New or Noteworthy Diseases

Stem rust of wheat caused but slight damage in Western Canada in 1936. Due to its initial appearance a week earlier than in 1935 with weather favourable for rust development during the last two weeks of June, there was sufficient inoculum present in Manitoba to produce a destructive epidemic. However, after that date, weather conditions were unfavourable for rust development. All cereal crops in southern Manitoba ripened prematurely, in fact frequently dried up, and rust made little progress. Further north, where the rainfall and temperature was more nearly normal, it did some damage, but it was largely obscured by the greater damage caused by drought and heat. Stem rust caused little injury elsewhere in Canada.

In a recent paper (Ann. Mycol. 34:257-260. 1936) T. Petch states that the name Gibberella Saubinetii (Mont.) Sacc. is a synonym of Gibberella cyanogena (Desm.) Sacc., a common saprophyte on herbaceous and woody stems. The correct name of the Gibberella on cereals is Gibberella Zeae (Schw.) Petch (Sphaeria Zeae Schw.).

From the limited information to hand, it appears that Thatcher, a new rust resistant variety of wheat, may be more susceptible to ergot (Claviceps purpurea) than the varieties of bread wheat commonly grown in Western Canada. It may be recalled that durum wheats as a class are decidedly more susceptible than common wheats.

Since the discovery of the oat nematode (Heterodera schachtii) in Ontario in 1934, the original infestation in Simcoe and Ontario counties has been increasing in intensity. The seriousness of the problem has been further emphasized by the discovery of another infestation in Waterloo county.

Twist (Dilophospora Alopecuri) was found fairly generally distributed on Vancouver Island and in the Fraser Valley, B.C. on velvet grass (Holcus lanatus). It has been recorded only once before in Canada, when it was collected on barley at Carlyle, Sask., in 1924.

Alfalfa plants apparently affected with bacterial wilt (Phytomonas insidiosa) were found at the Experimental Station, Windermere, B.C. Although it is present in the Pacific Northwest States, it is a disease new to Canada.

Bacterial wilt and tuber rot (cause undetermined) was again destructive in Quebec. The disease was first detected in 1931 (P.D.S. 11:49) and was most severe in 1934. It is not known to occur elsewhere in Canada, but Reiner Bonde

(Phytopath. 27:106-108. 1937) recently described a similar disease in Maine. A newly described leaf spot (Cladosporium pisicola) of pea was found at Salmon Arm, B.C. and a leaf spot (Ramularia Rhei) apparently new to North America was collected on rhubarb at High River, Alta.

A rust (Pucciniastrum Epilobii) previously recorded in North America in Alaska on Godetia and Clarkia is now known on Godetia across Canada from Alberta to P.E.I., and recently was found on Clarkia in a greenhouse at Ithaca, N.Y. Another rust (Coleosporium Campanulae), new to Canada, was collected on Campanula persicifolia in Vancouver, B.C. A leaf spot (Gloeosporium mezereum), new to North America, caused considerable defoliation of Daphne mezereum in British Columbia. Fusarium avenaceum, a common pathogen of cereals, caused severe foot rot in stocks at Ottawa, Ont., and Lennoxville, Que.

A new apple rot caused by Gloeosporium allantoideum Peck was found at Fredericton, N.B. For this pathogen Dr. Dearness has erected the genus Dasycarpoma. Apparently a new virus disease of red raspberry tentatively named Yellow Blotch was found in Ontario in 1935.

Previous to 1936 it was shown that brown heart of turnip could be controlled by the application of boron to soils on which turnips were subject to the disorder. This year, the reports indicate continued success in the Maritime provinces in the control of brown heart by the use of boron. In addition, another important non-parasitic disease, drought spot and corky core of apple, has been successfully controlled in the Okanagan Valley, B.C., by the application of boron (H.R. McLarty, Scientific Agriculture 16:625-633. 1936). It is estimated that 40,000 boxes of perfect fruit were added by this means to the 1936 harvest of the Okanagan growers. A yellowing of alfalfa, common in spots or in whole fields in the Okanagan and Kootenay Valleys, has also been observed to be due to the lack of boron.

Cephalosporium wilt, a native disease of elm, was found in Nova Scotia. This is the first report of its occurrence in Canada. Recent investigations in the United States, indicate that it is not an uncommon disease.

Scab (Fusicladium saliciperdum) was severe through the Maritimes and eastern Quebec. It was more destructive in the Annapolis Valley, N.S., than it has been since 1928. The disease is now known as far west as Louiseville, Que., nearly 25 miles west of Three Rivers.