Cereal Diseases Observed at Experimental Farms in Western Canada

F. J. Zillinsky

Powdery mildew was the most serious disease on winter cereals at Saanichton, B. C. It was observed in moderate to heavy amounts on winter wheat, oats and barley. Yellow dwarf on barley, red leaf and Helminthosporium avenae on oats, and leaf rust on wheat were present in trace to light amounts. A peculiar stem break condition was noticed on a few barley strains but could not be attributed to insect or mechanical damage.

At Agassiz, B. C., Septoria leaf blotch was severe on oats. Some red leaf and Helminthosporium leaf blotch were also found. Leaf yellowing was noticed on four oat introductions but it did not appear to be caused by either a fungus or bacteria. Mildew and leaf spotting diseases were present on barley varieties. Mildew and leaf rust were observed on winter wheat plots.

Diseases were not conspicuous on wheat, oats or flax at Lacombe, Alta. at this time. The two most conspicuous diseases of barley were scald and net blotch. Other barley diseases observed were bacterial blight and false stripe. Dr. W. P. Skoropad assisted in the identification of cereal diseases at Lacombe.

Diseases on cereals were of very minor importance at Scott, Sask. A few wheat plants which appeared to have been attacked by root rot were noticed. Drought was extremely damaging to all spring-sown crops.

Few signs of disease were observed at Indian Head, Sask. Halo blight was moderate to heavy on some strains of oats but not general in field plots. The most common barley disease was bacterial stripe, particularly on the Lethbridge strains.

Incidence of Barley Diseases at Lacombe, Alta., 1957

W. P. Campbell

Variety	Scald	Net blotch	Septoria	Loose smut	False stripe
Herta	tr.	-	-	-	-
Husky	sl.	tr.	tr.	tr.	-
Velvon II	tr.	tr.	-	-	-
Parkland	sl.	sl.	-	-	-
Traill	tr.	tr.	-	tr.	-
UM 570	mod.	tr.	-	sl.	-

(continued)

Variety	Scald	Net blotch	Septoria	Loose smut	False stripe
Vantage	tr.	mod.	-	-	-
Pirkka	mod.	sl.	tr.	-	-
Compana	sl.	tr.	tr.	-	sl.
Wolfe	mod.	sl.	sl.	-	-
Gateway	mod.	sl.	tr.	tr.	-
Olli	sl.	mod.	tr.	tr.	-

This rating of barley disease severity confirms F. J. Zillinsky's observations recorded above. It supplements the data presented below by H. A. H. Wallace who observed plots in an area free of scald (Rhynchosporium secalis) (R. A. Shoemaker).

Co-operative Barley Tests Survey in 1957

H. A. H. Wallace

An extensive survey of the Prairie Provinces was not made this year, but a survey was made of the plots at Brandon, Portage la Prairie, Morden and Winnipeg, Man. This area is free from scald (Rhynchosporium secalis).

Minerva, Slovak and Piroline at Winnipeg had good resistance to speckled leaf blotch (Septoria passerinii) but were very susceptible to spot blotch (Helminthosporium sorokinianum). In contrast, Freja and Ingred were resistant to spot blotch and susceptible to speckled leaf blotch. As noted in 1956 the 2-row varieties as a group were more resistant to speckled leaf blotch than the 6-row varieties. Traces of yellow dwarf were common. An important observation of this disease, is its greater severity on isolated plants, apparently due to the habits of the aphid. Infection of rod rows wa mostly confined to the end plants. False stripe mosaic, apparently from seed infection, was found on some plants of Opal B, Slovak and Canadian Thorpe.

At Brandon all varieties were completely susceptible to speckled leaf blotch.

Plots of the Western co-operative test at six stations were seen. Hybrid Br M 57-754 was resistant to speckled leaf blotch and susceptible to spot blotch. In contrast Br M 45-680 had fair resistance to spot and net blotch (H. teres). but was susceptible to speckled leaf blotch. Leth. 4362-3, G. B. 61, U. M. 570 W and Husky appear to have some net blotch resistance but are susceptible to speckled leaf blotch. No variety had good resistance to spot blotch. Leth. 4363-45 was very susceptible to bacterial streak.