II DISEASES OF FORAGE AND OTHER FIELD CROPS

A. FORAGE LEGUMES

ALFALFA

BLACK STEM (Ascochyta imperfecta) was found in all 35 fields examined in Sask. It was sl. in fields cut for hay early in July but sev. in fields left for seed (H. W. Mead).

WINTER CROWN ROT (low-temperature basidiomycete) was rated 2-tr. -sl. 1-sl. -mod. 1-mod. -sev./4 fields surveyed in the Edmonton - Lacombe districts, Alta. (J.B. Lebeau). It was less sev, in Sask. than in the 2 previous years (H. W. M,).

SUMMER BLACK STEM (Cercospora zebrina), Infection was sl. in 5/35 fields in Sask, (H. W. M.).

ANTHRACNOSE (Colletotrichum destructivum). This organism was obtained from blackened sterns in Petri dish culture in Sask, (H,W.M.). Previous reports, to the Survey, of this organism have all been from eastern Canada (D.W. Creelman),

BACTERIAL WILT (Corynebacterium insidiosum), Infections were 24-tr. -sl. 13-sl. -mod, 15-mod, -sev./88 fields surveyed in s. Alta, This represents an increase over its incidence in 1962 (E. J. Hawn). Slight infection was found in 2/35 fields in Sask. (H. W. M.).

STEM NEMATODE (Ditylenchus dipsaci) was rated 6-sl, 4-mod. 2-sev. /88 irrigated stands examined in s. Alta. (E. J, H.).

CROWN BUD ROT (Fusarium spp., Rhizoctonia solani, Ascochyta irnperfecta) was widespread in irrigated fields in s. Alta., being recorded as 44-tr. -sl. 36-sl. -mod. 2-mod. -sev./88 fields surveyed (E. J. H.).

YELLOW LEAF BLOTCH (Leptotrochila medicaginis) caused minor damage in a field at Lacombe and in 2/3 fields west of Rad Deer, Alta. (B. Berkenkamp). Trace -sl. infections were seen in Queens Co., P.E.I. (C.B. Willis).

BLACK STEM (Phoma sp.), Moderate -sev. infections were general and caused a mod. amount of damage in P.E.I. (C.B.W.).

COMMON LEAF SPOT (Pseudopezixa trifolii f. sp. medicaginis-sativae) was general in P. E.I. where sl. -mod infections caused mod. damage (C. B. W.).

ROOT AND CROWN ROT (various organisms) was encountered throughout P.E.I. in tr. -sl. amounts (C. B. W.).

WITCHES' BROOM (virus) was widespread in the north Okanagan, Cache Creek and Prince George districts of B. C. (M. J. Pratt).

WINTER KILLING caused mod. -sev. losses in 10/35 fields surveyed in Sask. where records showed lower than usual soil temperatures. Most varieties were damaged in plots at Saskatoon where Rambler was the most resistant. Distinct varietal differences were evident at Indian Head. Reports from other provincial points indicated losses as high as 80% (H. W. M.).

COMMON CLOVERS

SNOW MOLD (low-temperature basidiomycete). A sl. -mod. infection was observed in a field of T. pratense and damage was sev. in a field of T. hybridum in the Lacombe, Alta, district (J. B. Lebeau),

SOOTY BLOTCH (Cymadothea trifolii) was tr. on T. repens at Lacombe, Alta. (B. Berkenkamp) and very sev. infections, causing mod-sev. damage, developed on T. repens, T. pratense and T. hybridum in P.E.I. as the season progressed (C.B. Willis)

POWDERY MILDEW (Erysiphe polygoni). Light infections, discernable only with a hand lens, developed on T. hybridum in the Vancouver, B. C. area. This disease has not previously been observed on the B. C. coast (H.N. W. Toms). Infection was 5-10% in 2 fields of T. hybridum and 10% in 3/4 stands of T. pratense west of Red Deer, Alta. (B. B.). Trace -sl. infections were general on T. hybridum, T. pratense and T. repens in P.E.I. (C. B. W.).

