DISEASES OF CEREAL CROPS

WHEAT

LEAF SPOT (Ascochyta sorghi) was present in two collections from Cupar and Langham, Sask. (B. J. S.). *

SPOT BLOTCH (Bipolaris sorokiniana). Trace infection was recorded at Two Hills, Alta. (L. J. P.). Infection was 5% in 1/15 fields examined in Man. (W.A.F.H.).

COMMON ROOT ROT (Bipolaris sorokiniana, Fusarium spp.) caused 15 - 25% damage at New Norway, mod. damage at Rocky Mountain House, slight damage at Barrhead and Blackie; it was general in the St. Paul district and observed at Lethbridge, Bittern Lake and Islay, Alta. (A.W.H., D. S.). It was rated 2-tr. 2-sl. I-mod. in fields n. and n. e. of Edmonton (L. J. P.). Ratings were 3-tr. 1-sl./4 spring wheat and 10-tr. 14-sl, 1-mod. in winter wheat fields in s. Alta. (J.S. H., T. G. A.). Its incidence in Sask. was average, being slightly down from 1965 and considerably lower than in 1964. The ratings for crop districts 1 to 9, respectively, were: 13.46, 10.45, 16.46, 11.24, 4.81, 10.74, 8. 87, 4. 23, and 8. 79. The disease was especially light in the northeast and eastern crop districts 8 and 5 and considerably heavier than usual in southern areas (B. J. S.).

ERGOT (Claviceps purpurea) was prevalent in s. w. Alta. causing appreciable losses (A. W. H., D. S.). Trace amounts were recorded in early Aug. in 11/21 6 fields inspected in Sask. (R. D. T.).

ANTHRACNOSE (Colletotrichum graminicola) occurred in a patchy fashion in fields at Vulcan, Alta. Damage was probably light (A. W. H., D. S.).

YELLOW BLOTCH (Drechslera tritici-repentis) was prevalent on seedlings of 'Pembina' at Lasalle, Man., light on mature crops in Man. and mod. on durum wheat in s. w. Sask. The varieties 'Golden Ball' and 'Pelissier' appeared more susceptible than other varieties in plots at Regina (W. C. McD.).

POWDERY MILDEW (Erysiphe graminis). Infection was light on 'Gaines' wheat in plots nr. Abbotsford, B. C. (H. N. W. T.). It was rated 1-mod./4 spring wheat and 2-tr. 1-sl. in winter wheat fields in s. Alta. (J.S. H., T. G. A.). Very little mildew was seen in e. Ont. (R. V. C.).

HEAD BLIGHT (Fusarium spp.). A trace of infection was seen in experimental plots at Glenlea, Man. (W.A.F.H.).

TAKE-ALL (Gaeumannpmyces graminis (Sacc.) Arx & Oliver = Ophiobolus graminis Sacc.) caused mod. damage at Bashaw and Bittern Lake, was widespread in a crop on summerfallow at Wildwood, light at Barrhead and observed at Fairview and Okatoks, Alta. (A.W. H., D. S.). It was rated 1-sl. 1-tr. in fields n. and n. e. of Edmonton and 1-tr. in winter wheat in s. Alta. (J. S. H. , T. G. A.). Take-all caused 1% damage at Elfros in Sask. and traces occurred at Carrot River, Nipawin, Kerrobert, Unity, Marcelin, Melfort and Scott. Specimens were received from 2 fields at Rosthern, Sask. in which losses of 1% and 5% were reported (B. J. S., R. D. T.).

BASAL GLUME ROT (Pseudomonas atrofaciens). Trace amounts were observed in 3 fields in s. e. Sask. and a specimen was received from the same area (R. D. T.).

STEM RUST (Puccinia graminis f. sp. tritici) appeared much later than usual in Man. It developed slowly and by the end of the season only traces were seen on susceptible varieties and wild grasses although it was widely distributed throughout Man., Sask. and s. Alta. Cultivated varieties suffered little or no damage (G. J. G.). It was rated 3-91./4 spring wheat and 1-tr. in winter wheat fields in s. Alta. (J.S. H., T. G. A.). Traces occurred in only 3/212 fields surveyed in Sask. (B. J.S.). Traces were seen in 1/9 fields nr. St. Catharines (T. R. D.) and it was generally scarce in e. Ont. although somewhat more plentiful on late-seeded crops and on winter wheat planted as a spring crop (R. V. C.).

