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.).

ROOT ROT (various organisms) is a disease of major importance in Que. and was frequently encountered in surveys. Damage was most severe in old stands and the disease was more serious in 1965 than in 1966, possibly because of a lack of snow cover (C. A.).

WITCHES'-BROOM (alfalfa witches'-broom virus). Trace infections were seen in 1 field nr. Creston and slight infections in 2 in the lower Okanagan district of B. C. (E. J. H.).

VIRUS DISEASES (undeiermined). Several conditions tentatively thought to be of virus origin were occasionally seen in Que. surveys. They caused some damage (C. A.).

MINERAL DEFICIENCIES. Deficiencies of boron, potassium and phosphorus were occasionally encountered in Que. The damage caused did not seem important (C. A.).

BIRDSFOOT TREFOIL

LEAF SPOT (Stemphylium loti Graham) was found in one field in Que. (C. A.). This organism has not previously been reported on Lotus in Canada (Ed.).

COMMON CLOVER

BLACKSTEM (Ascochyta ? medicaginis) caused slight damage and also a leaf spotting on red clover in 4/15 red clover fields and mod. stem damage in 2/10 alsike fields in c. Alta. The organism cultured from alsike appeared different from that cultured from red clover. (B. B.). The identity of the species of Ascochyta affecting forage legumes in Canada seems still to be in doubt and critical taxonomic studies are needed (Ed.).

SOOTY BLOTCH (Cymadothea trifolii). Trace infections were recorded in 2/12 alsike and 1/14 red clover fields in c. Alta. (B.B.). It was found on red, alsike and ladino clovers in Que. surveys. Infection was most widespread and severe on alsike and was more common in 1965 than in 1966 (C. A.).

POWDERY MILDEW (Erysiphe polygoni). Moderate damage was observed in 3/10 alsike and 8/14 red clover fields in c. Alta. (B. B.). It occurred on red, ladino and alsike clovers in Que. and was most prevalent and severe on red clover (C. A.). Moderate infections were commonly observed on red clover in the Fredericton area (D. W. C.) and 30% damage occurred in a field of red clover at Hartland, N.B. (S.R. C.).

ROOT ROT (Fusarium spp.). Fusarium [illegible]-aceum, F. culmorum and F. oxysporum caused severe damage to roots of alsike clover in Que. in 1965. Most of the damage occurred in the Lower St. Lawrence and Lake St. John districts. Damage was less severe in 1966 (C. A.).

NORTHERN ANTHRACNOSE (Kabatiella caulivora) caused an estimated 50% damage to red clover at Sunset House, Alta. (A. W. H., D. S.). Ratings on red clover in c. Alta. were 2-tr. 3-mod. 1-sev./14 fields surveyed (B. B.).

BLACKSTEM (Phoma trifolii) was seen in about half the red clover fields surveyed in Que. in 1965-66, causing some apparent damage (C.A.).

COMMON LEAF SPOT (Pseudopeziza trifolii f. sp. trifolii-pratensis) caused considerable damage in 50% of the red clover fields examined in Que. (C. A.).

CROWN ROT (Sclerotinia ? sclerotiorum) caused traces of damage to red clover at scattered locations throughout Que. (C.A.). This should probably be attributed to S. trifolii (Ed.).

LEAF BURN (Leptosphaerulina trifolii (Rostr.). Petr. = Sphaerulina trifolii Rostr.) occurred on red, white and ladino clover in plots and along roadsides at Vancouver, B. C. The condition has been observed in other years in the same area but has been mistaken for frost damage. Virus-infected plants seem more susceptible and most of the leaves become necrotic by the end of October. In non-virus-infected plants, necrosis does not become general except in older Leaves. The organism has not previously been reported from B. C. but is known from Alaska, Sask. and Man. (M. J. P., H. S. P.).

TARGET SPOT (Stemphylium sarcinaeforme) was seen in all red clover fields surveyed in Que. in 1965-1966. It was sev. in 1965 and sl.-mod. in 1966. It is probably the most serious disease of red clover in the province (C.A.).