NORTHERN ANTHRACNOSE (Kabatiella caulivora). Damage ranged from 5-20% in 6/7 fields of T. pratense examined west of Red Deer, Alta. Severe infections developed in seed fields (B. B.). Trace -sl. infections were general on the same host in P.E.I. (C.B. W.).

BLACK STEM (Phoma sp.) was rated tr. -mod. in many fields of T. pratense and T. hybridum in P.E.I. and caused a slight amount of damage. It was more prevalent on T. pratense (C. B. W.). see note on Phoma trifolii in C.P.D.S. 42: 2.39. 1962 (D.W. Creelman).

ROOT ROT (Plenodomus meliloti) caused tr. -sl. damage on clovers north and northwest of Edmonton (W.P. Skoropad) and minor damage in 2/3 clover fields in the Lacombe, Alta. district (B.B.).

COMMON LEAF SPOT (Pseudopeziza trifolii f. sp. trifolii-pratensis). Slight -mod. infections on T. pratense and T. hybridum caused sl. damage throughout P.E. I. It was particularly prevalent on newly-seeded red clover (C.B. W.).

TARGET SPOT (Stemphylium sarcinaeforme) was general as tr. -sl. infections on T. pratense in P. E. I. (C. B. W.).

RUST (Uromyces nerviphilus (Grognot) Hotson). Ladino clover (T. repens) was 10% infected at La Pocatiere, Que. This is the first report, to the Survey, of this rust although there is a collection in DAOM, Ottawa from the same locality as we1 as another from Que., 1 from Ont. and 2 from B. C. A collection from La Pocatiere, taken in mid-Oct. clearly demonstrated the presence of repeating aecia in this species (H. Genereux, D.B.O. Savile, D.W.C.).

RUST (Uromyces trifolii) was sl. on T. hybridum in the Vancouver, B. C. area (H.N.W.T.) and tr. on T. repens at Lacombe, Alta. (B.B.). Traces were found on T. pratense var. Dollard at Ste. Anne de Bellevue, Que. (H. G.). and infections, though slight, were quite extensive in older plantings of T. pratense, T. repens and T. hybridum In **P.E.I.** (C.B. W.).

ROOT **AND** CROWN ROTS (various organisms) caused extensive damage to stands of T. pratense, T. repens and T. hybridum throughout P.E.I. (C.B.W.).

MOSAIC (virus). White clover mosaic virus (WCMV) and clover yellow mosaic virus (CYMV) were found affecting T. repens, both the white Dutch and Ladino strains, T. pratense and T. hybridum near the sea caast of the Lower Fraser Valley, B.C. Bean yellow mosaic virus (BV-2) was found in some fields of T. pratense in the Lower E'raser Valley and in the Okanagan Valley. WCVM, CYMV and alfalfa mosaic virus, in that order of importance, were widespread on Ladino in the Okanagan Valley (M. J. Pratt). Mosaic affected up to 70% of T. pratense in an experimental plot and was tr. in 1 field at Lacombe, Alta. (B.B.). Symptoms on T. pratense in P.E.I. included a distinct vein clearing (C. B.W.).

PHYLLODY (clover phyllody virus), Trace infections were seen on T. repens (White Dutch) at Lacombe, Alta. (B.B.). At La Pocatiere, Que. a plot of ladino was 80% affected and damage was sev. (H. G.). Severely infected plants of both T. hybridum and T. pratense were common in hay fields and strawberry plantings at Kentville, N.S. (K.A. Harrison). Trace - 5% infections were commonly encountered in T. pratense, T. repens and T. hybridum in P.E.I. The last species was the most affected (C.B. W.).

BLACK MEDIC

MOSAIC (virus). Bean yellow mosaic virus was commonly seen on black medic escapes in the Okanagan Valley, B.C. (M.J. Pratt).

SWEET CLOVER

STEM CANKER (Ascochyta caulicola) caused slight damage to most varieties at Saskatoon, Sask. (H. W. Mead).

