

II. DISEASES OF FORAGE AND OTHER FIELD CROPS

A. FORAGE LEGUMES

ALFALFA

BLACK STEM (Ascochyta imperfecta) was present as a trace in 1/6 fields at Creston, B. C. Infection was rare in s. Alta. hay fields. Irrigated stands at Maple Creek had a uniform slight infection. Several of these stands had been allowed to go to seed (E. J. Hawn). Ratings for c. and n. Alta. were: 4-tr. 5-sl. 4-mod. /42 (W. P. Campbell). Damage was moderate in Sask. ; 45/48 fields were affected. The disease developed slowly during the dry summer but increased rapidly during the wet weather after mid-August (H. W. Mead). Crops grown for hay had slight to moderate infections in Man. Seed crop infections were rated moderate to severe (W. C. McDonald).

LEAF SPOT (Cercospora zebrina) occurred in plots at Winnipeg but was not commonly found elsewhere in Man. (W. C. McD.).

DOWNY MILDEW (Peronospora aestivalis) was rated: 4-tr. to sl. /6 at Creston, B. C. ; 2-sl. /47 in s. Alta. (E. J. H.), 1-mod. at Beaverlodge /42 in c. Alta. (W. P. C.). Slight damage was seen in Sask. ; 6/48 fields were affected. Most varieties were moderately infected at Snowden, n. Sask. at the end of May (H. W. M.).

YELLOW LEAF BLOTCH (Pseudopeziza jonesii) infection was less in Sask. than in previous years; 12-sl. /48 (H. W. M.). In Man. moderate to severe infections were widespread. It was the most damaging leaf spot in Foundation seed plots of the varieties Vernal and Rambler (W. C. McD.).

COMMON LEAF SPOT (Pseudopeziza medicaginis) infection was slight in U. B. C. plots, Vancouver (H. N. W. Toms). Damage was sl. in 1 field at Agassiz and 1/6 fields examined at Creston, B. C. Ratings for s. Alta. were: 7-tr. 4-mod. 1-sev. /41 (E. J. H.). In n. and c. Alta. ratings were 3-tr. 6-sl. 4-mod. /42 (W. P. C.). Damage was moderate in Sask. The disease was more serious in s. Sask., especially at Indian Head. Twenty fields were affected out of 48 examined (H. W. M.). Infections were widespread but only slight to moderate in Man. (W. C. McD.). Moderate infection was noted in a new planting of Grimm at Charlottetown, P. E. I. (J. E. Campbell). Traces were found in all 7 fields surveyed in Prince, Queens, and Kings Counties (R. R. Hurst). Several varieties had 10-20% of leaves affected in plots at St. John's, Nfld. (O. A. Olsen).

ROOT CANKER (Rhizoctonia solani) was observed on a specimen from Kelowna, B. C. (E. J. H.).

CROWN BUD ROT (Rhizoctonia solani, Fusarium roseum and Ascochyta imperfecta) ratings were: 8-tr. 5-sl. 18-mod. 2-sev./41 s. Alta. fields and 1-sl. 5-sev. /6 irrigated fields at Maple Creek (E. J. H.).

LEAF SPOT (Stemphylium botryosum) damage was moderate, on the average. It was rare in n. Sask. and common in s. Sask. Altogether 25/48 fields observed were affected (H. W. M.). Plots at Ashern and Winnipeg, Man. had considerable infection, but field infections were slight (W. C. McD.). Plots at St. John's, Nfld. had up to 5% infection (O. A. O.).

CROWN ROT (low-temperature basidiomycete). A survey of 42 fields in n. and c. Alta. revealed the following infections: 1-tr. 5-sl. 9-mod. 6-sev. (W. P. C.). Damage in Sask. was slight and occurred on individual plants in 10/48 fields examined (H. W. M.).

BACTERIAL WILT (Corynebacterium insidiosum) was severe in a field that was sown in 1955 at Kelowna, B. C. Ratings for s. Alta. were 2-sl. 8-mod. 2-sev. /41 and 1-mod. 5-sev. /6 irrigated fields near Maple Creek (E. J. H.). A survey of 42 fields in n. and c. Alta. gave these data: 2-tr. 5-sl. 5-mod. 4-sev. near Edmonton (W. P. C.). Slight infections were noted in dry land plots at Snowden, n. Sask. and in irrigated fields at Val Marie, s. Sask. (H. W. M.).

ASTER YELLOWS (Callistephus virus 1) was found on a specimen from Winkler, Man. (W. C. McD.).

WINTER KILLING was moderate in plots at Saskatoon and slight at Snowden, Sask. (H. W. M.). One field was severely damaged in Queens Co., P. E. I. (R. R. H.).

POTASSIUM DEFICIENCY symptoms were slight and localized in 1 field at Lethbridge, Alta. (E. J. H.).

COMMON CLOVER

LEAF SPOT (Ascochyta meliloti). The fungus had conidia 15-20 x 5-6 μ . Damage to red clover was moderate at Routhierville, Que. (D. Leblond).

SOOTY BLOTCH (Cymadothea trifolii) occurred in moderate amounts on scattered plants in plots at Agassiz, B. C. Traces were found in 1 field of red and 1 of alsike clover near Rolling Hills, Alta. (E. J. Hawn). Traces were found in 10 fields in Queens Co., P. E. I. and damage was negligible (R. R. Hurst). Slight infection was noted in Ottawa Red and Dollard red clover at Heatherton and on roadside plants at Cornerbrook, Nfld. (O. A. Olsen).