RUST (Uromyces trifolii) was rated 2-tr./10 alsike fields in c. Alta. It appeared later than usual in 1966 and became widespread in Sept. at Lacombe (B. B.). Rust was occasionally observed on red clover in Que. surveys but appeared to be of little importance (C. A.).

PHYLLODY (clover phyllody virus). Slight to moderate infections were commonly observed on ladino and alsike clovers in Kamouraska Co., Que. It was also recorded in Bellechasse Co., at Deschambault and St. Urbald, Portneuf Co. and St. Roch, L'Islet Co. (H. G.). It was seen in a few fields of red clover and half the fields of ladino in Que. surveys in 1965-66 but did not seem to be as prevalent as in earlier years (C. A.). Phyllody could be found with ease in alsike and white clover along Highway #2 between Edmundston and Fredericton. N. B. In the Fredericton area it was prevalent on red, white and ladino clovers on the Research Station and in farmers' fields (D. W. C., H.S.T.).

PROLIFERATION (clover proliferation virus) was found in 2/10 fields of alsike clover examined in

c. Alta. and was occasionally seen on roadside plants (B. B.).

OTHER VIRUS DISEASES. Virus-like symptoms were seen in half the red clover and some of the ladino fields surveyed in Que. There was some apparent damage in red clover but little in ladino (C. A.).

ROOT ROT (various organisms) was judged to be more severe on red than on alsike clovers in Que. There was also more damage in 1965 than in 1966 (C. A.).

MINERAL DEFICIENCIES. Phosphorus and potassium deficiencies in red clover and magnesium deficiency in ladino clover were occasionally encountered in Que. surveys (C. A.).

WINTER KILLING caused 30% damage in low areas of 4 fields visited nr. Salisbury, N. B. (S.R. C.).

SWEET CLOVER

BROWNROOT ROT (Plenodomus meliloti) caused severe damage in a field at Lacombe, Alta. (B. B.).

B. Oil-seed Crops

FLAX

RUST (Melampsora lini) caused 1-2% damage in 1/6 fields surveyed in Alta. The affected field was nr. Barrhead (G. A. P.).

BROWNING AND STEM BREAK (Polyspora lini) was present in a specimen of 'Bolley' flax received from Melfort, Sask. (G. A. P.).

PASMO (Septoria linicola). Specimens were received from Melfort, Sask. (G. A. P.).

ASTER YELLOWS (aster yellows virus). Two fields at Saskatoon showed 1% and 10% infection, respectively and it was present in moderate amounts in a field nr. Armit, Sask. (B. J. S., G. A. P.).

CHEMICAL INJURY. Herbicide injury caused 1-2% damage in 1/6 fields surveyed in Alta. (G. A. P.). Affected specimens were received from Holdfast and Brooksby, Sask. Damage at the latter location occurred as strips in the field (B. J. S.).

HEAT CANKER caused traces of damage at Melfort, Sask. (G. A. P.).

MUSTARD

WHITE RUST (Albugo cruciferarum) was found on Brassica kaber var. pinnatifida nr. Annaheim, Sask. (G. A. P., T. C. V.).

STAGHEAD (Albugo cruciferarum, Peronospora parasitica). Some damage was recorded at Vulcan, Alta. (A. W. H., D. S.).

LEAF AND POD SPOT (Alternaria brassicae, A. raphani). Traces of damage were seen in 2/8 fields surveyed in Sask. The condition also occurred on Thlaspi arvense and Lepidium sp. nr. Melfort, Sask. (G. A. P., T. C. V.).

BASAL STEM ROT (Fusarium acuminatum, F. poae, Rhizoctonia solani) was seen in trace amounts at Cudworth, Sask. (G. A. P., T. C. V.).

BLACK LEG (Plenodomus lingam) occurred in all 5 fields surveyed in Sask. (G. A. P., T. C. V.).

STEM ROT (Sclerotinia sclerotiorum) was the most conspicuous disease of yellow mustard encountered in Sask. with 63% of all fields showing infection and 38% being rated mod.-sev. In a few fields nr. Annaheim and Middle Lake, 75% of the stems were rotted in low-lying areas (G. A. P., T. C. V.).