SUMMER BLACK STEM (Cercospora zebrina). Average damage was mod. in 8/10 fields observed in Sask. Severe stem lesioning and early defoliation occurred in varietal tests at Saskatoon. Infection was least on the varieties Madrid and Gold Top and most sev. on selections N-10 and N-13 (H. W. M.).

ROOT ROT (Fusarium spp.) caused mod. -sev. damage in 5/10 fields surveyed in Sask. In plots at Saskatoon, flowering plants wilted suddenly. An examination of the roots showed a complete rotting of the cortex. Fusarium acuminatum, F. oxysporum and F. solani were isolated (H. W. M.).

ROOT ROT (Phytophthora cactorum) was sev. in a stand nr. Lethbridge, Alta. (J.B. Lebeau).

MOSAIC (virus) Bean yellow mosaic virus was observed in sweet clover escapes in the Okanagan Valley, B. C. (M. J. Pratt).

WINTER KILLING caused mod.-sev. damage in 5/10 fields surveyed in Sask. It was especially sev. in plots at Saskatoon where soil temperatures were lower than normal in the early part of the 1962-63 winter (H.W. M.).

B. OIL SEED CROPS

FLAX

ALTERNARIA BLIGHT (A. linicola) caused slight injury at Davidson, Sask. (T. C.V.).

RUST (Melampsora lini) was rarely encountered in Sask. The susceptible variety Redwing is no longer recommended for n. Sask. (T. C. Vanterpool),

SEEDLING BLIGHT (Rhizoctonia praticola) was sl. in late June at Davidson and sl.-mod. in mid-July at Melfort, Sask. (T. C.V.).

PASMO (Septoria linicola) was more commonly seen than usual at Ottawa, Ont. Infections were rated tr. -mod. (R.V. Clark).

LATE ROOT ROT (various organisms) caused slight damage at Saskatoon (T. C. V.).

ASTER YELLOWS (aster yellows virus). Trace amounts were found in all fields examined in the Lacombe, Alta. district (B. Berkenkamp). There was up to 50% infection in late-seeded fields in the Inter-lake region of Man. but very little infection outside the Red River Valley (W. C. McDonald).

ZINC DEFICIENCY caused stunting and white or pale brown leaf spotting nr. Perduc, Sask. The affected areas in the field corresponded to old burned straw piles. It is probable that the last burnings occurred in the late 1930' s. Samples were also received from Ogema (T. C. V.).

MUSTARD

WHITE RUST (Albugo cruciferarum) was observed on mustard in the Parkbelt district of Sask. (T. C. Vanterpool).

LEAF SPOT (Alternaria spp.) was present in the Parkbelt area of Sask. (T.C.V.).

WILT (Fusarium spp.) was seen on mustard in Sask. (T. C. V.).

DOWNY MILDEW (Peronospora parasitica) caused severe distortion to plants near a shelter belt west of Lacombe, Alta. (B. Berkenkamp).

BASAL STEM ROT (Sclerotinia sclerotiorum) was seen in the Parkbelt district of Sask. (T. C. V.).

RAPE

WHITE RUST AND STAGHEAD (Albugo cruciferarum). Moist conditions in Sask. in 1963 accounted for a greater than usual prevalence of this disease. Five fields with 3-10% infection were found at Valparaiso, Tisdale, Nipawin, Spalding and Meadow Lake, A field at Glaslyn showed sl. infection of the late green side branches (T.C. Vanterpool).

BLACK AND GRAY SPOT (Alternaria brassicae, A. raphani). Alternaria spp. were isolated from pod lesions, sometimes penetrating and infecting the seed, at Lacombe, Alta. (B. Berkenkamp). Stem lesioning was conspicuous in some northern fields in Sask,, and the disease extended further south than usual. Platings of seed from Dorintosh, Meadow Lake, North Battleford, Nipawin, Carrot River and Melfort showed all samples to be carrying unusually high percentages of A. brassicae. A. raphani was less commonly encountered. The higher incidence of Alternaria lesioning in swathed than in standing fields was shown to be due to A, tenuis (T.C.V.).

