II. DISEASES OF FORAGE AND OTHER FIELD CROPS

A. FORAGE LEGUMES

ALFALFA

BLACK STEM (Ascochyta imperfecta). All 35 fields surveyed in Sask. were moderately infected. The disease was retarded by very dry conditions from July to Sept. (H. W. Mead). Infection was 10-20% in 6/6 N. B. fields and caused some early defoliation (G. B. Orlob) (C. P, D. S. 40:2. 85. 1960).

WINTER CROWN ROT (low-temperature'basidiomycete) was tr. -sl. at Fort St. John, B. C. and Beaverlodge, Alta. ; tr. -mod. in the Edmonton, Alta. area; and mod, at McLennan and High Prairie, Alta, (N. Colotelo, W.P. Campbell).

BACTERIAL **WILT** (Corynebacterium insidiosum) was mod. in 1 field near Edmonton, Alta. (N. C., W. P. C.). In s. Alta. infection was 7-tr. -sev. 3-mod. -sev./25 fields (E. J. Hawn). Wilt was found in Sask. only in experimental plots at Snowden and Saskatoon (H. W. M.).

ROOT ROT (Cylindrocarpon sp. and Fusarium sp.) affected plots at the Lacombe, Alta. Experimental Farm.(N. C.).

STEM NEMATODE (Ditylenchus dipsaci) was mod, -sev. in 2- and 3-year old irrigated plots on the Research Station Lethbridge, Alta. Its presence was suspected, but not confirmed, in some outlying fields (E. J. H.).

YELLOW LEAF BLOTCH (Leptotrochila medicaginis) was mod, in 2/3 fields examined at Ste. Anne de la Pocatiere (D. W. Creelman, R.O. Lachance) and infection was sl. on second growth at La Gorgondiere, Que. (D. W.C.). In N.B., it was rated at 20% on one-third of the crop in a field in Northumberland Co. (G.B.O.) (C.P. D. S. 40:2. 85. 1960).

DOWNY MILDEW (Peronospora aestivalis). Trace -mod. infections were found in 11/16 fields in B. C. and n. Alta., the disease being most serious around Fort St. John, B. C. and Beaverlodge, Alta. (N. C., W.P. C.). All replicates of one hybrid were heavily infected and badly stunted in experimental plots at Snowden, Sask. (H, W. M.).

COMMON LEAF SPOT (Pseudopeziza trifolii f. sp. medicaginis-sativae) was tr. -sl. in all fields visited in n. Alta. (N. C., W. P. C.), and 3-tr. /25 in s. Alta (E. J.H.) . It was mod. in 3/3 fields at Ste. Anne de la Pocatiere, Que, (D. W. C., R.O. L.), averaged 30% in all fields surveyed in N. B. (G. B. O.) (C. P. D. S. 40:2. 85, 1960), and was tr-sl. at the Experimental Farm, Charlottetown, P. E.I. (J. E. Campbell).

CROWN BUD ROT (Rhizoctonia solani, Fusarium roseum, Ascochyta imperfecta). Infection was rated 5-tr.-sl. 5-sl.-mod. 13-mod.-sev./25 fields in s. Alta. (E.J.H.).

LEAF SPOT (Stagonospora meliloti) was sl. in experimental plots at Snowden and Saskatoon, Sask. (H.W.M.). It was rated 10% on 30% of the crop in 2 fields at Fredericton, N.B. (G.B.O.) (C.P.D.S. 40:2. 85. 1960).

LEAF SPOT (Stemphylium botryosum) was sl. in 10/35 fields surveyed in Sask. (H.W.M.). Damage was sl. and infection was 35% in a field at Fredericton, N.B. (G.B.O.) (C.P.D.S. 40:2. 85. 1960). It was tr. on Grimm at St. John's West, Nfld. (O.A. Olsen).

MOSAIC (virus) was 2-tr./25 fields surveyed in s. Alta. (E.J.H.).

WHITE LEAF SPOT (physiologic) appeared after drought had been broken by heavy rain in the Melfort, Sask. area (H.W.M.).

COMMON CLOVER

WINTER CROWN ROT (low-temperature basidiomycete). One field near McLennan, Alta. showed mod. infection (N. Colotelo, W.P. Campbell).

SOOTY BLOTCH (Cymadothea trifolii) was widespread but of little importance in N.B. except for a 30% infection on white clover in the forage nurseries at the Research Station, Fredericton (G.B.O.)(C.P.D.S. 40:2. 85. 1960). It was mod. in a field at Lawrencetown, N.S. (D.W. Creelman).

