BRIEF ARTICLES

DISEASES OF RAPESEED IN MANITOBA IN 1971[1]

C.C. Bernier

Two disease surveys of rape were made in Manitoba in 1971, one in the southern part of the province during the third week of July, and a second in the northern section during the third week of August. In the south (Morden, Darlingford, Swan Lake, and Carman), Argentine rape (Brassica napus) is grown almost exclusively and the crop was virtually free from diseases in the 12 fields visited.

In the northern survey (Neepawa, Dauphin, Swan River, The Pas, and Roblin), diseases were observed in many of the 40 fields visited. Both the prevalence in the field and the general severity of the diseases were assessed in each case. The disease ratings, expressed as % of fields in each category, for the staghead form of white rust caused by Albugo candida (Pers. ex Lév.) Ktze. and for black spot caused by Alternaria spp. were as follows:

	Turnip rape* (26 fields)		Rape† (14 fields)	
Disease rating	Black spot	Staghead	Black spot	Staghead
Trace	35	23	64	0
Slight	15	11	21	0
Moderate	15	4	0	0
severe	0	35	0	0
% of fields infected	65	73	85	0

* Brassica campestris L.

† Brassica napus L.

Staghead was prevalent and damaging in turnip rape (B. campestris), where 39%of the fields visited were found to be moderately to severely affected. Yield reductions in severely affected fields were estimated to range from 30 to 60%, and areas within a few fields were essentially a total loss. Although fewer fields of rape than turnip rape were assessed, rape appears to be highly resistant to white rust. Traces of sclerotinia stem blight and aster yellows were also observed in about 10%of the fields visited.

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LAWN AND TURF DISEASES IN THE VICINITY OF WINNIPEG, MANITOBA[1]

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A record was kept of the diseases occurring in The University of Manitoba Plant Science Department turf grass plots and from diseased grass samples sent to the Plant Science Pathology Laboratory during 1968–71. The diseases varied with the season of the year and with the particular grass swecies and cultivar.

Damage done by snow molds during the winter months becomes evident in early Yay when the grasses resume qrowth. Untreated bentgrass golf greens have been observed to be heavily infected with a nonsporulating low temperature Basidiomycete. This disease has been observed every year during the survey period and is probably the most serious turf grass disease in Manitoba. Bentgrass and bluegrass are hardest hit by this organism. Typhula snow mold has not been a major problem in golf greens, but it has been observed on creeping red fescue in Winnipeg lawns, where it causes scattered damaqe. The Typhula species involved has not been determined.

During periods of cool moist weather in May and early June, melting out of bluegrass caused by Helminthosporium spp. and a disease caused by Septoria macropoda Pass. have been observed. The latter causes a leaf chlorosis and basal crown rot of bluegrass. Melting out and septoria were severe on some cultivars of bluearass in May 1969. Cultivars susceptible to Septoria were not affected by Helminthosporium. The Helminthosporium was not identified as to whether it was H. sativum or H. vagans. The melting out type diseases are a serious problem in Manitoba.

There were relatively few disease problems encountered during the summer months aside from a few minor cases of rust caused by Puccinia graminis Pers. and powdery mildew caused by Erysiphe graminis DC. ex. Mérat.

The autumn of 1971 was very favorable for rust on some bluegrass varieties in the

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University turf grass varietal trial plots. The varieties that were most severely damaged were those that remained green into October. Varieties that became semi-dormant in October were not seriously affected by rust but some of these varieties showed considerable Septoria infection.

In late October 1971, small circular dead patches were observed in the University bentgrass greens. Fusarium nivale (Fr.) Ces. was isolated from the diseased grass.

Several other diseases of only occasional occurrence were identified during the survey period. Red thread caused by Corticium fuciforme (Berk.) Wakef. was observed at a Winnipeg golf course in July 1968. This disease was likely favored by the cool moist weather prevailing at the time. In June 1970 brown patch caused by Rhizoctonia solani Kühn was observed in the University bentgrass plots.

FIRST RECORD OF SEPTORIA DIGITALIS IN CANADA

R.S. Dickout[1] and D.J. Ormrod[2]

In July 1972, seedsman F.O. Blake of Milner, British Columbia, applied to the B.C. Department of Agriculture for inspection of a crop of Digitalis lanata Ehr. being grown for seed on Southern Vancouver Island. The potential buyer in England requested certification that the crop was free of Septoria digitalis Pass. and Colletotrichum fuscum Laub., as a requirement for possible re-export to Australia.

A field inspection carried out by the Victoria office of the Plant Protection Division, Canada Department of Agriculture, revealed that up to 75% of the plants in the 0.5 acre field were affected by a conspicuous leaf blotch. Microscopic examination by R.G. Atkinson, Canada Department of Agriculture Research Station, Saanichton, showed the causal organism to be a Septoria. Final identification as S. digitalis Pass. was made by J.A. Parmelee, Plant Research Institute, Canada Department of Agriculture, Ottawa, who found good comparison with a fungus exsiccatus in DAOM from Italy (Sacc., Myc. Ital. 558).

By inquiring into the history of this planting, it was found that the seed originated from a nearby farm where the crop had been grown for approximately 30 years. As the disease is known to be seed-borne (1), it is presumed that it has occurred in the area for many years but had not been previously recognized. Examination of young seedlings ready for planting out showed no apparent infection, thus it seems likely that, under our conditions, the crop must remain in the field over the wet winter and spring seasons before infection becomes extensive.

Septoria leaf spot can be an important disease in crops grown for leaf as it has been shown to reduce the yield of cardiac glycosides (used in the treatment of heart disease) from approximately 0.473% in healthy leaves to 0.121% in severely infected leaves (2). Because. S. digitalis is carried as pycnidiospores on the surface of the seed, it seems likely that appropriate seed disinfection procedures would help to reduce spread to new areas. Seed treatment with captan or thiram has been reported as successful (1).

Figure 1. Leaves of *Digitalis lanata* showing irregular lesions with purple borders and pale centers, typical of infection by Septoria *digitalis*.

Literature cited

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