FHB specimens for field staff and conduct tours and workshops for identification of FHB.
- Agriculture and Agri-Food Canada will provide advice, assistance, and training, and will conduct research and collaborate with out-of-province researchers.
- The Canadian Grain Commission will publish the annual results of the wheat grain Fusarium survey, and provide technical assistance to researchers.
- The Alberta Barley Commission will provide updated communications via appropriate news media, and provide appropriate support for the Response Plan as needed.

The Agricultural Pests Act gives authority to the municipalities to control *F. graminearum*. The Response Plan recommends that for regions free of or with occasional incidence of *F. graminearum*, common or certified seed from the infested lot(s) cannot be used as seed. Seed lots that test positive for *F. graminearum* must be sold for food or feed, depending on mycotoxin levels. Other seed lots from this farm that test negative for *F. graminearum* may be sold for seed, at the option of the local municipality; however, it is strongly recommended that they be treated with a registered fungicide seed treatment. Seed growers whose lot(s) test positive for *F. graminearum* should have subsequent cereal crops inspected by municipal agricultural fieldmen. Cereal growers that have crops infested with *F. graminearum* must follow recommended control procedures.

Recommended Control Procedures

For uninfested land - *F. graminearum* has not been detected:

- Do not use seed from known *F. graminearum* infested areas.
- Ensure that purchased seed is tested by an accredited laboratory and has a certificate showing that the seed tested negative for *F. graminearum*.
- As a precautionary measure, all grain intended for seed should be treated with a recommended fungicide.
- Adopt a minimum two year rotation between successive cereal crops, and avoid planting corn, which is also a host.
- Ensure that rotation crops or fallow are free from volunteer cereals and grassy weeds. Susceptibility to FHB decreases from durum wheat to CPS wheat to HRS wheat to barley to oats.

For infested land - *F. graminearum* has been confirmed:

- Do not use or sell grain from infested land for seed purposes.
- Clean crop residue from all equipment before moving to uninfested fields.
- Incorporate cereal residue, preferably in the fall.
- For the next two years:
 - Do not seed cereals or corn on or adjacent to infested land.
 - Use shallow tillage or direct seeding to avoid bringing infested crop residue to the surface.
 - Use non-host crops, such as canola, alfalfa, clover, or pulses.
 - Control volunteer cereals and grassy weeds on infested land, including headlands.
- After the rotation, plant disease-free, treated seed, and do not purchase seed from known *F. graminearum* infested areas.

For seed producers, merchants, and seed cleaners: In addition to the above procedures, seed cleaning operations need precautions to avoid cross contamination of seed lots. Since cross contamination may still occur, all cereals cleaned and intended as seed should be treated with a recommended fungicide.

For feedlot operators: Avoid buying feed from areas known to have *F. graminearum*. Do not spread spilled grain directly onto crop fields; rather, dispose of grain by feeding, composting, or burying.