DISEASES OF FORAGE AND FIBRE CROPS

ALFALFA

LEAF SPECK - Pseudopeziza Medicaginis (Lib.) Sacc.

B.C.-

Leaf speck was general on Vancouver island and in the lower Fraser valley, although the damage was insignificant.

Alta.-

The disease was common and sometimes caused severe leaf drop in certain varieties. It was, however, apparently not as prevalent this year as in 1928 and 1929.

Sask.-

A light infection was observed on the leaves of alfalfa in the University plots, Saskatoon.

Que.-

In the fields, where leaf speck was found, in Hull, Sherbrooke and Kamouraska counties 50 to 100 per cent of the leaves were attacked. No noticeable damage was observed.

N.B.-

Several varieties of alfalfa were moderately infected at the Experimental Station, Fredericton.

P.E.I.-

Leaf speck caused some yellowing of the leaves in Queens county.

OTHER DISEASES

ROOT ROT - Sclerotinia Trifoliorum Erikss.

This disease was reported from Pemberton Meadows, B.C.

BACTERIAL BLIGHT - Pseudomonas Medicaginis Sackett

Slight damage was reported from 3 fields in the Lethbridge district (zone 2), Alta. Alfalfa severely affected by a bacterial disease was also found in zone 4.

ASCOCHYTA SPOT - Ascochyta Meliloti (Trel.) Davis

This disease is common, and at times severe, in Alberta. Slight to medium damage was also reported from Saskatoon, Sask. Hail wounds on the stem served as admirable infection courts.

BROWN ROOT ROT - Plenodomas Meliloti Dearn. & Sanford

For injury to alfalfa see under sweet clover.

Alfalfa

WHITE SPOT - Non-parasitic
This disease was reported from Deux Montagnes county, Que.

DOWNY MILDEW - Peronospora Trifoliorum de Bary
Although this disease is of general occurrence in P.E.I. it is not important.

RUST - Uromyces Medicaginis Pass.
Although this rust is of rare occurrence, it apparently caused some injury this year in P.E.I.

COMMON CLOVER

POWDERY MILDEW - Erysiphe Polygoni DC.

B.C.-
General on Vancouver island and in the lower Fraser valley. Damage was severe in some locations.

Alta.-
Out of 10 fields examined, two were found to be infected with mildew. The damage was not heavy although the disease was probably fairly common.

Ont.-
A heavy, general infection caused a reduction of 50 per cent in the crop in Middlesex county.

Que.-
Powdery mildew was heavy on the second growth in Hull and Sherbrooke counties, but it probably caused little damage.

N.B.-
Powdery mildew was severe throughout the province. The damage was not estimated.

N.S.-
In Kings county the second crop of clover showed a considerable amount of late infection, but it was not appreciably injured.

P.E.I.-
Red clover was infected 100 per cent in Queens county. The heavy infection caused the leaves to dry up prematurely and may have been responsible for the failure of the crop to set seed;

RUST - Uromyces Trifolii (Hedw. f.) Lev.

Alta.-
Light, general infections were reported in fields at Entwistle and at the Experimental Station, Lethbridge.

Ont.-

Rust was observed on alsike clover in Carleton county. Out of 3 fields examined, in one 20 per cent of the leaves were infected, in another 10 per cent and in a third no rust was observed. In the two infected fields small patches were found where not only the leaves, but also the stems were rusted.

N.S.-

Rust appeared to be fairly common, but it apparently caused little loss. Slight infection, was reported from Digby, Pictou and Colchester counties, while a 40 per cent infection was observed in Kings county.

PSEUDOPEZIZA LEAF SPOT - Pseudopeziza Trifolii Fuck.

This disease was fairly common in both Antigonish and Colchester counties, N.S., although the damage was slight. One slight infection was observed in P.E.I.

CERCOPORA LEAF SPOT - Cercospora zebrina Pass.

Cercospora leaf spot was found in 2 fields in Carleton county, Ont., 10 and 50 per cent of the leaves, respectively, being infected.

SOOTY SPOT - Dothidella Trifolii (Pers.) Bayl.-Elliott & Stansf. (Polythrincium Trifolii Kunze)

B.C.-

Sooty spot was general on Vancouver island and the lower Fraser valley, although it caused little damage.