POWDERY MILDEW (Erysiphe polygoni). Two late-maturing plots at Saskatoon, Sask. were heavily infected in Oct. (T. C. V.).

RING SPOT (Mycosphaerella brassicicola) was very prevalent in fields in n. Sask. where it was the most common rape disease in the parkbelt. It develops late in the life of the plant and does not seem to be of great importance (T. C. V.).

BASAL STEM ROT (Sclerotinia sclerotiorum). Infection in Sask. was rated tr. in several fields, 1-5% in 1 and 5-20% in 1 (T.C.V.).

ASTER YELLOWS (aster yellows virus), Traces could be found in most fields in Sask. just before harvest. One field with 5% infected plants was seen nr. Spalding. Incidence was the highest since 1957 (T. C.V.). Trace infections were common in Man. (P.H. Westdal, H.P. Richardson).

SAFFLOWER

LEAF SPOT (Alternaria carthami) was prevalent on all varieties at Ottawa, Ont. (R.V. Clark).

HEAD BLIGHT (Botrytis cinerea). Slight infections occurred at Ottawa, Ont. (R. V. C.).

RUST (Puccinia carthami), Infection at Ottawa, Ont. was rated generally slight (R.V. C.).

SOYBEAN

ROOT INFECTION . (Corynespora cassiicola (Berk. & Curt.) Wei). This organism was found fruiting on roots of soybean plants in experimental plots at Ottawa, Ridgetown and Harrow, Ont. There was no evidence of foliar symptoms or root rot as reported in the U.S.A. (W.L. Seaman).

STEM CANKER (Diaporthe phaseolorum var caulivora) affected up to 10% of Lincoln at Ridgetown, Ont. and less than 1% of Harmon, Hawkeye and Ford. It was observed on Lincoln and Clark at Harrow (W. L. S.).

POD AND STEM BLIGHT (Diaporthe phaseolorum var sojae) was less prominent than in 1962 at Ottawa, occurring primarily on the early-maturing varieties Comet and Merit. At Ridgetown, only the varieties Merit and Chippewa were affected. Stems of Merit were moderately affected at Harrow (W. L. S).

SUNFLOWER

DOWNY MILDEW (Plasmopara halstedii. was tr. in 14 fields of hybrid varieties and sev. in 1 field each of Mennonite and Peredovik. Losses in these 2 fields were high (J.A. Hoes, E.D. Putt).

RUST (Puccinia helianthi). Intensity of infections ranged from tr. -60% on 80-100% of the plants in all fields of Mennonite and Peredovik. It was sl. in 1/14 fields of hybrid varieties (J.A.H., E.D.P.).

BASAL STEM ROT (Sclerotinia sclerotiorum) was mod. in isolated localities throughout c. Alta. (W. P. Skoropad). Infection was 5-10% at Codette and 5-15% at Tisdale in n. -e. Sask. (T. C. Vanterpool). In Man. it was rated 17-tr. -2%. 2-5%/49 fields surveyed (J.A.H., E.D.P.).

LEAF SPOT (Septoria helianthi). Trace infections were found in 5/49 fields in Man. (J.A.H., E.D.P.).

LEAF MOTTLE (Verticillium albo-atrum) was widespread in Man. though losses were less than in 1962. Infections were rated 36-sl. 5-mod. 5-sev./49 fields (J.A.H., E.D.P.).

WILT (Verticillium dahliae) was found, for the first time on sunflowers, at Summerland, B.C. in a field that had previously grown Verticillium - susceptible crops (G.E. Woolliams).

ASTER YELLOWS (aster yellows virus). Trace infections were seen in Man. (P.H. Westdal, H. P. Richardson).

LIGHTENING INJURY caused sev. damage in a localized area in a field at Morden, Man. (J.A.H., E.D.P.).

C. ROOT CROPS

SUGAR BEET

LEAF SPOT (Alternaria tenuis) caused slight damage in 2 fields at Sherrington, Que. (R. Crete).