LEAF RUST (Puccinia recondita) was widespread in Western Canada by late July but infections were much lighter than normal. Heavy infections were observed later but development was too late to have much effect on yield (D. J. S.). Infection was severe on 'Ridit' in plots at Abbotsford, B. C. and caused a 50% reduction in yield. It was also sev. on 'Gaines' but losses were not as heavy (H. N. W. T.). Infections were recorded at Stettler, Bruderheim and Athabasca in n. Alta. (A. W. H., D. S.). It was rated 9-tr. 3-sl. 2-mod. in fields examined n. and n. e. of Edmonton (L. J. P.) and 5-tr. 1-51. on winter wheat fields in s. Alta. (J.S. H., T. G.A.). Infections were widespread in Sask. by mid-August. Leaves were dried up but losses were not significant because leaf destruction occurred after the heads were well filled (B. J.S.). Infection ranged from 1-10%

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on 100% of the plants in 8/22 fields examined in Man. on 21 July (W. A. F. H.). It was trace on 'Manitou' and 'D-184' and heavy on 'McMurachy' at St. John's West, Nfld. (G. A. N.).

STRIPE RUST (Puccinia striiformis). Trace infections were seen in one winter wheat field in s. Alta. (J.S.H., T.G.A.).

BROWNING ROOT ROT (Pythium spp.) was observed in fields at High River and Hardisty, Alta. (A.W. H., D. S.). Specimens were received from Kelvington, Avonhurst and Balcarres, Sask. (B. J. S., R. D. T.). It was prevalent in many fields of winter wheat in Essex and Kent counties in s. w. Ont. Plant recovery was good after nitrogen was applied to promote late spring growth (C. D. McK.).

EYE SPOT (Selenophoma donacis (Pass.) Sprague & Johnson) occurred with yellow blotch and speckled leaf blotch on durum wheat in s. w. Sask. (W. C. McD.). This is the first report, to the Survey, of S. donacis on wheat in Canada. Sprague lists it as occurring on wheat in Idaho and Wash. It has been reported in Canada on Agropyron, Elymus, Festuca and Poa (Ed.).

GLUME BLOTCH (Septoria nodorum). 'Park' wheat was commonly affected at widely separated points in Alta. It was also seen at Victoria, B. C. (A. W. H.). Trace to slight infections occurred at scattered points throughout Sask. with mod.-sev. infections in the northeastern zones (R. D. T.).

SPECKLED LEAF BLOTCH (Septoria spp.) was recorded at Coutts (A. W. H.) and traces were seen at Ashmont. Alta. (L. J. P.). It was rated 1-tr./4 spring wheat and 1-sl. in winter wheat fields surveyed in Sask. (J.S.H., T. G.A.). S. avenae f. sp. triticea occurred in 62/215 fields surveyed in Sask. It was generally slight in intensity with its greatest degree of severity in the western zones (R. D. T.). The disease was observed on durum wheat leaves in s. w. Sask. (W. C. McD.).

DWARF BUNT (Tilletia contraversa). Traces were seen in one winter wheat field in s. Alta. (J.S. H., T. G. A.).

COMMON BUNT (Tilletia foetida) was seen in trace amounts in 2 winter wheat fields in s. Alta. (J.S.H., T.G.A.).

LOOSE SMUT (Ustilago tritici). Traces occurred in 3/208 fields of common wheat surveyed in Sask. In 7 fields of durum wheat, 3 showed 1% infection and 1 had a trace (B. J. S.). Three/75 commonwheat fields examined in Man. averaged one infected head per field. Seven/16 durum fields averaged 1.4% infection with some showing up to 8% (J. J. N.).

BACTERIAL BLACK CHAFF (Xanthomonas translucens). 'Park' wheat appeared particularly susceptible in Alta. where 15% of the plants were affected at Bittern Lake and 5-10% of the plants at Islay. It was also sev. at Barrhead, general at St. Paul and Elk Point, and light at Okatoks, Stettler, Olds and Buck Lake (A. W. H., D. S.). It was found in experimental plots but not in farmers' fields in Man. In increase plots of 'Manitou' at Winnipeg it was present in a patchy distribution with a trace to 90% of the leaf area destroyed on affected plants. Infection was slight in plots of 'Marquis' at Glenlea (W.A.F.H.).

BARLEY YELLOW DWARF (barleyyellow dwarf virus). Trace infections were seen in 13/50 fields surveyed in Man. (C. C. G., P. H. W.).