N.B.-

A light infection was reported from the Experimental Station, Fredericton.

P.E.I.-

A light scattered infection was observed in Queens county.

DOWNY MILDEW - Perenospora Trifoliorum de Bary

Heavy infections of downy mildew were reported from five fields of clover at Ste. Anne de la Pocatière, Que.

MOSAIC - Virus

Only a very few plants attacked by mosaic, were observed at Fredericton, N.B. A single affected plant, stunted and yellow was found late in the season in Queens county, P.E.I.

SWEET CLOVER

BROWN ROOT ROT - Plenodomas Meliloti Dearn. & Sanford

For injury caused by brown root rot on common clover see under sweet clover.

LEAF SPOT AND STEM CANKER - Ascochyta Meliloti (Trel.) Davis

Slight damage due to this disease was reported from Aberdeen and Saskatoon, Sask.

A light scattered infection was also observed at Becketts Landing, Ont.

MOSAIC - Virus

Mosaic caused a slight amount of damage at Summerland, B.C. Two clumps of sweet clover on the roadside near Ottawa, were infected with mosaic, while Medicago lupulina growing near by was free. This disease was also reported from Becketts Landing, Ontario.

BROWN ROOT ROT - Plenodomas Meliloti Dearn. & Sanford

Alta.-

Brown root rot was not as destructive this year as in 1929, although this disease was fairly common and in places severe. It was found also on common clover and alfalfa.

Sask.-

An infected plant was found on the roadside near Saskatoon.

SCLEROTINIA ROOT ROT - Sclerotinia Trifoliorum Erikss.

This root rot was reported from the lower Fraser valley, B.C. Damage was slight.

The indications are that losses from Sclerotinia may be greater than commonly realized in Alberta. Infection of the soil is common and widespread. (Sanford)

CORN

SMUT - Ustilago Zeae (Beck.) Ung.

Alta.-

A slight infection was reported from Brooks, where the disease had been observed in 1928 and 1929.

Sask.-

This disease is not often troublesome in Sask. It was reported on garden corn at Indian Head and Whitewood.

Man.-

Smut was reported in 4 fields; in zone 3 one field had 50 per cent of the hills infected and a second with 10 per cent of the ears smutted; in zone 1, only a trace was present in 2 fields.

Ont.-

Only a slight infection was observed in Lincoln county.

N.B.-

Two per cent of the plants at the Experimental Farm, Fredericton, were infected. The disease occurred widely throughout the province, but it caused only slight damage.

RUST - Puccinia Sorghi Schw.

Corn rust was quite general in the Red River valley, Man. Infections, however, were too light to cause any appreciable damage.

Very small localized infections were observed at the Experimental Farm, Charlottetown, P.E.I.

BLIGHT - Fusarium sp.

This disease seems to result in poorly developed ears in P.E.I.

FLAX

WILT - Fusarium Lini Bolley

Alta.-

Wilt was not observed on flax this year.

Sask.-

Of 3 fields examined all were affected with wilt, two lightly and one moderately. This disease was also reported from Dollard and Yellow Grass.

Man.-

Out of several fields examined, two were found to be badly infected with wilt, the damage amounting to 25 per cent.

N.B.-

Only three affected plants were observed in York county.

RUST - Melampsora Lini (Pers.) Desm.

Only one field out of 21 examined in Sask. showed any

infection and in this one the damage was negligible.

A trace of rust was also observed in four fields in Manitoba.

HEAT CANKER - Non-parasitic

This disease caused severe damage in the University plots, Edmonton, Alberta.

At the Experimental Farm, Ottawa, Ont., up to 50 per cent of the plants of several varieties were destroyed by heat canker.

From the University of Saskatchewan, Saskatoon, T. C. Vanterpool reported a root rot of flax, from which Fusarium, Rhizoctonia and Alternaria were isolated.

SUNFLOWER

WILT - Sclerotinia Sclerotiorum (Lib.) de Bary

B.C.-

General on Vancouver island and in the lower Fraser valley. When rotation is not practised the damage is severe.

Sask.-

Sunflower wilt was reported from Saskatoon and Alameda. At the latter place 15 per cent of the plants were dead.