LEAF SPOT (Cercospora beticola) occurred on 100% of the plants in some fields in Man. and caused moderate damage. The importance of crop rotation was clearly demonstrated. All of the seriously affected fields had been cropped to sugar beets or were adjacent to fields that had been (W. C. McDonald). A lighter than usual infection was observed in Kent Co., Ont. Drought conditions mitigated against disease development (C. D. McKeen).

BORON DEFICIENCY. Patches in a 14-acre field nr. Chatham, Ont. showed symptoms of sev. boron deficiency accentuated by drought conditions. Several other fields in Kent Co. showed sl.-mod. symptoms (C.D. McK.).

D. MISCELLANEOUS CROPS

BUCKWHEAT

DAMPING-OFF (Rhizoctonia solani) was sev. at Fredericton in soil, probably potato soil, braught from Bath, N.B. (K. M. Graham).

ASTER YELLOWS (aster yellows virus). Trace infections were observed in buckwheat fields in Man, (P.H. Westdal, H. P. Richardson).

FIELD CORN

NORTHERN LEAF BLIGHT (Bipolaris turcicum). Incidence was exceptionally low in s.-w. Ont. probably due: to the lack of prolonged periods of dew during Aug. and Sept. (R.E. Wall).

ROOT AND STALK ROT (Gibberella zeae) was less frequently encountered than in 1962 in Essex and Kent counties, Ont. although infections of up to 30% were seen. In 1962 root invasion was general but in 1963 more of the stalk rot resulted from infection through the leaf sheaths and ear stalks (R.E.W.).

TOBACCO

LEAF SPOT (Alternaria spp.). Spots caused by Alternaria spp. and others of undetermined origin constituted the most serious field diseases of tobacco in s.-w. Ont. in 1963. Losses were incurred through lowering of the grade in infected crops (Z.A. Patrick, L. W. Koch).

BLUE MOLD (Peronospora tabacina) has not been found in Ont. for 9 years. Preventative spray measures are still recommended because air-borne inoculum from the U.S.A. poses a constant threat (Z.A. Patrick, L. W. Koch).

DAMPING-OFF AND SORE SHIN (Rhizoctonia solani, Pythium spp.). Damping-off was the moat common seed-bed disorder, occurring in patches in most s.-w. Ont. greenhouses. The overall loss was estimated at 5%. Sore shin was sev. in the field immediately following transplanting (Z.A.P., L.W.K.).

BLACK ROOT ROT (Thielaviopsis basicola) occurred in a few improperly sterilized seedbeds. Field losses in some instances were extremely heavy, as high as 30%. Environmental conditions in 1963 were favorable to the pathogen and even normally-resistant varieties were attacked. Yellow Gold showed high resistance even in fields where the disease was most sev. in 1962 (Z.A.P., L.W.K.).

VIRUS DISEASES. Tobacco etch virus caused mod. losses in burley tobacco in Essex and Kent counties, Ont. Other viruses observed in burley and flue-cured crops were: TMV, cucumber mosaic, streak, ring spot, alfalfa mosaic, curly top, potato Y and mottle viruses. Losses, apart from those caused by tobacco etch, were insignificant (Z.A. P., L. W. K.).

WEATHER FLECK (air pollution) caused slight losses, late in the season, in s.-w. Ont. (Z.A.P., L. W. K.).

YELLOW PATCH (excess nutrients). Losses from this disorder were insignificant in s.-w. Ont. in 1963 (Z.A.P., L. W.K.).

E. CULTIVATED AND OTHER GRASSES

AGROPYRON

Ergot (Claviceps purpurea). Severe infections were seen on A. repens west of Red Deer, Alta. (B. Berkenkamp).

Powdery mildew (Erysiphe graminis). Slight-mod infections were general on A. repens in P.E.I. (C.B. Willis).

Speckled leaf blotch (Septoria elymi). Trace-sl. infections on A. repens were common on P.E.I. (C.B.W.).

Stem smut (Ustilago spegazzinii) occurred generally on A. repens at Trout Creek Point, nr. Summerland, B. C. (G. E. Woolliams).