SOIL-BORNE MOSAIC. What appeared to be soil-bornemosaic was observed on 20% of the plants in 2 fields at Lowe Farm, Man. Attempts to transfer it mechanically were unsuccessful (W. A. F. H.).

STREAK MOSAIC (wheat streak mosaic virus) was found on occasional plants in 8/20 winter wheat fields surveyed in s. w. Ont. in Nov. (L.F. G., G. C.M.).

STRIATE MOSAIC (wheat striate mosaic virus) was seen in 2/50 commercial fields examined in Man. Infection was less than 1% (C. C. G., P. H. W.).

SPLOTCH (physiological) was rated 1-sl. 2-mod. /7 durum fields examined in s. w. Sask. (R. D. T.).

CHEMICAL INJURY. Slight herbicide injury occurred in 92/215 fields surveyed in Sask. This unusually high incidence of injury was apparently due to a delay in the application of herbicides because of wet weather. Damage was most evident in crop distrists 5, 6, 8 and 9 (B. J. S.). Damage from herbicides was rated at 5% in a field at Shediac, N. B. (S. R. C.).

CHLOROTIC BANDING (high-temperature injury) was observed at Jnnisfree, Elk Point, Vegreville and Ferintosh, Alta. (A. W. H., D. S.). Temperatures of 87 and 89°F on June 18 and 20 are thought responsible for the slight injury seen in 2/8 fields examined in Man. (W. A. F. H.).

LOW-TEMPERATURE INJURY was rated 1-sl. 2-mod. 3-sev./12 fields surveyed in s. Alta. (J.B. L.).

OATS

ANTHRACNOSE (Colletotrichum graminicola). Some infection was observed at Spruce Grove, Alta. (A.W.H., D. S.).

LEAF BLOTCH (Drechslera avenacea) was recorded at Vegreville, Alta. (L.J.p.); light infections were seen in n. e. Man.(W. C.McD.) and mod. - sev. infections occurred on 'Fundy' oats at St. John's, Nfld. (C. A. N.).

POWDERYMILDEW (Erysiphe graminis). Trace infections were seen in 1/8 fields examined in the St. Catharines district, Ont.(T. R. D.).

ROOT ROT (Fusarium spp.) killed 4% of the plants in plots at Saskatoon and 1% in plots at Regina, Sask. (B. J. S.).

HALO BLIGHT (Pseudomonas coronofaciens) was rated 8-sl./22 fields examined in Sask. Affected fields were widespread in distribution (R. D. T.). Infection ranged from tr. -mod. in 3/18 commercial fields surveyed in Man. It was also seen in experimental plots at Morden. The organism was isolated and found pathogenic (W.A.F.H.). It was rated 1-tr, 3-sl./8 fields nr. St. Catharines (T. R. D.) and was plentiful early in the season in e. Ont. (R. V. C.).

CROWN RUST (Puccinia coronata f. sp. avenae) was found in 2/22 fields surveyed in Sask. (B. J. S.). It was first observed in Man. on 18 July. Maximum intensities of 10-25% were reached in commercial fields by the end of July but losses in Western Canada were negligible except for slight to moderate losses in some late-sown fields. Traces only were found in rust nurseries in Alta. Infections were heavy near buckthorn infestations in s. e. Ont. and in the Guelph area. It was slight in the nursery at Lennoxville, Que. but none was found in the Maritime Provinces (G. F.). Grown rust was plentiful at maturity in e. Ont. (R. V. C.).

STEM RUST (Puccfnia graminis f. sp. avenae) was first found in Man. at the end of July and its subsequent development was relatively slow. Losses generally, were negligible except in a few late fields that had moderate to severe infections. In Eastern Canada only the nurseries at Appleton and Ottawa, Ont. and La Pocatikre, Que. had mod. -sev. infections (J.W.M.). Infection was severe at maturity in e. Ont. especially at Ottawa. In barberry areas its occurrence was spotty, with occasional heavy infections (R. V. C.). In Que. seed board tests only the plots at Huntingdon and Lennoxville had noticeable infections (D. L.).

SPECKLED LEAF BLOTCH (Septoria avenae f. sp. avenae). Slight infections were recorded in 2/22 fields surveyed in n. e. Sask. (R. D. T.). It was prevalent late in the season in e. Ont. Early-seeded crops escaped much of the infection (R. V. C.).

LOOSE SMUT (Ustilago avenae) was rated 1-tr, /31 fields surveyed in Man. (J.J. N.) and 3-tr./5 at Centreville and Moncton, N. B. (S. R. C.). Light infections were seen on 'Exeter' at St. John's West, Nfld. (G. A. N.).