POWDERY MILDEW (Erysiphe polygoni). Trace infections were recorded on red clover at Cecil Lake, B.C. and it was sl. on the same host at Nampa, McLennan and Edmonton, Alta. (N.C., W.P.C.). It was mod. in 20/20 fields in n.-e. Sask. (H.W. Mead). Red clover was sev. infected in N.B. in early fall (G.B. Orlob) (C.P.D.S. 40:2. 86. 1960). It was 2-mod. 1-sev./5 fields nr. Fredericton, N.B. in July and a field at the Research Station, Kentville, N.S. showed mod. infection (D.W.C.). Trace infections were seen on red clover at the Experimental Farm, Charlottetown, P.E.I. (J.E. Campbell).

NORTHERN ANTHRACNOSE (Kabatiella caulivora). Trace-sl. infections were general throughout c.- and n. Alta, with some sev. infections at Nampa and McLennan in the Peace River District (N.C., W.P.C.). It was sl. in 3/20 fields in n.-e. Sask. (H.W.M.). Damage was 25% in 2 fields in w. N.B. and less in 3 other fields in n. N.B. (G.B.O.) (G.P.D. S. 40:2. 86. 1960).

COMMON LEAF SPOT (Pseudopeeiza trifolii f. sp. trifolii-pratensis) was common in N. B. with an average infection of 30% (G. B.O.) (C.P.D.S. 40:2. 86. 1960).

LEAF SPOT (Stemphylium sarcinaeforme) was 18-mod,/20 fields in n. -e. Sask. It is always common in this part of the province where dews are heavy and frequent (H.W. M.). Sl. -mod. infections occurred on red clover at the Experimental Farm, Charlottetown, P. E.I. (J.E. C.). Trace infections were seen on red clover at St. John's West and Colinet, Nfld. (O.A. Olsen).

RUST (Uromyces trifolii) was common in N. B. with infection as high as 50% in some localities (G. B.O.). (C.P. D. S. 40:2. 86. 1960). Slight infections were seen in 2/3 fields examined in the Berwick, N.S. district. (D. W.C.), and a tr. infection was recorded nr, Charlottetown, P.E.I. (J.E. C.).

DECLINE AND PHYLLODY (virus). Surveys of clover fields along the St. lawrence River valley between Montreal and Quebec City disclosed the presence of phyllody in red, alsike and ladino clovers. In 1959 the western limits of the disease appeared to be at Lavaltrie on the north shore and Contrecoeur on the south shore. In some portions of a clover field at Lavaltrie, infection reached a high of 50%. Surveys in 1960 indicated that the western limit of the disease was near St. Roch de l'Achigan, directly north of Montreal. The extension of the known western limit of the disease was probably due to more critical surveying although there is a possibility that the disease is spreading westward. Infected ladino and red clover was observed in fields at L'Epiphanie and L'Assomption as well as in most fields along the St. Lawrence between Montreal and Quebec City. Fairly heavy infection was observed at Charette, nr. Shawinigan Falls, Indications were that infection in 1960 was lighter than in 1959 (L.N. Chiykowski). Phyllody was more sev. in plots of ladino and white Dutch clover at Normandin than at any other point observed in Que. (R.O. Lachance). A sev. infection was seen on ladino at Riviere Ouelle, and it was observed on red and alsike clovers at Ste. Foy, Que. (D. W. C.).

MOSAIC (virus) was common red and white clover In the Okanagan Valley, B.C. (G.E. Woolliams). It was tr. on red clover at Upton, P.E.I. (J.E. C.).

SWEET GLOVER

ROOT ROT (Ascochyta imperfecta) was found in one field at Fort St. John, B.C. in mid-July (N, Colotelo, W.P. Campbell).

ROOT ROT (Cylindrocarpon sp. and Fusarium sp.) was mod. in plots at the Experimental Farm, Lacombe, Alta. (N. C., W. P.C.).

LEAF SPOT (Leptosphaeria pratensis) was 3-sl./35 fields examined in Sask. It caused sl. defoliation at Saskatoon (H. W. M.).

MOSAIC (virus) was frequently observed at different localities in the Okanagan Valley, B. C. (G. E. Woolliams).

B. OIL SEED CROPS

FLAX

ALTERNARIA BLIGHT (A, linicola) occurred in tr. amounts in the park belt district of Sask. (T.C. Vanterpool) (C.P.D.S. 40:2. 60. 1960).

