CEREAL DISEASES ENCOUNTERED AT ILLUSTRATION STATIONS IN NORTH AND CENTRAL ALBERTA IN 1961

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In August, 1961, cereal plots at nineteen locations in central and northern Alberta were examined for the presence of disease. The results of this survey are summarized below.

Barley Diseases

Net blotch (Drechslera teres) and scald (Rhynchosporium secalis) were the most severe and widespread of the diseases observed on barley. Net blotch was found at all the sixteen stations where barley was grown and the intensity of infection ranged from trace on three varieties at Buffalo Head Prairie to moderate-severe on nine of ten varieties at Vermilion. Scald occurred at fifteen of the sixteen stations with the lowest infection ratings being recorded at High Prairie and the highest ratings at Cheddarville and Vermilion where eight of the nine varieties grown were moderately to severely attacked.

Common root rot (Bipolaris sorokiniana and Fusarium spp.) was recorded in trace amounts at most stations. Moderate infections were recorded at Olds, Vermilion, Vegreville and Athabasca.

Loose smut (Ustilago nuda) was seen as trace infections at eight of the sixteen stations. The only variety seriously affected was H53-1409 which had a ten per cent infection at Cheddarville and was five per cent infected at Leslieville and Vermilion. Bacterial blight (Xanthomonas translucens) was recorded at five stations in central Alberta with the heaviest infection occurring at Vegreville. Speckled leaf blotch (Septoria passerinii) was moderate to severe on six of ten varieties at Vegreville and trace on one of eight varieties at Keg River and High Prairie. Ergot (Claviceps purpurea) was recorded only at Vegreville and there only as a trace infection.

Generally, barley diseases were more serious on the stations in central than on those in northern Alberta.

Oat Diseases

The non-parasitic diseases, blast and gray speck (manganese deficiency), were the most common oat diseases encountered. Blast was recorded at seventeen of the nineteen stations, mostly in trace to slight amounts though moderate to severe symptoms were seen at High Prairie. Gray speck occurred at nine locations and it, too, was moderate to severe at High Prairie.

Halo blight (Pseudomonas coronafaciens) was seen in trace to slight amounts at fourteen stations. Leaf blotch (Drechslera avenacea) was trace to slight at nine stations. Trace infections of common root rot (Bipolaris sorokiniana and Fusarium spp.) were recorded at four stations and loose smut (Ustilago avenae) was seen in one variety at Cheddarville.

Wheat Diseases

Common root rot (Bipolaris sorokiniana and Fusarium spp.) occurred in trace to slight amounts at all the nineteen stations visited. It was by far the most common disease observed on wheat, although damage appeared to be very slight,

Glume blotch (Septoria nodorum) was recorded at five stations, mostly as trace infections. It was not observed in the Peace River district. Speckled leaf blotch (Septoria tritici) was seen as trace to slight infections at Wanham and Cheddarville. Trace infections of ergot (Claviceps purpurea) occurred at Evansburg and Vegreville; leaf rust (Puccinia recondita) was trace on two varieties at Vegreville, and loose smut (Ustilago tritici) was slight on one variety at Buffalo Head Prairie.

Flax Diseases

Diseases of flax were not severe on the illustration stations visited. Wilt (Fusarium oxysporum f. lini) was seen in trace amounts in four of eight varieties at Manning and in three of ten varieties at Keg River, Slight to moderate infections of rust (Melampsora lini) were recorded on Redwing at Blueberry Mountain and trace amounts were observed on the same variety at High Prairie, Rhizoctonia stern canker was trace on seven of the twenty-seven varieties in the Co-operative tests at Beaverlodge and was seen on one variety at Blueberry Mountain. There were no flax diseases at six other stations in the Peace River district.

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