RAPE

WHITE RUST (Albugo cruciferarum). Moderate infections were recorded in 3/6 fields surveyed in c. Alta. Foliar infection was more prevalent than usual (B. B.). It was observed in 79% of the 52 rape fields surveyrdin the Prairie Provinces. Infection in fields was rated 15%-tr. 25%-sl. 29%-mod. 10%-sev. The disease was drstructivc, particularly at Morinville, Redwater and Vermilion in Alta. and at Saskatoon, Duck Lake and Wakaw in Sask. Fusarium spp., Alternaria brassicae, A. raphani and Peronospora parasitica were associated with Albugo on the hypertrophies (G. A. P., T. C. V.). Moderate infections caused an estimated 3% damage on 'Arlo' in the Swan River Valley, Man. It was prevalent throughout the area (W. C. McD.).

STAGHORN (Albugo cruciferarum, Peronospora parasitica). Infections were extensive at Tawatinau and were also recorded at High River, Sexsmith, Grande Prairie and Athabasca, Alta. (A. W. H., D. S.). Traces were seen in all fields surveyed in c. Alta. and damage was moderate in two (B. B.).

LEAF, STEM AND POD SPOT (Alternaria brassicae, A. raphani) caused moderate damage in 2/6 fields surveyed in c. Alta. Pods were severely infected in one field. Infection was common on heads affected by staghead (B. B.). Ratings in 52 fields surveyed in the Prairie Provinces were 13%-tr. 38%-sl. 17%-mod. 4%-sev. Leaf spots were evident in many fields in the Humboldt-Melfort area of Sask. in June. Stem and pod spots were plentiful in Aug., particularly in the Swan River area of Man. (G. A. P., T. C. V.). The outbreak in Man. was the worst since 1956. Damage was estimated to be 20% in the Swan River Valley (W. C. McD.).

ROOT ROT (Fusarium spp.) was observed at Clairmont and Belloy (A. W. H., D. S.) and specimens were received from Olds, Alta. with the lower stems completely rotted (B.B.). F. acuminatum was isolated from affected plants at Saskatoon, Sask. (G. A. P., T. C. V.).

RING SPOT (Mycosphaerella brassicola) was not seen in fields surveyed in Alta. in 1966 (B. B.). Ratings were 27%-tr. 27%-sl. 15%-mod. in 52 fields surveyed in the Prairie Provinces where the disease was less severe than in 1965. It seems to attack older, senescent plants more than younger ones (G. A.P., T.C.V.).

DOWNY MILDEW (Peronospora parasitica). Infection in 52 fields examined in the Prairie Provinces was rated 2%-tr. 8%-sl. 10%-mod. 2%-sev. The conidial state was more conspicuous than for a number of years (G. A.P., T. C. V.).

CLUBROOT (Plasmodiophora brassicae). The variety 'Essex' was 75% infected at Comfort Cove, Notre Dame Bay, Nfld. Plants showed a pronounced clubbing of the taproot (O,A. O.).

BLACKLEG (Plenodomus lingam). Trace to slight infections occurred in 71% of the 52 fields examined in the Prairie Provinces. It was particularly evident in the Annaheim-Lake Lenore districts of Sask. Thlaspi arvense was also infected in most centers of rape production in Alta. and Sask. (G. A. P., T. C. V.).

STEM ROT (Sclerotinia sclerotiorum) was more prevalent in the Prairie Provinces than in 1965. Ratings of 52 fields were: 13%-tr 12%-sl. 10%-mod. 4%-sev. (G.A.P., T. C.V.).

ASTER YELLOWS (aster yellows virus). Ratings of 52 fields in the Prairie Provinces were: 33%-tr. 6%-sl. 670-mod. It was particularly heavy in plots at Saskatoon. Aster yellows was also observed on Brassica kaber var. pinnatifida in a rape field nr. Margo, Sask. and on Thlaspi arvense in a mustard field at Cudworth, Sask. (G. A. P., T. C. V.). It was prevalent in all parts of Man. where damage ranged from 1-5%. In a late plot of breeders' seed at Winnipeg damage was 25% (W. C. McD.).

CHEMICAL INJURY from 2, 4-D drift was encountered in Sask. and Man. See Can. Plant Dis. Surv. 46:4. p. 118, 1966 for illustrations of two types of injury (G. A. P., T. C. V.).