SEEDLING BLIGHT (Rhizoctonia praticola), The outbreak in 1960 was the worst on record in Sask. Infection was 10-25% at Swift Current and tr. -1% at Delisle (T. C. V.) (C.P. D.S. 40:2. 59. 1960).

ROOT ROT (Rhizoctonia praticola, Pythium ultimum, Fusarium spp.) was widespread in Sask. (T. C. V.) (C.P. D.S. 40:2. 59. 1960).

SEEDLING BLIGHT (Rhizoctonia solani) occurred at Morden, Man. In some patches damage was 100% but the overall damage was less than 1%. Isolations yielded chiefly R. solani as well as Fusarium oxysporum var. redolans (W.A.F. Hagborg, W. L. Gordon).

ASTER YELLOWS (virus) was tr. in the parkbelt area of Sask. and virtually absent on the open prairie (T.C.V.) (C.P.D.S. 40:2. 60. 1960).

HEAT AND DROUGHT caused slight amounts of boll blight and sterility and 2 reported cases of heat canker in Sask. (T.C.V.) (C.P.D.S. 40:2. 59. 1960).

CHEMICAL INJURY. Injury from 2, 4-D caused some damage at Kincaid and Kindersley, Sask. The injury took the form of leaf doubling (T.C.V.) (C.P.D.S. 40:2. 60. 1960).

MUSTARD

ROOT ROT (Rhizoctonia solani). A trace infection was found in a dry land field near New Dayton, Alta. (J.S. Horricks).

RAPESEED

WHITE RUST (Albugo cruciferarum) was common in the parkbelt district of Sask., being most conspicuous in the Melfort-Nipawin and Meadow Lake districts (T.C. Vanterpool) (C.P.D.S. 40:2. 60. 1960).

BLACK SPOT (Alternaria spp.) was mod. -sev. at Meadow Lake and sl. in the Melfort-Nipawin area, Sask. (T. C. V.) (C.P.D.S. 40:2. 60. 1960).

ROOT ROT (Fusarium spp.). Traces only were found in Sask. (T. C. V.) (C.P.D.S. 40:2. 61.1960).

RING SPOT (Mycosphaerella brassicicola) was sev. at Meadow Lake in Aug. and was found in the Melfort-Nipawin District, Sask., in Sept. (T.C.V.) (C.P.D.S. 40:2.60. 1960).

STEM BLIGHT (Sclerotinia sclerotiorum) caused some damage at Meadow Lake and was tr. in the Aylsham, Sask. area (T.C.V.) (C.P.D.S. 40:2. 61, 1960).

ASTER YELLOWS (virus). Traces were recorded at Shellbrook, Annaheim, Meadow Lake and Regina, Sask. (T,C. V.) (C.P. D. S. 40:2.61. 1960).

CHEMICAL INJURY. 2, 4-D drift caused some damage in one fie d in Sask. (T.C.V.) (C.P.D.S. 40:2.61. 1960).

SOYBEAN

STEM CANKER (Diaporthe phaseolorum) was sev. on the relative' r small acreage planted to the variety Lincoln in s. -w. Ont. (A.A. Hildebra d). Approximately 10 plants in a 4-acre field at Ottawa, Ont. were affected. The pathogen was present in the perfect state (V.R. Wallen).

ROOT AND STALK ROT (Phytophthora megasperma var. sojae) was as widespread and sev. in s. -w. Ont. as at any time since it was first discovered in 1954. There was confirmatory evidence that incidence and severity are correlated with compaction of the soil. There was little doubt that this factor was of importance in the 4 bu./acre reduction in yield in 1960. The disease affected principally the variety Harosoy (A. A. H.).

MANGANESE DEFICIENCY was apparent, as usual, in many of the unsprayed fields in central Essex Co., Ont. (A,A. H.).

SUNFLOWER

POWDERY MILDEW (*Erysiphe communis) Wallr. ex Fries = Erysiphe cichoracearum DC.) Infection was 1-sev. 3-sl.72T fields examined in Man.

* W.B. Cooke (Mycologia 44: 570-574. 1952) published a revision of the nomenclature of the species of Erysiphaceae known before 1832 in order to' bring the names into line with the latest version of the International Rules of Botanical Nomenclature. Conformity with the Rules necessitates changes in the names of a number of our commonly encountered erysiphaceous fungi. These changes, which are being adopted by Canadian Plant Disease Survey, include the following:

It was also sev. on Helianthus maximiliani in a nursery at Winnipeg (W. C. McDonald).