Man.-

Wilt was apparently quite common in Manitoba this year. Many fields in zone 1 were badly damaged. In one field the areas were large, where all the plants were destroyed. In another field 30 per cent of the plants were killed.

N.B.-

Only two specimens of wilt were observed in a field near the Experimental Station, Fredericton.

N.S.-

In a varietial test of 450 pure lines at Kentville, infection varied from 0 - 70 per cent. In one case the head was infected, in all others the infections were of the crown or stem type.

RUST - Puccinia Helianthi Schw.

Sask.-

Traces of the aecial stage were found on cultivated sunflower at Saskatoon and Indian Head while a trace of the uredenial stage was present in August at Indian Head.

Sunflower

Man.-

This rust was common throughout Manitoba and was quite severe in some fields.

N.S.-

In a varietial test at Kentville, varying amounts of rust were present on a large number of pure lines. Some showed as much as 50 per cent of the foliage affected. A few lines showed appreciable resistance.

LEAF SPOT - Septoria Helianthi Ell. & Kellerm.

The majority of the pure lines under test for wilt resistance at Kentville were susceptible to leaf spot, but only a few lines were injured.

CULTIVATED GRASSES

Awnless Brome (Bromus inermis)

Leaf spot (Septoria bromigena Sacc.) Light to heavy infections were present in most fields inspected in Saskatchewan. The damage was slight.

Scald (Rhynchosporium Secalis (Oud.) Davis) was general in the Clive district (zone 10), Alta.

Ergot (Claviceps purpurea (Fr.) Tul.) was found occasionally on Vancouver island and in the lower Fraser valley, B.C.

It was reported from Edmonton, Alta.

Ergot was found at Saskatoon, Sask. and in the south eastern part of the province it has been frequently noticed along the roadsides and spreading into adjoining fields of rye.

Smut (Ustilago bromivora Tul.) Common on Vancouver island B.C.

Timothy (Phleum pratense)

Rust - (Puccinia graminis Pers. var. Phlei-pratensis (Erikss. & Henn.) Stakm. & Piemeisel) caused severe damage in some sections of B.C.

Common, but slight infections were reported from Alta.

Slight and scattered rust infections were observed in Colchester, Antigonish, and Digby counties N.S.

Rust appeared late in the season in P.E.I. Only scattered infections were observed.

Smut - (Ustilago striaeformis (Westend.) Niessl) A trace of timothy smut was observed along the edge of a field, Manotick, Ont.

Ergot - (Claviceps purpurea (Fr.) Tul. was occasionally found on Vancouver island, B.C.

Reported also from Edmonton, Alberta.

Western Rye Grass - (Agropyron tenerum)

Smut (Ustilago bromivora (Tul.) Fisch.) caused medium damage at Lloydminster, Alberta.

Moderate damage from smut was reported in one field near Venn, which had 10 per cent of the plants infected, and also in a plot at the University Farm, Saskatoon, Sask., showing 25 per cent of the plants smutted.

Rust - (Puccinia Clematidis (DC.) Lagerh.) caused very slight damage at Quill Lake, Sask.

Ergot - (Claviceps purpurea (Fr.) Tul. was observed at Edmonton, Alberta.

Sudan Grass (Holcus Sorghum sudanensis)

Bacterial? Leaf spot (Bacillus Sorghi Burr.) was observed on the Experimental Farm at Saskatoon and Indian Head, Sask. In some cases the infections were heavy, but the damage was light.

Broom Millet (Panicum miliaceum)

Smut (Sorosporium Panici-miliacei (Pers.) Takah.) A slight infection was observed in Alberta.

In a small plot at the Experimental Farm, Indian Head, Sask. 5 per cent of the heads were affected.

Fescue (Festuca spp)

Rust (Puccinia graminis Pers.) was quite common on Vancouver island, although the damage was slight.

MISCELLANEOUS CROPS

Buckwheat

A heavy and general mottling of the leaves, possibly due to a virus, was observed at Kentville Agricultural School, Ont. The affected plants appeared vigorous.

Vetch

A bacterial blight was common and apparently destructive on pearl vetch at the Experimental plots, Olds, Alberta.