INTUMESCENCE (water congestion) was observed at Humboldt, Sask. See Can. Plant Dis. Surv. 46:4. p. 119, 1966 for illustration (G. A.P., T. C. V.).

SOYBEAN

BROWN STEM ROT (Cephalosporium gregatum). This disease has not been found in significant amounts in s. w. Ont. in recent years. A survey in mid.-September, 1966, when plants were in some stage of senescence, revealed symptoms, consisting of internal basal stem browning in 45% of the fields. The pathogen was recovered from stem bases in 83% of the fields (J.H. H.).

ROOT 'AND STEM ROT (Phytophthora megasperma var. sojae) has been well controlled in Ont. by the use of resistant varieties such as 'Harosoy 63'. No new races of the fungus have been found (J.H. H.).

BACTERIAL BLIGHT (Pseudomonas glycinea) was present in Ont. fields from July to September. By mid-September, 92% of the fields surveyed had diseased plants and 80% of the leaves on these plants had blight lesions (J.H. H.).

BROWN SPOT (Septoria glycinea) was again observed in Ont. only on primary leaves. Sixty % of the fields surveyed were affected and 60% of the primary leaves on affected plants showed symptoms (J.H. H.).

SUNFLOWER

DOWNY MILDEW (Plasmopara halstedii) destroyed 35-60% of the plants in 4 fields nr. Altona, Man. but elsewhere in the province the disease was absent or occurred in trace amounts only (J.A. H.).

RUST (Puccinia helianthi) was virtually absent in Man. in 1966 although all varieties except 'Admiral' are susceptible (J.A. H.).

STEM ROT (Sclerotinia sclerotiorum) affected 10-15% of the plants in a 40-acre field at Bon Accord, Alta. The field had been planted to barley in 1965 and to rape in 1964 (A.W. H., D. S.). Little was seen in Man. in 1966 (J.A. H.).

LEAF MOTTLE (Verticillium dahliae) occurred in most sunflower fields in Man. but the percentage of infected plants was generally less than 10%. Damage was slight (J. A. H.).

HEAD PROLIFERATION (cause unknown) occurred throughout the sunflower-growing districts of Man. where most fields, irrespective of variety, showed 3-5% affected heads. In one field, 22% of the plants were affected. The symptoms were of two types. In the one type, instead of having one large head, the plant had two or three abnormally small heads: each head was borne on a separate peduncle. In the other type only one peduncle occurred but one or two heads grew through another one and the resulting structure gave the impression of one, single, misshapen head with one or two bulged areas. A portion of such a head might be sterile. The particular growing conditions in 1966, a virus, or minute amounts of 2, 4-D or similar herbicide are possible causes. The condition was unknown to two visiting Russian sunflower workers (J.A. H.).

C. Root Crops

SUGAR BEET

LEAF SPOT (Cercosporabeticola). A number of fields in the Chathamarea of s. w. Ont. were moderately to severely infected. The disease appeared about mid-Julyand considerable defoliation had occurred in several fields by harvest (C. D. McK.).

LEAF SPOT (Ramularia beticola) was widespread in stands of bolted seed plants of the monogerm variety 'CS-42' in the Ladner, B. C. area. This variety is more susceptible than others grown in the district. Probably the reduction in seed production was slight (H. N. W. T.).

BORON INJURY affected a number of roots obtained from several fields in the Wallaceburg, Ont. area. Precipitationwas exceedinglylow in the affected area in June, July and August (C. D. McK.).

DROWNING. About 8% of the plants died in a 2-acre field at Woodslee, Ont. about 2 weeks after a 4-inch downpour on 12 July. The tips of the primary roots of affected plants decayed (C. D. McK.).

FASCIATION (genetic)was seen in themonogerm variety 'CS-42' in the Ladner, B. C. district in early August. Terminal flags were quite striking shortly before seedmaturityandwhileplants were still erect. The actual reduction in seed yield would be less than 1% (H. N. W. T.).

