NEW AND NOTEWORTHY DISEASES

Cereal rusts caused no significant losses to cereal crops in western Canada in 1964. There was a sharp increase, from 5-38%, in the number of cultures of crown rust of oats (Puccinia coronata) virulent on the 'Landhafer-Santa Fe' type of resistance. There was also a decided increase, from 3.5-26%, in the number of cultures of the potentially dangerous race 6AF of stem rust of oats (Puccinia graminis avenae). This race can attack all oat varieties currently grown in Canada.

Common root rot of wheat (Bipolaris sorokiniana, Fusarium spp.) was more prevalent and severe in Saskatchewan than in any year since 1951. Its high incidence was correlated with below-normal rainfall. Considerable damage was also recorded in central Alberta. Root rot incidence in barley in Saskatchewan was also higher than in 1963. Wheat scab (Gibberella zeae) was unusually prevalent in the Peace River area. An outbreak of basal glume rot (Pseudomonas faciens) occurred in southeastern Saskatchewan and western Manitoba and resulted in a considerable amount of black tip in kernels.

Agropyron mosaic was commonly found in winter wheat fields in western Ontario where wheat streak mosaic was identified for the first time in eastern Canada. Wheat spot mosaic virus was isolated from wheat in Alberta for the first time since 1955. Oat blue dwarf virus was isolated, for the first time in Canada, from oats at Winnipeg, Manitoba.

Net blotch (Drechslera teres) and scald (Rhynchosporium secalis) of barley were widespread and frequently severe in central and northern Alberta. Aster yellows was found in most barley fields surveyed in Manitoba and barley yellow dwarf in half of the fields.

Crown bud rot (Rhizoctonia solani, [illegible] imperfect a Fusarium [illegible] in irrigated lands of a [illegible] in southern Alberta and damage from snow mold, caused by the low-temperature basidiomycete was seen in all fields surveyed in northern Alberta. Clover phyllody was less severe in eastern Quebec than for a number of years. Red clover vein mosaic was recognized, for the first time in Canada, in red clover and in sweet clover in British Columbia. Seed smut (Thecaphora deformans) was collected, for the first time in Canada on lupine, in Alberta.

Flax wilt (Fusarium oxysporum f. lini) was severe in western Quebec where pasmo (Septoria linicola) was reported for the first time. Generally light infections of aster yellows were found in all flax fields visited in Manitoba. Unusually heavy infections of downy mildew (Peronospora manshurica) and leaf spot (Septoria glycines) occurred on soybeans in Ontario and anthracnose (Colletotrichum truncatum) was discovered, for the first time in Canada, in the same province.

Sunflower rust (Puccinia helianthi) was commonly found in eastern Ontario. There is evidence that a race or races different from race 1, commonly found in Manitoba, exist in Ontario. Leaf spot (Septoria helianthi) affected yields in some fields in Manitoba and Sclerotinia minor was reported, for the first time in Canada on sunflowers, in Ontario.

Stalk rot (Fusarium graminearum) caused serious damage to field corn in western Ontario where ear and kernel rots (Fusarium moniliforme) were more prevalent than in previous years. Two conditions of unknown etiology, red stripe and silk cut, affected a high proportion of kernels of some varieties and lines of corn in Ontario. Field losses from black root rot of tobacco (Thielaviopsis basicola) were extremely heavy in Ontario. Weather fleck became quite severe toward the end of the season in Ontario tobacco fields.

Ryegrass mosaic virus was found, for the first time in Canada, in Lolium perenne in British Columbia. Snow mold caused extensive damage to lawns and turf in central and northern Alberta.

The sugar beet nematode (Heterodera schachtii) caused damage to both table beets and cabbage in Ontario. Neither of these crops had previously been reported as hosts

of this nematode in Canada. Club root (Plasmodiophora brassicae) caused extensive losses in cabbage crops in eastern Newfoundland.

Aster yellows caused high losses in unsprayed carrot and lettuce fields in Prince Edward Island. Black rot (Xanthomonas campestris) was a serious problem in cauliflower crops in Ontario. Cucumber scab (Cladosporium cucumerinum) was responsible for heavy losses in New Brunswick and Nova Scotia.