RUST (Puccinia helianthi) was 11 tr./21 Man. fields. Three fields of susceptible varieties, 2 of which were the large-seeded type, had infections ranging from 5-15% of the leaf area (W.C. McD.).

WILT (Sclerotinia sclerotiorum), coupled with flooding, caused 100%killing of a 2-acre patch in a field nr. Burdett, Alta. The remainder of the field showed na damage. Wilt was also found in trace amounts in 1 field nr. Welling, Alta. (F.R. Harper). In Man. it was 6-tr. 1-5%. 1-25%/21 fields (W.C. McD.).

LEAF MOTTLE (Verticillium albo-atrum) was tr. in 5/21 fields in Man. Heavy infections developed in the disease nurseries at Winnipeg and Morden (W. C. McD.).

STALK ROT (various organisma) was 10-tr. 5-30%. 1-60%/21 fields examined in Man. The more sev. infections were confined to the Altona-Winkler area (W. C. McD.).

LEAF SPOT (cause undetermined). A leaf spot of unknown cause occurred in sl. amounts in 8/21 fields in Man. (W.C. McD.).

C. ROOT CROPS

SUGAR BEET

CROWN GALL (Agrobacterium tumefaciens) was reported to have caused more damage than usual at L'Assomption, Que. (D. W. Creelman).

LEAF SPOT (Cercospora beticola) was sev. in experimental plots at London, Ont. By 6 Oct. there was an average of 65 infections per leaf, based on the three oldest living leaves per plant, and considerable defoliation. The infection apparently spread from an area where garden beets had been growing the previous year, The sugar beets affected were grown from monogerm seed which appears to have little resistance (C. P. D. S, 39:38. 1960). (F.R. Forsythe).

ERYSIPHE COMMUNIS Wallr. ex Fries
= Erysiphe cichoracearum DC.
MICROSPHAERA PENICILLATA (Wallr. ex Fries) Lév.
= Microsphaera alni (Wallr.) Salmon
PODOSPHAERA CLANDESTINA (Wallr. ex Fries) Lév.
= Podosphaera oxyacanthae (DC.) de Bary
PHYLLACTINIA GUTTATA (Fries) Lév.
= Phyllactinia corylea (Pers.) Karst.
SPHAEROTHECA MACULARIS (Wallr. ex Fries) W. B. Cke.
= Sphaerotheca humuli (DC.) Burr.

ROOT ROT AND LEAF SPOT (Phoma betae) was found in a 5-acr area in a field nr. Picture Butte, Alta. Damage was confined to the crow area and involved about 1% of the roots in the affected patch, This field had been planted to sugar beets the previous year (F.R. Harper).

DRY ROT (Rhizoctonia solani) affected 10% of the plants in a 10-a re field at Ste. Pie, Que. Black root and dry rot were widespread in St. Hyacinthe Co,, where 60% of the sugar beet production of Que. is centred (R. Crete).

D. MISCELLANEOUS CROPS

BUCKWHEAT

ASTER YELLOWS (virus) was tr, in buckwheat in N.S. (K.A. Harrison) (C.P.D.S. 40:2. 99. 1960).

TOBACCO

NEMATODES. High populations of Pratylenchus penetrans occur ed in many flue-cured tobacco fields in s.-w. Ont. Seventy-three samples submitted by Extension Officers or individual growers contained populatio s ranging up to 6300 per lb. of soil (W. B. Mountain, R. M. Sayre).

WEATHER FLECK (non-parasitic). It was reported from Delhi, Ont. that tobacco leaves sprayed on both surfaces with Phygon XL-50 at 4 lb/acre had only 2-3% the amount of fleck occurring on unsprayed plants (D. W. Creelman).

E. CULTIVATED AND OTHER GRASSES

AGROPYRON

Ergot (Claviceps purpurea) was found several times on A. repens and other Agropyron spp. in c. Alta. (W.P. Campbell), Widely scattere tr. infections were noted in N.B. (G.B. Orlob) (C.P.D.S. 40:2.79. 1960)

Leaf Blight (Drechslera tritici-repentis). Infection of A. repens n N. B, was quite variable but generally light. It was found principally in th n.-and c. parts of the province (G.B.O.) (C.P.D.S. 40:2. 79. 1960).