ALOPECURUS

Leaf fleck (Mastigosporium album), Light infections occurred on A. pratensis at St. John's West, Nfld. (G.A. Nelson).

AVENA

Crown rust (Puccinia coronata). Fifteen -20% infection was noted on A. fatua in Man. in July (W.A.F. Hagborg).

BROMUS

Ergot (Claviceps purpurea) was observed in 4/48 fields of B. inermis surveyed in Sask. One sev, infection was recorded nr. Codette (C. Noviello).

Leaf blotch (Drechslera bromi). Infection averaged 5% In 3/4 fields of B. inermis at Lacombe, Alta. (B. Berkenkamp). Ten/48 Sask. fields showed varying degrees of infection. Infected fields were at Chamberlain, Melfort, Nipawin, Regina and Unity (C. N.).

Powdery mildew (Erysiphe graminis) was tr. in 2 brome fields in the Unity, Sask. district (C.N.).

Bacterial blight (Pseudomonas coronafaciens var atropurpurea) was sl. -mod. in 6/48 fields of B. inermis in Sask., occurring at Craik, Regina, Saskatoon and Unity (C.N.).

Scald (Rhynchosporium secalis). Infection in B. inermis fields in Sask. was rated 4-tr. -sl, 1-mod. /48. It occurred at Nipawin, Saskatoon and Unity (C.N.).

Crazy top (Sclerophthora macrospora) was collected on B. inermis in the Edmonton, Alta. district (A. W. Henry, W. P. Skoropad). This is the first report, to the Survey of S. macrosporд on Bromus. The Index of Plant Diseases in the United States (U.S.D.A. Agr. Handbk.165) records its occurrence of B. commutatus in Key., Tenn. and possibly Oreg. (D.W. Creelman)

Leaf spot (Selenophoma bromigena). Infection averaged 5% in 3/3 fields of Manchor brome examined at Lacombe, Alta. (B.B.). It was observed in 45/48 brome fields surveyed in Sask. and it was very sev. in 9 fields at Melfort, Regina, Unity, Saskatoon and Zealandia. Great differences in susceptibility were evident among clones at Saskatoon (C.N.). Infection was mod. on B. inermis at St. John's West, Nfld. (G.A. Nelson),

Leaf spot (Septoria bromi) was sl. in 1 brome field at Prince Albert and in 1 at Saskatoon, Sask. (C.N.).

Smut (Ustilago bullata) was common on B. tectorum at Summerland, B. C. (G.E. Wooliams).

Stripe blight (Xanthomonas translucens f. sp. cerealis) was observed on B. inermis in plots at Saskatoon and was sev. in 1 field nr. Unity, Sask. (C.N.). This disease of brome has not been previously reported to the Survey (D. W. C.).

CALAMAGROSTIS

Gall nematode (Anguina graminophila (Goodey, 1933) Christie, 1959) was collected on C. canadensis at Rupert and St. Martin, Que. (B.E. Hopper). This nematode has not previously been reported from Canada. Anguina agrostis (Steinbuch, 1799) Filipjev, 1936 was collected on Agrostis tenuis and Poa pratensis at 3 locations in N. S. in 1942. see C. P.D.S. 22:34 1943 (D. W. Creelman).

DACTYLIS

Leaf spot (Mastigosporium rubricosum) was tr. on D. glomerata in a single planting nr. Charlottetown, P.E.I. (C. B. Willis)

FESTUCA

Anthracnose (Colletotrichum graminicola) was widespread and sometimes serious on F. rubra in lawns at Saskatoon, Sask. (C. Noviello).

HORDEUM

Head smut (Ustilago bullata) was sev. in a field of H. jubatum at Brooks, Alta. (J.S. Horricks, T. G. Atkinson),

PHLEUM

Leaf speckle (Selenophoma donacis). Moderate infections were found on P. pratense at St. John's West, Nfld. (G.A. Nelson).