COVERED SMUT (Ustilago kolleri). Trace infections were seen in 1/21 fields surveyed in Man. (J. J. N.).

RED LEAF (barley yellow dwarf virus). Of 29 fields surveyed in Man., 15 had trace infections and 1 had 1% (C. C. G., P. H. W.).

BLUE DWARF (oat blue dwarf virus) was seen in experimental plots nr. Winnipeg but none was observed in commercial fields in Man. (C. C. G., P. H. W.).

BLAST (physiological). Traces were seen nr. St. Paul, Alta. (L. J.P.). Trace to moderate amounts were observed in 11/22 fields surveyed in Sask. (R. D. T.). About 2% of the plants of 'Shefford' oats were affected in a field at Macdonald College, Que. (H. G.).

CHEMICAL INJURY. Herbicide injury was noted in 4/22 fields surveyed in Sask. (B. J. S.).

CHLOROTIC BANDING (high soil temperatures) was observed on 2% and 5% of the plants in 2/5 fields surveyed in Man. (W.A. F. H.).

GRAY SPECK (manganese deficiency) was sev. at La Crête and seen in trace amounts at Bluffton and Two Hills, Alta. (A. W. H., L. J.P.).

BARLEY

SPOT BLOTCH (Bipolaris sorokiniana) was rated 1-sl./12 fields examined in s. Alta. (J.S. H., T. G. A.). Slight-mod. infections occurred in the north-central and northeastern zones of Sask. occurring in 6/28 fields surveyed (R.D.T.). It was light in the north and moderate in s. Man. (W. C. McD.). Dry weather in e. Ont. kept infections at a very low level (R. V. C.). The seedling blight stage of the disease affected 75% of the barley in a mixed planting of barley and oats at Bear River, N. S. The 5-acre field had been sown in 1965 to barley which showed poor growth (C. O. G.).

COMMON ROOT ROT (Bipolaris sorokiniana, Fusarium spp.). Damage was sev. at Vulcan, Athabasca, Stettler and St. Paul, mod. at Conrich, slight at Trochu and observed at Sunset House, Rycroft, Lacombe, Westlock and Duvernay, Alta. (A. W. H., L. J.P.). It was rated 4-tr. 2-sl./12 fields examined in s. Alta. (J.S. H., T. G. A.).

ERGOT (Claviceps purpurea) was observed in 4/28 fields examined in Sask. Ratings were 2-tr. 2-sl. One of the latter fields had 4% infection (R. D. T.).

Traces were seen in a field at Macdonald College, Que. (H. G.).

POWDERY MILDEW (Erysiphe graminis) was rated 1-sl./12 fields examined in s. Alta. (J.S. H., T. G. A.) and traces were found in plots at Regina and Saskatoon, Sask. (B. J. S.).

TAKE-ALL (Gauemannomyces graminis). A moderate infection was seen north of Edmonton, Alta. (L. J. P.).

LEAF RUST (Puccinia hordei). Traces were present in 2/26 fields examined in Sask. (B. J. S.) and in 1/4 seen in the St. Catharines area, Ont. (T. R. D.). It was observed only in late-planted fields in e. Ont. (R. V. C.). Infection varied from sl.-sev., depending on variety, at St. John's West, Nfld. (G. A. N.).

STEM RUST (Puccinia graminis) occurred in only 10/34 rust nurseries in Canada and was generally light except at Appleton, Ont. where all varieties of barley were attacked. These infections were presumably caused by rye stem rust which also attacks barley including those varieties resistant to wheat stem rust. 'Montcalm' is susceptible to wheat stem rust which appears to have caused most of the infection on that variety (G. J. G.).

NET BLOTCH (Pyrenophora teres) was rated 3-tr. 1-sl. 1-mod. in fields n. and n. e. of Edmonton (L. J.P.) and was observed at Rocky Lane, Athabaska, Olds, Stettler, Brownvale, Peace River and Fairview, Alta. (A. W.H., D.S.). Ratings in s. Alta. were 4-sl. 1-mod. 6-sev./12 fields examined (J.S. H., T. G. A.). It was slight in plots at Regina and very severe on 'Jubilee' in plots at Saskatoon, Sask. A third crop of 'Haanchen' and a field of seedlings were severely diseased in the Saskatoon area. The disease was detected in 20/28 fields surveyed in Sask. and was most prevalent in the northern zones (B. J. S., R. D. T.). Infection was moderate to severe in Man. (W. C. McD.).

