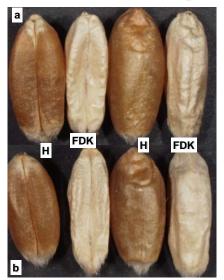
Fusarium Head Blight (FHB) of Cereals

Agriculture et Agri-Food Canada Agroalimentaire Canada

Canadian Grain Commission canadienne Commission des grains

Fusarium Damaged Kernels (FDK)

Symptoms of fusarium damaged kernels caused by Fusarium graminearum



Canadian Prairie Spring (a) and Canadian Western Red Spring (b), showing fusarium damaged kernels (FDK) due to Fusarium graminearum, and healthy kernels (H)



Fusarium graminearum infected barley with 15 ppm deoxynivalenol (DON). Compare with symptoms caused by other diseases



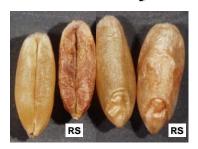
FKD in Canada Prairie Spring (a), Amber Durum (b), and Canadian Western Red Spring (c & d). Currently, FDK's in Alberta are relatively rare and typically caused by species other than F. graminearum. In Manitoba most FDK's are caused by F. graminearum



Fusarium graminearum infected barley kernels (right - black sexual fruiting bodies that release wind-borne ascospores. left - orangish masses of rain-splashed spores)



Damage due to diseases and midge that can be confused with fusarium damaged kernels caused by Fusarium graminearum



Reddish discolouration (red smudge - RS) in durum caused by tan spot fungus infection of kernels



Brownish discolouration (kernel smudge) in barley caused by spot blotch fungus infection



Reddish kernel discolouration in barley due to Fusarium avenaceum (does not produce DON)



Orange wheat blossom midge damage in wheat



Kernel size reduction in Katepwa wheat due to leaf infection by Septoria leaf spots. Seed infection with Septoria can also produce FDK-like symptoms



Brownish lesion (a) and orangish discolouration (b) of barley kernels due to the net blotch fungus



 Prepared by T.K. Turkington AAFC Lacombe, and R. Clear, CGC Winnipeg, and I. Evans, AAFRD Edmonton (Updated February 2010, T.K. Turkington). Seed and photographs courtesy of R. Clear, T.K. Turkington, and J. Gilbert, AAFC Winnipeg. Confirmation of seed infection with F. graminearum will require a laboratory diagnosis.

Consult provincial factsheets (e.g. Fusarium Head Blight of barley and wheat, Agdex 110/631-1, AAFRD) and variety guides for more information.

Government of Alberta

Agriculture and Rural Development