CEREAL DISEASES IN THE MARITIME PROVINCES, 1971[1]

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The 1971 cereal growing season could be characterized as only moderately successful, primarily as a result of heavy rains during mid-May. These rains delayed seeding dates by 2 to 3 weeks and necessitated seeding to be continued until mid-June.

Grain aphid infestations, largely of the bird-cherry oat aphid Rhopalosiphum padi (L.), appeared in mid-June and their presence resulted in heavy losses from barley yellow dwarf (BYD) in barley, oats, and wheat in all three provinces. Some oat fields seeded in mid-June in Prince Edward Island and the Annapolis Valley of Nova Scotia were virtually destroyed, with losses approaching 100%. Plants in the majority of fields seeded in late May and early June displayed visible symptoms of BYD, but to a much lesser degree of severity, and the disease was restricted primarily to the boundaries of the fields. No visible BYD symptoms were detected during a mid July disease survey of early-seeded barley fields in eastern Nova Scotia, where some seeding took place in late April and early May.

In disease loss trials at Charlottetown, plots of 'Herta' barley seeded on May 11 yielded an average of 32 bushels per acre, whereas those seeded on June 15 yielded an average of 15 bushels per acre. Plants in the earlier seeded plots did not exhibit BYD symptoms, while those in some areas of the June-seeded plots were infected with BYD and in these areas yields were as low as 8 bushels per acre. This reduction in yield between seeding dates cannot be attributed solely to virus infections since other leaf diseases were also more severe in the late seeded plots, and other abiotic factors may have contributed to lower yields.

Diseases incited by fungal pathogens were of normal intensity in 1971. Powdery mildew of wheat incited by Erysiphe graminis DC ex Merat f.sp. tritici Marchal has decreased in severity since most wheat growers discontinued seeding the mildew susceptible cultivar Selkirk in favor of the moderately resistant Opal. However, in areas where wheat has been under cultivation for a number of years, take-all incited by Ophiobolus graminis Sacc. has become a much more common disease, Traces of take-all could be found in all wheat growing areas but significant losses were recorded in only two areas - near Shediac, New Brunswick in fields of spring wheat and in the Annapolis Valley of Nova Scotia on Yorkstar winter wheat.

Southern leaf blight of corn incited by Helminthosporium maydis Nisikado & Miyake was found in a small acreage of grain corn in western P. E. I. This was the first noted occurrence of the disease in the Maritimes.

Observations made during the 1971 season indicated that date of seeding is one of the major factors determining the success of Maritime cereal production in the Maritimes.

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