SCALD (Rhynchosporium secalis) was rated 3-tr. 1-sl. 2-mod. 1-sev. in fields n. and n. e. of Edmonton (L. J.P.). Infection was 40% at Brownvale, general at Stony Plain and observed at Camrose, Fairview, Eckville, Okatoks, Peace River, Calgary, Smith, Strathmore and Stettler, Alta. (A. W.H., D.S.). Ratings were 1-tr. 1-mod./12 fields examined in s. Alta. (J.S. H., T. G. A.). Average damage was slight in 9/28 fields surveyed in Sask., mainly in the north-central zones (R. D. T.). Trace to light infections were seen in n. e. Man. (W. C. McD.).

SPECKLED LEAF BLOTCH (Septoria passerinii). Trace-mod. infections were observed in 8/28 fields examined in Sask., mainly in the central and northern zones (R. D. T.). It was moderate to severe in all parts of Man. (W. C. McD.).

COVERED SMUTT (Ustilago hordei). Ratings in 4/28 fields in Sask. were: 1-tr. 1-1% 1-2% 1-2.5% (B. J. S.). Infection averaged 0.1% in 5/56 fields in Man. It ranged up to 2% (J. J. N.).

FALSE LOOSE SMUT (Ustilago nigra). Infection ranged up to 5% and averaged 0.2% in 5/56 fields surveyed in Man. (J. J. N.).

LOOSE SMUT (Ustilago nuda) caused a 10% yield reduction at Milk River, moderate damage at Gwynne and was observed at Calgary and Falher, Alta. It was rated 1-tr. 1-sl. in fields n. & n. e. of Edmonton (A.W.H., L. J.P.). Ratings in Sask. were 5-tr. 3-2 to 3%/28 fields surveyed. The variety 'Gateway 63' was reported to show 5% infection in several fields nr. Regina and 'considerable loose smut' in a number of fields at Smeaton (B. J. S.). Eighteen / 56 fields surveyed in Man. showed an average infection of 0.6% with infection ranging up to 6% (J. J. N.). It was quite prevalent on susceptible varieties in e. Ont. (R.V.C.). Infection ranged from 0.5 - 9.8% on 15 lines and varieties in plots at La Pocatikre, Que. (H. G., G. St. P.). Light infections were seen at St. John's West, Nfld. (G. A. N.).

BACTERIAL BLIGHT (Xanthomonas translucens) was observed in trace amounts in some experimental plots at Saskatoon, Sask. (R. D. T.). None was seen in commercial fields in Man. (W.A.F.H.).

ASTER YELLOWS (aster yellows virus). Incidence in commercial fields in Man. in 1966 was the highest on record. Infection ranged from trace-6.5% with a mean of 3.2% for 25 fields. Macrosteles fascifrons was much more abundant than usual (C. C. G., P.H.W.).

STRIPE MOSAIC (barley stripe mosaic virus). Half the plants showed symptoms in one field in Man. It was also seen in experimental plots nr. Winnipeg (C.C.G., P.H.W.).

BARLEY YELLOW DWARF (barley yellow dwarf virus) was rated 3-tr. 1-1%/32 fields surveyed in Man. (C.C.G., P.H.W.).

HEAD BLIGHT (cause undetermined) was extensive at Falun and was observed at Trochu and Smith, Alta. (A.W.H., D.S.).

BORON TOXICITY caused 40% damage in a field at Port Elgin, N. B. (S.R. C.).

CHEMICAL INJURY. Herbicidal injury was seen in 9/32 fields in Sask. (B. J. S.).

CHLOROTIC BANDING (high soil temperatures). Trace amounts of heat banding were seen in Man. in late June (W. A. F. H.).

RYE

ERGOT (Claviceps purpurea). Thirty % of the plants were reported diseased in a field at Biggar and infection was slight in one at Choiceland (R. D. T.). At St. John's West, Nfld., 'Tetra Petkus' had 1-4 sclerotia per head on 10% of the heads (G. A. N.).

STEM RUST (Puccinia graminis). A light infection was seen at Edmonton, Alta. (A.W.H., D. S.). In rust nurseries it was rated 10% at Creston, B. C. and Lethbridge, Alta., tr. in e. Ont. and Que. except at Appleton, Ont. where it reached 60% (G. J. G.).

LEAF RUST (Puccinia secalina). Trace to slight infections were general throughout Sask. (B. J. S.).