POWDERY MILDEW (Erysiphe polygoni) was found in trace amounts on red clover in 2 fields near Rolling Hills; 1 irrigated field near Hays, and in plots at Lethbridge, Alta. One field of alsike near Rolling Hills had trace infection (E. J. H.). In n. and c. Alta. 17/25 red clover fields were affected as follows: 1-tr. 9-sl. 5-mod. 2-sev. (W. P. C.). In Sask. the damage was slight and concentrated in the northern area. Of 12 red clover fields surveyed 10 were diseased (H. W. Mead). Moderate infection was observed on red clover on roadsides in the Chateauguay district of Que. (R. Crete). Red clover and alsike plants in the greenhouse were severely attacked and the infected leaves dropped at Kentville, N. S. (C. O. Gourley). Only traces were found in all 10 red clover fields examined in Queens Co., P. E. I. (R. R. H.). In plots at Charlottetown a moderate infection caused slight damage to red clover (J. E. Campbell).

NORTHERN ANTHRACNOSE (Kabatiella caulivora) infection was 3-tr. 9-sl. 6-mod. 1-sev. /25 red clover fields in n. and c. Alta. (W. P. C.). A few red clover plants were affected in 2 fields near Nipawin, n-e. Sask. Ten other fields surveyed were clean (H. W. M.). The variety Ottawa Red had trace infection at Heatherton, Nfld. (O. A. O.).

LEAF SPOT (Pseudopeziza trifolii). A slight infection was noted in plots at Charlottetown, P. E. I. (J. E. C.).

LEAF SPOT (Stemphylium botryosum) infection was slight on red clover varieties Ottawa Red and Dollard in plots at Heatherton, Nfld. (O. A. O.).

LEAF SPOT (Stemphylium sarcinaeforme) damage was moderate and concentrated in n. -e. Sask. Ten/12 red clover fields were affected (H. W. M.). Slight infection was observed in red clover plots at Charlottetown, P. E. I. (J. E. C.).

RUST (Uromyces trifolii) infection was moderate in red clover plots at Charlottetown, P. E. I. (J. E. C.). One red clover field had moderate infection in May but damage was slight later in the season (R. R. H.).

CROWN ROT (low-temperature basidiomycete). One alsike field in central Alta. had moderate infection. Two others were clean. One red clover field near Edmonton had slight infection (J. B. Lebeau).

DECLINE AND PHYLLODY (? virus) was present in red and alsike clover but caused little damage. However, ladino clover was severely affected and this disease limits the usefulness of ladino at Ste. Anne de la Pocatiere, Que. (R. O. Lachance).

LEAF SPOT (cause not determined) slightly affected all 3 alsike fields examined in c. Alta. (J. B. L.).

WINTER INJURY. Ladino plots on well-drained, gravelly soil were completely destroyed at Ste. Anne de la Pocatiere, Que. (R. O. L.).

SWEET CLOVER

GRAY STEM CANKER (Ascochyta caulicola) was observed on plants on the roadside at Mossleigh, Alta. (E. J. Hawn). Damage was moderate in Sask. Ten/12 fields observed were diseased and most varieties and selections grown at Saskatoon were infected (H. W. Mead). Localized patches were severely infected in 1 field near Manitou. Only traces were found in other parts of Man. (W. C. McDonald).

SUMMER BLACK STEM (Cercospora davisii). Trace to moderate infections were widespread through Man. (W. C. McD.).

LEAF SPOT (Leptosphaeria pratensis (Stagonospora meliloti)) infection was slight in 1 field near Beaverlodge, Alta. (E. W. B. Ward).

ROOT ROT (Phytophthora cactorum) destroyed 75% of a 50-acre cover crop grown after corn near Cottam, Ont. (R. W. Walsh).

COMMON LEAF SPOT (Pseudopeziza medicaginis). In the late summer infection was slight near Saskatoon and Melfort. Six/12 fields surveyed in Sask. were diseased (H. W. M.). This disease was widespread in Man. in July. Moderate to severe infections were observed s. -w. of Winnipeg where damage was most severe (W. C. McD.).

BASAL STEM ROT (Sclerotinia sclerotiorum) damage was less than in previous years. Only traces were found in 2/12 fields examined in Sask. (H. W. M.).

ASTER YELLOWS (Callistephus virus 1). Plants from a field near Ochre River, Man. showed typical symptoms: proliferation of seed stalks, thin, leaf-like petals and profuse hairiness of peduncles. The floral parts were knotted in a ball which turned to dust when rubbed (Reference: Hilgardia, 16: p. 637. 1945) W. C. McD.). A few plants were affected at Morristown and Kentville, N. S. (C. O. Gourley).

MOSAIC (Bean virus 2) damaged a foundation seed plot of the variety Erector at Brandon, Man. Most plants were badly stunted and seed yields are expected to be much lower than in previous years (W. C. McD.).

LEAF MOTTLE (? virus). One plant at Saskatoon was severely damaged. Leaves became mottled brown, and dropped. New leaves formed. The plant was stunted but the stem was not distorted (H. W. M.).