Stripe smut (Ustilago striiformis). Infection was tr. on a half-acre plot of timothy, var. Drummond at Macdonald College, Que. (H. Genereux)

Chemical injury. Distortion of heads at Nipawin, Sask. was attributed to herbicide injury (B. J. Sallans).

POA

Powdery mildew (Erysiphe graminis). Trace infections were seen on P. pratensis (Kentucky blue grass) at Lacombe, Alta. (B. Berkenkamp). Infection was very heavy on Merion blue grass in a large, new lawn at Aylmer, Que. in Oct. It was also observed on P. pratensis, especially in

shady areas, in many Ottawa: lawns (D. W. Creelman). Slight infections were general in Queens Co., P.E.I. (C.B. Willis).

Stem rust (Puccinia graminis) was sev. causing considerable browning and death of Merion blue grass at Aylmer, Que. (D. W. C.).

Leaf rust (Puccinia poae-nemoralis) was observed on P. pratensis in several lawns at Saskatoon, Sask. in Aug. Damage was generally light but 1 infection was rated sev. (C. Noviello).

SETARIA

Kernel smut (Ustilago neglecta) occurred extensively on S. viridis growing as a weed at Summerland, B.C. (G.E. Woolliams).

LAWNS AND TURF

Snow mold (low-temperature basidiomycete). . Damage to turf in s. Alta. was rated 1-tr. 4—sl. 1-mod. (J.B. Lebeau). Several lawns in Saskatoon, Sask. were affected. Damage was mostly mod. and most lawns recovered (C. Noviello).

Melting-out (Bipolaris sorokiniana, Drechslera poae (Baudys) Shoem. = D. vagans (Drechs.) Shoem.) (see Shoemaker, R.A. Can. J. Bot. 40: 808-846, 1962). Infection by B. sorokiniana was rated 5-sev. on turf grass at Lethbridge, Alta. (J.B.L.).

The two organisms caused mod. damage to many lawns at Winnipeg, Man. especially where rotary mowers were used and the clippings not removed (W.C. McDonald). G. poae caused a trace of injury nr. Charlottetown, P.E.I. (C. B. W.).

Anthracnose (Colletotrichum graminicola) caused browning of several lawns at Edmonton, Alta. Damage was associated with high temperatures and high humidity that favored a heavy thatch (W.P. Skoropad).

Powdery mildew (Erysiphe graminis). Late-season infections were common at Saskatoon, Sask., particularly in shaded areas. It was prevalent on Merion blue grass but damage was light (C.N.).

Leaf, root and crown diseases ("Helminthosporium" spp.) At Saskatoon, Sask. there was a widespread occurrence of leaf, crown and root lesions caused by "Helminthosporium" species. These developed from May through to fall. Damage was sev. in some cases and some lawns required reseeding or resodding. Merion blue grass, generally considered resistant, was sev. affected (C.N.).

Fairy ring (Lepiota naucina, Marasmius oreades, Agaricus arvensis), The two first-named species were common, but not serious, in lawns at Saskatoon, Sask. (C.N.). M. oreades caused sev. damage in 8 lawns at Lethbridge, and fairy rings caused by A. arvensis were present on rangeland at Stavely, Alta. (J. B, L.).

Brown patch (Rhiaoctonia solani) was sev, in 2 turf areas at Lethbridge, Alta. (J, B, L.) and caused 10% damage in a planting of Poa pratensis at Fredericton, N.B. (K. M. Graham, R. G. White).

Dollar spot (Sclerotinia homeocarpa) was isolated from golf course turf at Harrison, nr. Agassiz, B, C. (H.S. Pepin),

Snow mold (Typhula **sp.).** Damage was widespread and sev. in the Ottawa, Ont. district in the spring of 1963. Typhula sp. was isolated in the one case investigated but other organisms may have been involved in the overall outbreak (D. W. Creelman).

Blight (various organisms). Dead patches of varying sizes were observed in lawns in Saskatoon, Sask. in late April and early May. Isolations yielded Bipolaris sorokiniana, Pythium spp., Drechslera poae, Fusarium culmorum, F. acuminatum and F. equisiti (C. N.),