Powdery Mildew (Erysiphe graminis) was generally mod. on A. intermedia in Sask, but was sev. on a farm nr. Saskatoon (H. W. Mead). A mod. infection was seen on A. repens in a field nr. Fredericton, N. B. (D. W. Creelman).

Head Blight (Fusarium avenaceum). Trace infections occurred a A. repens at Fredericton, N.B. (G.B.O.) (C.P.D.S. 40:2. 79. 1960).

Tar Spot (Phyllachora graminis) occurred mostly as tr. infectio in N. B. but was rated at 20% on A. repens in 2 fields at Fredericton (G.E O) (C.P.D.S. 40:2. 80. 1960).

Stem Rust (Puccinia graminis) became sev. on A. repens late in the season in N.B. (G.B.O.) (C.P.D.S. 40:2, 80. 1960).

Leaf Rust (Puccinia recondita). Trace infections were common on A. repens in most parts of N.B. (G.B.O.) (C.P.D.S. 40:2. 80. 1960).

Scald (Rhynchosporium secalis) was sev. on A. repens nr. Fredericton and in localized areas in the eastern part of N. B. (G. B.O.) (C.P.D.S. 40:2. 79. 1960). The only previous report, to the Survey, of R. secalis on Agropyron is from B. C. (C.P.D. S. 23:37. 1944) (D. W.C.).

Speckled Leaf Blotch (Septoria elymi). Trace infections were recorded on A. repens- in N.B. (G.B.O.) (C.P.D.S. 40:2. 79.1960). It has been reported on Agropyron from Alta. (C.P.D.S. 43:19. 1934) (D. W.C.).

Stem Smut (Ustilago spegazzinii) affected about 10% of A. repens in the Trout Creek Point district of B. C. (G. E. Woolliams). It was reported to be heavy on Agropyron sp. in the Estevan, Sask. area (T.C. Vanterpool).

Stripe Smut (Ustilago striiformis) was sl. on A. repens at Fredericton and in other areas of N.B. (G.B.O.)(C.P. D.S. 40:2. 80. 1960). It has been reported on A. trachycaulum'from B.C. (C.P.D.S. 21:26. 1942) D.W.C.).

Bacterial Blight (Xanthomonas translucens f. sp. cerealis). Trace infections occurred on A. repens at Fredericton, N.B. (G.B.O.) (C.P. D.S. 40:2. 79. 1960). The only previous report to the Survey is from Man. (C.P.D.S. 32:40. 1953). (D.W. C.).

AGROSTIS

Twist (Dilophospora alopecuri) was tr. on ~~A. tenuis~~ nr. Fredericton, N.B. (G.B.O) (C.P.D.S. 40:2. 80. 1960). This constitutes a new Canadian record, and is possibly a new one for North America. Sprague, Diseases of Cereals and Grasses in North America, 1950, does not list Agrostis as a host for this fungus (D. W.C.).

Eye Spot (Mastigosporium rubricosum) affected 20% of A. stolonifera at Hartland, N.B. (G.B.O.) (C.P.D.S. 40:2. 80. 1960). This disease has not been previously reported on Agrostis in Canada (D. W. C.).

Tar Spot (Phyllachora graminis) was tr. on Agrostis spp. nr. Woodstock and Fredericton, N. B. (G. B.O.) (C.P. D.S. 40:2. 80. 1960). The only previous. report of tar spot on Agrostis in Canada is from N, S. (C. P. D. S. 32:40. 1953). (D.W.C.).

Stem Rust (Puccinia graminis) was sl. on A. stolonifera in western N.B. late in the season (G.B.O.) (C.P.D.S. 40:2.80. 1960).

Leaf Rust (Puccinia recondita) was tr. on A. perennans in N.B. (G.B.O.) (C.P.D.S. 40:2. 80. 1960).

Leaf Spot (Ramularia pusilla) was widespread, but generally light, on A. tenuis, A. stolonifera and A. perennans in N.B. One heavy infection was found nr. Fredericton (G.B.O.) (C.P.D.S. 40:2. 80, 1960). This if the first report, to the Survey, of R. pusilla on Agrostis (D, W. C.).

Leaf Blotch (Septogoloeum oxysporum). A mod, infection was recorded on A. stolonifera at St. Clement, Temiscouata Co., Que, (D. Leblond). This is the first Canadian record of this organism on Agrostis. Sprague, Diseases of Cereals and Grasses in North America, 1950, lists it on Calamngrostis canadensis from Alta. (D. W, C.).