Stem and bulb nematode (Ditylenchus dipsaci) was found in onions in western Ontario and white rot (Sclerotium cepivorum), introduced on infected transplants from the U.S.A., infested many onion fields in the Okanagan Valley, B.C. and poses a serious threat to the onion industry. Onion smut (Urocystis magica) caused losses in British Columbia and Ontario. Early blight (Alternaria solani) of tomatoes was serious in British Columbia, Ontario and New Brunswick.

Cylindrocarpon [illegible]la and Stemphylium botryosum caused le[illegible] on parsnip crowns in Nova Scotia. White rust (Albugo occidentalis) was reported, for the first time in Canada. on s-oinach in British Columbia. Skin r (i [illegible]ctonia solani) aff [illegible]ted [illegible] - i Pri [illegible] Edv [illegible]d Island while scorch, caused by a virus complex, was responsible for considerable losses to swede crops in southern and western Ontario.

Black leg (Erwinia atroseptica) was again the major cause of rejection of seed potato fields in Canada while the incidence of ring rot (Corynebacteriurn sepedonicum) showed a marked decrease in all provinces but Manitoba. Late blight (Phytophthora infestans) caused no significant losses. Wilt (Verticillium albo-atrum) was widespread in potato fields in Ontario and pink-eye, a condition associated with verticillium infection, was severe in some varieties in Ontario and Nova Scotia.

Fire blight (Erwinia amylovora) continues to be a major disease in apple and pear orchards in western Ontario. Apple scab (Venturia inaequalis) was very well controlled in commercial orchards throughout the country and little pin point or storage scab developed. The apple virus diseases chlorotic leaf spot, McIntosh leaf pucker and stem pitting were recognized for the first time in Ontario. Frost during bloom caused extensive reductions in the apple crop in southwestern Quebec. Infection by Gloeosporium album caused losses in storage in both apples and pears in Nova Scotia.

Leaf spot of sour cherries (Higginsia hiemalis) was more serious than for some years in southern Ontario and brown rot (Monilinia fructicola) was severe on both cherries and peaches in British Columbia and Ontario. Symptoms of necrotic ring spot, a virus disease, were prevalent and pronounced in sour cherries in southern Ontario. Corvneum blight (Stigmina carpophila), previously considered to be serious only on apricots, was very severe on peaches in British Columbia.

Canker (Fusicoccum putrefaciens) continues to be troublesome in commercial plantings of highbush blueberries in Nova Scotia. Dead arm (Cryptosporella viticola) has caused great damage to many plantings of French hybrid grapes in Ontario despite rigorous pruning and extensive use of fungicides.

Red stele (Phytophthora fragariae) of strawberry was more than usually widespread in the Fraser Valley of British Columbia. An undetermined species of Rhizoctonia again caused extensive losses of cold-stored dormant strawberry plants in New Brunswick. Wilt (Verticillium dahliae) caused damage in strawberry fields in six Ontario counties.

Anthracnose (Gloeosporium apocryptum) was reported on maples throughout eastern Canada. Leaf scorch and general deterioration of maples planted along streets and roadsides continues to cause concern in Ontario. Root rot, caused by several species of Phythphora again caused extensive damage to Chamaecyparis plantings in British Columbia. Rust (Puccinia sparganioides) continues to be destructive on ash trees in western Nova Scotia and twig blight (Phomopsis juniperovora) was unusually widespread on junipers in British Columbia.

A die-back of spruce caused by Sphaeropsis ellisii was reported for the first time in Canada from Quebec. Septoria musiva caused damage to poplars in Alberta, Saskatchewan and Quebec. Cercospora handelii and Diplodina eurhododendri were reported, for the first time in Nova Scotia, as the causes of leaf spots of rhododendron; Willow blight (Pollacia saliciperda) was severe in Quebec and Nova Scotia. Extensions in range of the Dutch elm disease (Ceratocystis ulmi) were reported in Ontario and New Brunswick.

Wilt (Verticillium albo-atrum) was destructive in chrysanthemum plantings in British Columbia and a root rot caused by Thielaviopsis basicola was severe on poinsettia in eastern Ontario. Leaf and flower spot (Botryotinia draytoni) caused extensive damage on gladiolus in Quebec while gray mold (Botrytis cinerea) seriously affected-blooms in Nova Scotia. Gladiolus corms bore extensive lesions caused by Curvularia trifolii f. sp. gladioli in southern Ontario.