D. Miscellaneous Crops

BUCKWHEAT

ASTER YELLOWS (aster yellows virus) affected 1-2% of theplantsin a field at Regina, Sask. (B. J.S.).

FIELD CORN

EAR ROTS (Fusarium spp.). Damage from F. graminearum and F. moniliforme was seen only occasionally in s. w. Ont. in 1966 and was much less than that experienced in the cool, wet autumns of 1964 and 1965 (L. F. G., C. G. M.).

ROOT AND STALK ROT (Fusarium graminearum) was more prevalent than in 1964 and 1965, associatedprobablywith good conditions for maturing the ears. Some fields of very early hybrids contained up to 75% of plants with stalk rot (L. F. G., C. G. M.).

RUST (Puccinia sorghi). A moderate amount of rust was observed at Macdonald Collegeand at Deschambault, Portneuf Co., Que. in Sept. (R. I. B.).

STREAK MOSAIC (wheat streak mosaic virus) which was first reported on corn at, 2 sites in s. w. Ont. in 1965 was found at a further site at the Research Station, Harrow in 1966. It was also found on occasional plants in 8/20 winter wheat fields examined in Nov. (L.F.G., G.C.M.).

RED-STRIPED PERICARP (cause unknown) was very common throughout the corn belt of Ontario and was found as far east as Guelph but was not seen at Kemptville or Ottawa (L. F. G., G. C. M.).

TOBACCO

LEAFSPOTS (Alternaria spp.). Spots caused by A. spp. were observed on flue-cured tobacco in Ont. in combination with other leaf spots suspected to be of a physiological nature. Damage, generally, was not severe (S. K. G.). Affected specimens were receivedfrom two fields in the St. Thomas area of Elgin Co., Ont. (C. D. McK.).

SORE SHIN (Rhizoctonia solani) caused slight losses of flue-cured tobacco on a few farms in Ont. (S. K. G.).

DAMPING-OFF (Rhizoctonia solani, Pythium spp., Fusarium spp.) was common in seedbeds in Ont. but the overall loss was only an estimated 2%. The disease was effectively controlled by the organic mercury fungicide Morsodren (S. K. G.).

POLE ROT (Rhizopus spp. and bacteria). Rotting of leaves during curing was frequently encountered in Ont. Although the overall losses were not high, they were high on some farms. The disease was encountered in kilns that had been filledwith immature or wet leaves, where sticks were overcrowded or where toomanysticks were placed in a kiln (S. K. G.).

BLACK ROOT ROT (Thielaviopsis basicola) was more destructive in seedbeds in Ont. than in 1965 because of cold spring weather. Severe losses occurredin beds sterilizedwithallylalcohol in successive years. Field damage, at 3%, was less than in 1965 but the disease was severe on heavy or poorly drained soils. Weather was warmer after planting (S. K. G.).

MOSAIC (tobacco mosaic virus). There was a very high incidence of mosaic in one 4-acre field of burley tobacco nr. Learnington, Ont. The plants became infected soon after they were set out and the loss was heavy (C. D. McK.).

OTHER VIRUS DISEASES. Ringspot, etch and streak were observed in trace amounts in some flue-cured fields in Ont. but they caused only negligible losses. Tobaccoveinal necrosis virus was not found in 1966. Effective eradication of perennial weed hosts is credited for its disappearance (S. K. G.). No tobacco etch was seen in Essex Co., Ont. for the first time in 20 years. Traces of streak, ringspot and potato Y viruses were noted (C. D. McK.).

CHEMICAL INJURY. Improper application of agricultural chemicals, either in the greenhouse or

the field, caused considerable losses on some farms. Atrazine injury occurred in some fields where corn had been growing the previous year. Injury was also evident following aerial applications of D. D. T. (S. K. G.). Too strong a dosage of Morsodren caused damage to plants in a seedbed in Essex Co. (C. D. McK.).

FROST caused an estimated 10% damage in flue-cured fields in Norfolk and bordering counties in Ont. in mid-September (S. K. G.).

WEATHER FLECK (atmospheric pollution). Losses from weather fleck in Ont. were estimated at 1-2%. Most of the damage occurred in areas bordering Lake Erie (S. K. G.).