ANTHOXANTHUM

Ergot (Claviceps purpurea). Traces were found on A. odoratum in central N.B. (G.B.O.) (C.P.D.S. 40:2. 81. 1960). Sprague does not list Anthoxanthum as a host of this fungus (D. W. G.).

Brown Stripe (Passalora graminis) was found, though rarely, on A. odoratum in N.B. (G.B.O.). (C.P.D.S. 40:2. 81. 1960). This is a new Canadian, and possibly North American, record (D. W. C.).

Stem Rust (Puccinia graminis) was tr. on A. odoratum nr. Fredericton, N.B. (G.B.O.) (C.P.D.S. 40:2. 81. 1960). This is the first report, to the Survey, of stem rust on this host (D. W. C.).

BROMUS

Ergot (Claviceps purpurea) was common on B. inermis in c. -and n. Alta. (W.P.C.), and was tr. on the same host in most parts of N.B. (G.B.O.) (C.P.D.S. 40:2. 81. 1960).

Leaf Blotch (Drechslera bromi) was sl. on Bromus spp. in 3/15 fields examined in Sask. (H.W. Mead). It was the most commonly encountered disease of Bromus spp. in N.B. in 1960 (G.B.O.) (C.P.D.S. 40:2. 81. 1960). This is the first report, to the Survey, of this disease east of Ont. (D.W.C.).

Bacterial Blight (Pseudomonas coronofaciens) was mod. on Bromus spp. in 5/15 fields in Sask. It was present on 13/16 strains and varieties at Saskatoon early in July (H. W. M.).

Scald (Rhynchosporium secalis) was sev. but caused only sl. damage on B. inermis at Fredericton and in e. N.B. (G.B.O.)(C.P.D.S. 40:2. 81. 1960).

Leaf Spot (Selenophomn bromigena) affected, to a mod, degree, all 15 fields of Bromus spp. examined in Sask, It developed early and rapidly at Saskatoon and by the end of June infection ranged from tr. -sev. on 11 synthetic strains and 5 varieties of B. inermis. Dry weather during July checked its development (H.W. M.).

Purple Brown Spot (Stagonospora bromi) was quite common on B. ciliatus in Victoria Co., N. B. Infection was as high as 20%. The pathogen was isolated (G.B.O.) (C.P.D.S. 40:2. 81. 1960). This represents a first report to the Survey (D. W. C.).

Head Smut (Ustilago bullata). Infection was 5% on B. ciliatus in 2 localities in western N.B. (G.B.O.) (C.P.D.S. 40:2. 81. 1960). This is the first report, to the Survey, of U. bullata on Bromus (D. W. C.).

CALAMAGROSTIS

Ergot (Claviceps purpurea) was found occasionally on C. canadensis in c. Alta. (W.P.C.). Widely scattered traces were seen on the same host in N.B. (G.B.O.) (C.P.D.S. 40:2. 82. 1960).

Head Mold and Leaf Blight (Fusarium avenaceum) was abundant on C. canadensis in localized areas in the St. John River Valley, N.B. (G.B.O.) (C.P.D.S. 40:2. 81. 1960). It has not been previously reported to the Survey (D.W.C.).

Eye Spot (Mastigosporium rubricosum). Infections of 10% of C. canadensis were frequently observed in the St. John River Valley, N.B. (G.B.O.) (C.P.D.S. 40:2, 82. 1960). It has not been previously reported to the Survey on this host (D. W.C.).

Crown Rust (Puccinia coronata f. sp. calamagrostidis) was rated at 10-20% on C. canadensis nr. Fredericton, N.B. late in Aug. (G.B.O.) (C.P.D.S. 40:2, 82. 1960).

DACTYLIS

Eye Spot (Mastigosporium rubricosum) was found on D. glomerata throughout N. B. with some infections as high as 90% in early June (G. B. O). (C.P.D.S. 40:2, 82. 1960).

Brown Stripe (Passalora graminis) was tr. on D. glomerata in irrigated plots at the Research Station, Lethbridge and in a field at Raymond, Alta. (E.J. Hawn). It was occasionally found on D. glomerata in N.B. (G.B.O.) (C.P.D.S. 40:2, 82, 1960) and was mod. on the same host as St. John's West and Colinet, Nfld. (D. W.C.).