SPECKLED LEAF BLOTCH (Septoria secalis) was observed on rye at Strathmore, Alta. (A. W. H., D.S.).

BACTERLAL BLIGHT (Xanthomonas translucens) was seen in 2/2 fields examined in Man. On individual plants the leaf area destroyed ranged up to 40%. The strain isolated caused heavy infection on 'Prolific' rye but only limited infection on 'Titan' barley and 'Thatcher' wheat. It caused no infection on oats (W. A. F. H.).

DISEASES OF FORAGE AND FIELD CROPS

A. Forage Legumes

ALFALFA

BLACK STEM (Ascochyta medicaginis). Infection was rated 4-tr.-sl. 1-sl.-mod./50 fields surveyed in the Creston, B. C. area (E. J. H.). It was observed in the Pincher Creek, Peace River, Champion and Edmonton districts in n. Alta. (A. W. H., D. S.), rated 2-mod./5 fields in c. Alta. (B. B.) and caused sl. damage in a field nr. Morinville, Alta. as well as in a field nr. Saskatoon, Sask. where 75% of the plants were infected, mainly the lower leaves (G. A. P.). The disease was common in all parts of Que. Damage was more severe infields, cut twice or more (C. A.).

WINTER CROWN ROT (low-temperature basidiomycete). Ratings were 1-sl. 6-mod. 8-sev./15 fields surveyed in s. Alta. (J.B. L.).

LEAF SPOT (Cercospora zebrina) was observed in a few fields in Que. in 1965 and 1966 (C.A.).

BACTERIAL WILT (Corynebacterium insidiosum). In a survey of alfalfa fields in B.C. the disease was rated as follows: 7-tr.-sl. 11-sl.-mod. 11-mod.-sev./50 in the Creston area, 2-sl.-mod. 2-mod.-sev./6 in the Kamloops district, 1-tr.-sl./3 at Agassiz, 1-sl.-mod. 3-mod.-sev./5 in the lower Okanagan. In s. Alta. it was rated 15-tr.-sl. 28-sl.-mod. 22-mod.-sev./79 in the Lethbridge area (E. J. H.). It was occasionally observed in Que. in surveys in 1965-66 but was judged to be of little importance (C. A.).

BULB AND STEM NEMATODE (Ditylenchus dipsaci) was rated tr.-mod. in 13/79 fields examined in the Lethbridge, Alta. area. Six of these represented new infestations (E. J. H.).

CROWN BUD ROT (Fusarium spp., Rhizoctonia solani, Ascochyta medicaginis). Incidence and distribution of the disease was as follows in B. C.: 23-tr.-sl. 13-sl.-mod. 7-mod.-sev./50 fields in the Creston area,. 3-tr.-sl. 3-sl.-mod./6 near Kamloops, 2-sl.-mod./3 at Agassiz, 3-tr.-sl. 1-sl.-mod./4 nr. Grand Forks and 1-tr.-sl. 4-sl.-mod./5 in the lower Okanagan area, In s. Alta. it was rated 19-tr.-sl. 53-sl.-mod. 7-mod.-sev./79 fields surveyed (E. J. H.).

LEAF SPOT (Leptosphaerulina briosiana) was seen in scattered fields in Que. in 1965-66 but appeared to be of little importance (C. A.).

YELLOW LEAF BLOTCH (Leptotrochila medicaginis). Ratings in the Creston, B. C. area were 8-tr.-sl. 5-sl.-mod. 1-mod.-sev./50 fields surveyed (E. J. H.). Slight damage was encountered in 1/5 fields examined in c. Alta. (B. B.). It was observed in several fields in Que. in 1965-66 (C. A.).

DOWNY MILDEW (Peronospora aestivalis). Infection was mod. at Bluffton (A. W. H.) and slight in a field at Lacombe, Alta. (B. B.).

COMMON LEAF SPOT (Pseudopeziza trifolii f. sp. medicaginis-sativae) caused slight damage at Two Hills and Champion (A. W. H., D. S.) and in 2/5 fields seen in c. Alta. (B.B.). It was the most prevalent foliar disease encountered in Que. in surveys in 1965-66, occurring in most fields. It caused defoliation in late-cut fields (C.A.).

LEAF SPOT (Stagonospora meliloti) was seen occasionally in Que. in 1965-66 (C. A.).

LEAF SPOT (Stemphylium botryosum) was occasionally encountered in surveys in Que. and caused some damage where it occurred (C. A.).