E. Cultivated and Other Grasses

AGROPYRON - Wheatgrass

CULM SMUT (Ustilago hypodytes) occurred on 25-40% of the flowering stems on roadside plants of A. repens at Trout Creek Point nr. Summerland, B. C. (G. E. W.).

HORDEUM MOSAIC (hordeum mosaic virus) was isolated from A. trachycaulum collected at Warner and Jefferson, Alta. x Agrohordeum macounii was also infected at Jefferson (J. T. S.).

BROMUS - Bromegrass

ERGOT (Claviceps purpurea). Examination of 10 plants each of 7 introductions of Bromus species at Saskatoon, Sask. revealed the following infections: B. macrostachys 1-sl./10; B. oxyodon 2-sl./10; B. altensis, B. patulus 4-mod./10; B. inermis x B. pumpellianus 5-mod./10; B. squarrosus, B. sterilis 6-mod./10. Damage was mod.-sev. in a block of the strain 'S-6733' planted late in May at Saskatoon. Ergots weighed 56g and seed weight was only 125g (J. D. S.).

MOLD (Curvularia geniculata) occurred on seed imported from the Botanical Garden, Godolla, Hungary. Its identity was confirmed by R. A. Shoemaker (J. D. S.).

LEAF BLOTCH (Drechslera bromi) caused moderate damage in 1/3 fields observed in c. Alta. in late August (B. B.). The mean rating in 157/233 fields surveyed in Sask. was 2.0 using a 0-4 scale where 0 = no disease. There were 7 very severe infections and most severe cases occurred in parkland and parkland/forest soil zones. The majority of the observations were made on common brome and its derivatives and most of the locations examined were north of latitude 53° N. Of 32 species in plots at Saskatoon only B. laevipes, B. uniloides and B. bieberstenii showed slight infections on a few plants (J. D. S.). Leaf blotch was occasionally encountered on B. inermis in Que. (C. A.).

BACTERIAL BLIGHT (Pseudomonas and Xanthomonas spp.) occurred in trace amounts in a field at Lacombe, Alta. (B. B.). Infection was found on 10/2500 clones of B. inermis at 233 locations in Sask. Only one clone was severely damaged, that at Saskatoon. Average damage was slight with a few clones classed as moderate (J. D. S.).

LEAF RUST (Puccinia recondita). Infection was slight to moderate on B. pumpellianus and its subspecies dicksonii in plots at Saskatoon, Sask. It was slight on B. bieberstenii and B. arduennsis (J. D. S.).

SCALD (Rhynchosporium secalis) was rated trace to slight in 120/233 fields of B. inermis in Sask. It was found in practically every field examined after the beginning of August. It was severe on some clones of common brome in plots at Saskatoon. Strain 'S-6324' adjacent to severely infected barley showed some plants with heavy infection (J. D. S.).

LEAF SPOT (Selenophoma bromigena) caused minor damage in 2/3 fields examined in c. Alta. (B. B.). The average rating in 141/233 fields of B. inermis surveyed in Sask. was 1.6 using a scale of 0 to 4 where 0 = no disease. The sampling was biased because most of the fields examined were north of latitude 53° N and most severe infections occurred south of that latitude. Of the 18 introductions of Bromus spp. in plots at Saskatoon only 4 were infected as follows: B. angrenicus 7-sl./10; B. inermis variety 'Manchar', B. inermis x B. pumpellianus and B. pumpellianus 3-mod./10 (J. D. S.).

BLACK NODE (Septoria sp. and Fusarium spp. associated) caused moderate damage in 2 fields of B. inermis in Sask. All blocks of strain 'S-6733' at Saskatoon had some clones with black nodes associated with thick and brittle stems. The variety 'Redpatch' at Melfort, Sask. showed black node but it was not associated with thick stems (J. D. S.). For illustrations of this condition see Can. Plant Dis. Surv. 46:4. p. 124, 1966 (Ed.).

LEAF SPOT (Sporotrichum sp.) caused trace to moderate damage in 10/233 fields of B. inermis surveyed in Sask. There was no definite geographic distribution but it was found from Big River to Outlook. The most severe infection was at Melfort on 'Saratoga' fertilized with 33/0/0 (J. D. S.). This leaf spot is illustrated in Can. Plant Dis. Surv. 46:2. p. 124, 1966 (Ed.).