Scald (Rhynchosporium orthosporum). Infection was 30-40% on D. glomerata in N. B. early in the season (G. B.O.) (C.P.D. S. 40:2, 82. 1960). This is the first report of this disease to the Survey though there is one collection (DAOM 55099) from Ottawa and Rhynchosporium sp. has been reported on Dactylis from Guelph, Ont. (C.P.D.S. 36:46, 1957) (D.W.C.),

Leaf Streak (Phyllosticta owensii) was sev. on D. glomerata in an orchard at La Gorgendiere, Que. in Oct. (D.L.). This disease has not been previously reported to the Survey (D. W.C.).

ELYMUS

Ergot (Claviceps purpurea) was found on Elymus sp. nr. Dawson Creek, B.C. (W.P.C.).

FESTUCA

Ergot (Claviceps purpurea) was found once on F. pratensis in c. Alta. (W.P.C.), and was tr. on F. rubra in N. B. (G.B.O.) (C.P.D.S. 40:2, 83, 1960).

Twist (Dilophospora alopecuri) was widely distributed on F. elatior nr. Fredericton and in w. N.B. (G.B.O.) (C.P.D.S. 40:2, 83, 1960). This is the first report, ,to the Survey, of twist on Festuca (D. W.C.).

Net Blotch (Drechslera dictyoides) was tr. on Festuca spp. nr. Fredericton and Woodstock, N. B. (G.B.O.) (C.P.D.S. 40:2, 83. 1960).

Silver Top (Fusarium poae). Infected specimens were received from Dawson Creek, B.C. where it had been observed in previous years. Infection occurred at all nodes (H.S. Pepin). This constitutes a new report to the Survey (D. W.C.).

Leaf Mold (Hendersonia culmicola) was tr. on F. rubra in N.B. The organism was probably secondary or saprophytic (G.B.O.) (C.P.D.S. 40:2, 83. 1960).

Brown Stripe (Passalora graminis). Trace infections occurred on F. rubra at 2 locations nr. Fredericton, N.B. (G.B.O.) (C.P.D.S. 40:2. 82. 1960).

Leaf Mold (Phaeoseptoria festucae) occurred as tr. infections on F. rubra in N.B. It appeared to be saprophytic only (G.B.O) (C.P.D.S. 40:2. 83. 1960).

Leaf Spot (Ramularia pusilla) was tr. in some meadows in w. N.B. (G.B.O.) (C.P.D.S. 40:2. 83. 1960).

Blast (Spermospora subulata). Infection was rated at 20% of the leaves of 30% of the plants of E. rubra nr. Fredericton, N.B. (G.B.O.) (C.P.D.S. 40:2. 83. 1960). This disease seems to have been previously reported only from western U.S.A. (D. W, C.).

GLYCERXA

Brown Stripe (Passalora graminis) was often seen on G. grandis in the St. John River Valley, N.B. Infection approached 20% at 2 locations (G.B.O.) (C.P.D.S. 40:2. 82. 1960). There have been no. previous reports, on this host, to the Survey (D. W. C.).

Leaf Spot (Septoria avenae) was found on G. striata and G. canadensis at Fredericton, N.B. (G.B.O.) (C.P.D.S. 40:2. 82. 1960). This is the first report, to the Survey, of S. avenae on Glyceria (D. W. C.).

Brown Smut (Ustilago longissima) was tr. on G. grandis nr. Fredericton, N.B. (G.B.O.) (C.P.D.S. 40:2. 82. 1960).

HQRDEUM

Head Smut: (Ustilago bullata) was rated at 50% on Hordeum sp. on 30 acres that had been flooded in the spring at Weyburn, Sask. (T.C.V.)

LOLIUM

Ergot (Claviceps purpurea). At Fredericton, N.B., 25% of the heads of 60% of the plants of Lolium perenne were replaced by sclerotia (G.B.O.) (C.P.D.S. 40:2. 83. 1960).

PHLEUM

Eye Spot (Heterosporium phlei) was common and destructive on P. pratense in N.B. (G.B.O.) (C.P.D.S. 40:2. 84. 1960). Infection of P. pratense was extremely sev. in Lunenburg Co., N.S. (K. A. Harrison), and it was mod. in all fields examined at St. John's West and Colinet, Nfld. (D. W. C., O. A. Olsen).

Brown Stripe (Passalora graminis) was found on virtually all timothy examined in N.B. Damage was probably in the range of 5% in loss of yield and lowering of quality (G.B.O.) (C.P.D.S. 40:2. 84. 1960).

