New and Noteworthy Diseases

The development of cereal rusts in the Prairie Provinces was impeded by several factors. Only a small amount of inoculum moved north into Man., Sask., and Alta., The local infections that developed were held in check by dry weather in the early summer and by nearly normal temperatures in July and August when precipitation reached or surpassed normal levels. The plantings of resistant Selkirk wheat and Rodney and Garry oats in the southeast portion of the Prairies also helped restrict the development of rusts and impeded the subsequent spread to susceptible plantings further north and west. Wheat leaf rust was the most common cereal rust in the Prairies but it caused only small losses. The heaviest infections were east of Killarney and Gladstone in Man., on susceptible varieties and on late developing fields of Selkirk.

A new race of oat stem rust, 6A, was found frequently at Appleton, Ont., where the usually resistant varieties Garry and Rodney were as seriously damaged as the susceptible variety Bond. Single isolates of race 6A were recorded from Kemptville, Ont., Ste. Amne de la Pocatiere, and Ste. Anne de Bellevue, Que. Races 8A and 13A which also attack Garry and Rodney oats were recorded again from some of these Ont. and Que. stations. Race 7A which will attack Rodney oats was found frequently in Man. Speckled leaf blotch caused considerable damage to oat crops in Ont. and Que.

Net blotch was the most conspicuous disease of barley. Damage was slight to moderate in the Prairies and in Ont. and Que.

New records of diseases of wheat were: Cephalosporium stripe in Ont. and New Brunswick, and Agropyron streak mosaic in Ont.

Alfalfa yield in southern Alta. was reduced about 15% by bacterial wilt. Damage to common clover caused by powdery mildew was moderate in Sask.

Dry weather reduced the incidence of flax diseases in Man. and Sask. Rust was evident only on the susceptible variety Redwing. Rapeseed was affected by Albugo candida in several areas of Sask., but no other diseases caused appreciable damage to this crop. Sunflowers were affected by rust in Man., especially in the central part of the province. The variety Mennonite is susceptible to rust, but the demand for large seed for confectionery use has resulted in increased plantings of Mennonite and a consequent increase in rust. Leaf mottle affected sunflowers in central Man. but was destructive in only a few fields. Soybeans in

southern Ont. were damaged by manganese deficiency as a consequence of dry weather early in the season. However, fungus diseases of soybeans were less severe than in the two previous years.

Tobacco brown rot occurred in all major crop areas. The disease was most severe in crops grown in light, sandy soils after rye in the rotation. Large populations of the root-lesion nematode (Pratylenchus sp.) were found in many of the fields.

The incidence of ring rot of potato (Corynebacterium sepedonicum) in Que. was much lower than in 1957. This seems to be a reflection of greater care by growers and a more general use of quaternary ammonium compounds for disinfecting machinery. Late blight (Phytophthora infestans) caused heavy losses to potato crops in Eastern Canada through reduction in yields and subsequent tuber rot. In Nfld., wart (Synchytrium endobioticum) has spread to land not previously infested. Yield reductions of 75% were reported. A disorder of potato, called little leaf, has increased in prevalence in P.E.I., mostly in the variety Sebago.

Club root of crucifers (Plasmodiophora brassicae) continues to be a serious problem in the Maritime Provinces. Cercospora blight of carrots (C. carotae) was prevalent and caused appreciable losses in Eastern Canada. Cylindrocarpon radicicola was reported for the first time as causing a storage rot of carrots in N.S. Scab (Cladosporium cucumerinum) and a storage rot caused by Colletotrichum atramentarium constituted new disease reports on squash, also from N.S.

Aster yellows was generally less serious in 1958 than in 1957. Cucumber mosaic caused heavy losses in the Harrow-Leamington district of Ont. and most pepper crops in S.-W. Ont. were infected with one or more viruses.

Anjou pit, a disease of unknown origin affecting certain pear varieties, was more common and severe than in any previous season in B.C. Powdery mildew of apple (Podosphaera leucotricha) has become a problem in Ont. in orchards where organic fungicides are regularly used. Considerable late season scab (Venturia inaequalis) developed in commercial apple orchards in N.S., particularly on the variety McIntosh. Twig and blossom blight (Botrytis cinerea and Monilinia vaccinii-corymbosi) was more severe than usual on low-bush blueberries in N.S.