HEAD SMUT (Ustilago bullata) was general on B. tectorum in the Summerland, B. C. district (G. E. W.).

INTERVEINAL CHLOROSIS (cause undetermined) was moderate in 3 fields of B. inermis in Sask. Symptoms consisted of white or yellow interveinal spots mainly on non-flowering shoots. Affected tissues later became necrotic (J. D. S.).

DACTYLIS - Orchard grass

POWDERY MILDEW (Erysiphe graminis) was occasionally seen on D. glomerata in surveys in Que. (C. A.).

HORDEUM - Wild barley

MOSAIC (hordeum mosaic virus). H. jubatum was found infected at Warner and Jefferson, Alta. (J. T. S.).

PHLEUM - Timothy

ERGOT (Claviceps purpurea) occurred on a farm on Westham Island, nr. Ladner, B. C. where it had been seen previously. This is the first report to the Survey of its occurrence on Phleum in B. C. (H. N. W. T.).

EYE SPOT (Heterosporium phlei) caused minor damage in 5/5 fields examined in c. Alta. Damage was moderate in all 7 fields of 'Climax' timothy surveyed in the Melfort-Nipawin seed growing area in Sask. (J.D. S.). It also caused moderate damage in the St. John's, Nfld. area (O.A. O.).

BROWN STRIPE (Passalora graminis) was occasionally encountered on timothy in Que. in 1965 and 1966 (C. A.).

LEAF SPOT (Selenophoma donacis), 'Climax' timothy was moderately infected at La Pocatière, Kamouraska Co. and severely infected at Caplan', Bonaventure Co., Que. The severity of infection at Caplan was probably influenced by high relative humidity (C. A.).

POA - Bluegrass

MELTING-OUT (Drechslera poae) caused some damage to Merion bluegrass at Lacombe, Alta. (A. W. H., D.S.).

MOSAIC (virus). A light green to pale yellow mosaic was seen on Poa palustris at Nobleford, Alta. Tests proved the condition to be caused by a virus apparently unlike any others known in Canada (J.T. S., T. G. A.). See Slykhuis and Atkinson, Can. Plant Dis. Surv. 46:2. 147, 1966 for a list of grass species successfully inoculated. (Ed.).

NECROTIC MOTTLE (oat necrotic mottle virus) caused a slight chloroticmottle on the youngest leaves of a small proportion of Kentucky bluegrass plants at one site in Man. Transmission tests, however, proved 93% of the plants to be infected (C. C. G., P. H. W.).

LAWNS AND TURF

SNOW MOLD (low-temperature basidiomycete). Damage was rated 2-sl. 2-mod. 6-sev./13 turf areas surveyed in Alta. (J.B. L.). It caused some damage at Olds, Alta. (A.W. H., D. S.). Injury was noted in 3 lawns at Fredericton, N. B., but the pathogen involved was not determined (S.R. C.),

ANTHRACNOSE (Colletotrichum graminicola) was observed on lawn grasses at Grande Prairie, Alta. (A.W. H., D.S.).

MELTING-OUT (Drechslera poae) caused some injury at Barnwell, Alta. (A.W. H., D. S.) and damage was rated 2-sl./13 turf areas in s. Alta. (J.B. L.).

POWDERY MILDEW (Erysiphe graminis). Infections were seen in lawns at Edmonton and Fort Vermilion, Alta. (A.W. H., D.S.). Specimens of infected perennial bluegrass were received from Ste. Foy, Que. (D. L.).

FUSARIUM BLIGHT (Fusarium roseum f. cerealis) was mod. in 1/13 turf areas examined in s. Alta. (J. B. L.).

FAIRY RINGS (Marasmius oreades) were seen in lawns at Bathurst and Fredericton, N. B. (S. R. C.),

BROWNPATCH (Rhizoctonia solani) was observed in lawns at Fairview, Alta. (A.W. H., D. S.).

WINTER KILLING. Damage was rated 1-mod. 1-sev./13 turf areas surveyed in Alta. (J. B. L.).