Stem Rust (Puccinia graminis). Infection of timothy was 50% in one locality nr. Fredericton, N.B. and it was also sev. in localized areas throughout the province (G.B.O.) (C.P.D.S. 40:2. 84. 1960).

Stripe Smut (Ustilago striiformis) was tr. on P. pratense in Sunbury Co., N.B. (G.B.O.)(C.P.D.S. 40:2, 84. 1965).

POA

Silver Top (Fusarium poae). Infection of the node at the base of the inflorescence occurred at flowering time in several seed crops of Merion blue grass, Poa pratensis, nr. Dawson Creek, B.C. Loss was estimated at 12-14%. The condition also occurred there in 1959 (H.S.P., W.L. Gordon).

Purple Spot (Drechslera vagans) was rated as a 10% infection on Kentucky blue grass, Poa pratensis, during late spring in N. B. (G. B.O.) (C.P.D.S. 40:2, 84. 1960).

Leaf Mold (Epicoccum nigrum) was tr. on P. pratensis in N.B. (G.B.O.) (C.P.D.S. 40:2, 85. 1960).

Powdery Mildew (Erysiphe graminis) was common on P. pratensis at Fredericton, Chatham and Woodstock, N. B. Infection ranged from tr, -70% (G.B.O.) (C.P.D.S. 40:2, 84. 1960).

Brown Stripe (Passalora graminis) wgs seen on P. palustris in tr. amounts in all parts of N.B. (G.B.O.) (C.P.D.S. 40:2, 84, 1960).

Leaf Rust (Puccinia poae-nemoralis) was found on P. pratensis and P. palustris in c. - and e. N.B. Infection was 20% on Kentucky blue grass (P. pratensis) in nursery plots at Fredericton (G.B.O.) (C.P.D.S. 40:2, 84. 1960).

Stripe Smut (Ustilago striiformis), Tr. infection was recorded on P. pratensis at Fredericton, N.B. (G.B.O.) (C.P.D.S. 40:2, 84. 1960).

SETARIA

Kernel Smut (Ustilago neglecta) infected up to 50% of S. lutescens growing in several orchards at Trout Creek Point, B.C. (G.E.W.).

LAWNS AND TURF

Snow Mold (low-temperature basidiomycete) was 1-sl. on Agrostis palustris, 1-sl, 1-mod. on A. tenuis and 1-sl, 1-mod. on Poa annua in 2 golf greens examined in s. Alta. It was also 1-tr, 1-sl./21 turf areas (J.B. Lebeau). Injury was sl. on lawns at Saskatoon, Sask. (H.W.M.).

Melting-out (Bipolaris sorokiniana) was prevalent on many golf greens and lawns at Winnipeg, Man. (W.C. McDonald),

Red Thread (Corticium fuciforme) caused mod. yellowing and killing in turf plots at the Exp. Farm, Saanichton, and in a lawn at Victoria, B. C. (R. G. Atkinson).

Leaf Spot (Drechslera vagans) was mod. on Poa pratensis in turf at Scott and Melfort, Sask. (H. W. M.).

Powdery Mildew (Erysiphe graminis). Numerous reports were received of powdery mildew on lawn grasses in Sask, (T. C. V.).

Fairy Ring (Marasmius oreades) was 8-sl, 1-mod/21 turf areas examined in s. Alta. (J.B.L.).

Slime Mold (Physarum cinereum). Several patches, up to 1 sq. ft. in area were observed in a lawn at Summerside, P. E.I. Sporongia covered

the leaf blades and were also present on weeds in the lawn. Damage was not assessed (G. W. Ayers, J.E. Campbell).

Stem Rust (Puccipia graminis). The new bluegrass, Poa pratensis, variety "Park" was 90% infected in plots at Saanichton, R.C. It seemed much more suscegtible than either Kentucky or Merion bluegrass (R. G. A.). Two sev. infections on Poa pratensis were seen in 21 turf areas examined in s. Alta.(J.B.L.). P. pratensis was sev. attacked in one patch in a lawn at Ottawa, Ont. (D.W.C.).

Blight (cause unknown) caused widespread damage to lawns in Saskatoon, Sask. Large areas were killed, Fusarium acuminatum fruited profusely on dead leaves (H.W. M.).

Nitrogen Deficiency was rated as 5-mod. 2-sev./21 turf areas and 1-sl./2 golf greens examined in s. Alta. (J.B.L.).