## New and Noteworthy Diseases

As in 1960, the cereal rusts were of little consequence in western Canada in 1961. The extremely low incidence **of** the rusts is attributable to the low level of air-borne inoculum and to the drought conditions that prevailed throughout the growing season. Stem rust of oats was, however, moderate to severe in those districts of eastern Ontario where barberry occurs. Wheat striate mosaic and Agropyron mosaic were identified for the first time in the Prairie Provinces. The former was found to be widely distributed.

Common root rot (Bipolaris sorokiniana, Fusarium spp.) increased in prevalence and severity coincident with the very dry conditions in western Canada, The smuts, like the rusts, were at a very low level. Speckled leaf blotch (Septoria avenae f. sp. avenae was widespread and generally moderate in intensity on oats in the eastern provinces. Net blotch (Drechslera teres) of barley showed an increased incidence over 1960 while scald (Rhynchosporium secalis) decreased. High soil temperatures, particularly in Saskatchewan, resulted in a great amount of leaf banding and heat canker in cereals and flax,

Winter crown rot, caused by a low-temperature basidiomycete, was more prevalent and destructive to alfalfa than for many years. The expanding use of resistant varieties in British Columbia has relegated bacterial blight (Corynebacterium insidiosum) of alfalfa from a disease of major to one of minor importance. Crown bud rot (Rhizoctonia solani, Fusarium roseum, Ascochyta imperfecta) was the most important alfalfa disease in the province, expecially in heavily grazed areas.

Phyllody of clover was generally less severe than in previous years in Quebec and the Maritime Provinces. It was, however, detected for the first time in western Canada at two locations in Alberta. A severe root rot condition in sweet clover (Plenodomus meliloti and Fusarium spp.) caused heavy losses in the spring.

Diseases of flax and rape in western Canada were relatively inconspicuous because of unfavorable weather conditions. Stalk and root rot (Phytophthora megasperma var. sojae) of soybean is still spreading in Ontario where the widely grown variety Harosoy has little resistance. Leaf mottle (Verticillium albo-atrum) was prevalent in the main sunflower-producing areas of Manitoba and caused losses in yield,

The increasing incidence of leaf spot (Cercospora beticola) on sugar beets in Ontario is attributed to the increased use of monogerm seed, which has little resistance. The root nematode (Heterodera schactii) was detected on sugar beets for the first time in the beet-producing area of Alberta, Northern leaf blight (Bipolaris turcicum) of corn was more severe than usual on both field and sweet corn in western Ontario,

The incidence of aster yellows in susceptible vegetable crops in eastern Canada was considerably less than in recent years. The northern root-knot nematode (Meloidogyne hapla) continues to spread and cause losses to vegetables in Ontario and Ouebec. Fuscus blight (Xanthomonas phaseoli var. fuscans) of bean was identified for the first time in Canada in one field in Ontario, A

considerable acreage of brussels sprouts in-Ontario was severely affected by blackleg (Phoma lingam). In all cases studied the presence and severity of the disease could be attributed to short rotational practices.

Leaf blights (Alternaria dauci and Cercospora carotae) of carrot were widely distributed and caused damage in Quebec and Nova Scotia. Bacterial blight (Xanthomonas carotae), which is of sporadic occurrence in Canada, occurredon carrots in Quebec. Another seed-borne pathogen (Pseudomonas apii) was found on celery in the same province.

Cucumber scab (Cladosporium cucumerinum) again caused heavy losses in Ontario, Quebec, New Brunswicle and Nova Scotia. Downy mildew (Pseudoperonospora cubensis) of cucumber was reported, for the first time in western Canada, from Alberta. A serious localized outbreak of parsnip canker (Itersonilia perplexans) caused heavy losses in Nova Scotia. Powdery mildew (Erysiphe polygoni) was heavy on peas in western Canada. Serious losses were sustained in canning pea crops in irrigated areas in southern Alberta from root rot caused by various soil pathogens,

Bacterial ring rot (Corynebacterium sepedonicum) was the greatest single cause of rejection of seed potato fields in 1961 with the highest incidence occurring in Quebec. Blackleg (Erwinia atroseptica) was very severe in central Ontario and increased in incidence in Prince Edward Island. Late blight (Phytophthora infestans) was responsible for a considerable amount of tuber rot in Quebec, New Brunswick and Nova Scotia,

Root rot (Fusarium solani f. cucurbitae) caused severe losses to processing pumpkins in one district in Ontario. Black root (Aphanomyces raphani) was severe on radish in muck soil in coastal British Columbia. Losses from storage rot (Mycosphaerella melonis) in squash were reported from the same province. Skin spot (Rhizoctonia solani) was severe on swede turnips in storage in Nova Scotia.

Fruit and stem rot (Botrytis cinerea) of greenhouse tomato crops was unusually high in incidence in both western Ontario and Nova Scotia. Pink root rot (Pyrenochaeta terrestris) was reported, for the first time in Canada as a disease of tomatoes, when it caused extensive losses in greenhouse plantings in British Columbia. Wilt (Verticillium dahliae) of tomatoes, eggplant and other vegetable crops is now considered to be the most destructive soil-borne pathogen in western Ontario, Spotted wilt, a virus disease, was encountered for the first time in tomatoes in Nova Scotia.

Powdery mildew (Podosphaera leucotricha) was heavy on apples in the Interior of British,Columbia following a mild winter. Blast (Pseudomonas syringae) was identified for the first time on apple in Canada, in Ontario. Apple scab (Venturia inaequalis) was generally well controlled in the fruit-growing districts with the exception of pin-point scab late in the season.

Blossom blight and brown rot (Monilinia fructicola and M. laxa) on stone fruits was not serious in either the main producing areas of British Columbia or Ontario. Powdery mildew (Podosphaera clandestina) of sour cherries was common in Ontario. Rhizopus rot (R. nigricans) was unusually prevalent in stored peaches in British Columbia. Peach canker (Valsa spp.) was very common in peach following two successive cold winters in western Ontario.

Crown gall (Agrobacterium tumefaciens) caused heavy losses in com-

Raspberry spur blight was severe in Nova Scotia and western Ontario. Fusicoccum canker (F. putrefaciens) was general on highbush blueberries in the coastal areas of British Columbia. Leaf rust (Pucciniastrum myrtilli) was extremely severe on native blueberries on Cape Breton Island, Nova Scotia.

Downy mildew (Plasmopara viticola) of grapes was general and occasionally severe in western Ontario as was powdery mildew (Uncinula necator). Red stele (Phytophthora fragariae) of strawberry was found, by surveys, to be widely distributed in the soils of the Lower Mainland of British Columbia and in Nova Scotia. Green petal of strawberries was generally much less severe in eastern Canada than in previous years,

Blossom blight (Monilinia laxa) was reported on Chaenomales japonica, for the first time in Canada, from British Columbia. Phytophthora root rot (P. cinnamoni) continues to cause serious damage to Lawson's Cypress in the same province. Phytophthora ilicis caused losses in holly orchards in British Columbia. Fire blight (Erwinia amylovora) was severe on ornamental Malus species in Alberta, Brown rot (Monilinia demissa) was observed on Prunus demissa in British Columbia for the first time in Canada.

Crown gall (Agrobacterium tumefaciens) was found on cultivated Rhododendron in Nova Scotia. This is believed to be the first North American record. Anthracnose (Gloeosporidiella variabilis) was general and severe on Ribes alpinum in eastern Ontario, Powdery mildew (Sphaerotheca pannosa) was heavy on roses in Ontario and Nova Scotia. The dagger nematode (Xiphinema diversicaudatum) caused damage to greenhouse roses in Ontario. Willow scab and blight (Venturia saliciperda and Physalospora miyabeana) were epidemic in coastal British Columbia and in Nova Scotia.

Rust (Melampsora monticola) was observed, for the first time in Canada, on Euphorbia peplus in British Columbia, Numerous reports were received of the occurrence of anthracnose (Glomerella cingulata) on Ficus spp. Heavy infections of scab (Pseudomonas marginata) and dry rot (Stromatinia gladioli) were reported on Gladiolus from Nova Scotia. Basal stem rot (Botrytis cinerea) caused losses in cuttings of florists' geranium in British Columbia and Quebec. Rust (Uromyces scillarum) affected Scilla in British Columbia and fire (Botrytis tulipae) caused extensive losses in tulips in the same province, Two leaf spots (Centrospora acerina and Cercospora granuliformis) were severe on pansies in commercial plantings in Nova Scotia.