The Weather and its Influence on Diseases

The season on Vancouver Island, B. C., was characterized by abnormally dry weather from June to August. Rainfall at Saanichton was 0.07 in. (av. 1.09 in.) and sunshine the highest on record. The drought included 52 consecutive rainless days ending on 27 Aug. The weather was mild and wet in January and February, cold in early March, and warm and dry in April. The cold weather in March caused some injury to strawberries and to the foliage of bulbous iris. The common foliage diseases were all virtually absent because of the drought, but blossom-end rot of tomato and internal necrosis of potato tubers were abnormally prevalent. Harvesting weather was satisfactory, but some Pythium soft rot was seen in potatoes dug during the warm period (W. Jones).

On the mainland coast the winter was approximately normal, but there was a heavy frost in mid April. The summer was abnormally dry. The April frost damaged strawberry and blueberry plants. The drought reduced fruit and potato crops, but foliar diseases were markedly absent. For the second successive year there was no loss from potato late blight (R. E. Fitzpatrick).

In the lower mainland 16 in. of snow in March delayed spring growth and work on the land. The exceptionally dry summer greatly reduced the incidence in the Fraser Valley of foliage diseases such as peach leaf curl, raspberry yellow rust, apple scab and powdery mildew, cherry shot hole, and brown rot of stone fruits. There were no reports of early and late blights of celery or early and late blights of tomato. Strawberry red stele, plum black knot, Godronia canker of blueberry, Club root of crucifers, apple anthracnose, sclerotinia wilt of pole bean, and Coryneum blight of peach gave considerable trouble (I. C. MacSwan).

In the Kootenays low temperatures in January killed all apricot fruit buds and killed or damaged many peach trees weakened by Coryneum cankers. Healthy peach trees were unharmed. Heavy frosts at the opening of cherry bloom and the early pre-pink stage of apple buds reduced the cherry crop severely and the apple crop moderately, in Creston Valley. Wet fall weather in 1950 caused severe Coryneum canker of peach, and wet weather at husk fall allowed heavy fruit infection. Showers from 27 April to 2 May, 10-17 May (blossom period), 2-5 June and 11 June stimulated apple scab infection; but the summer from then on was dry (the only heavy rains being 10-12 July and 11 Aug.), which reduced scab infection. Intermittently wet weather from late August allowed heavy pin-point scab. The wet spring caused abundant blossom and twig infection of pear, where fire blight pruning was inadequate, but the dry summer checked spread. The dry weather also reduced brown rot incidence in the cherry crop (M. F. Welsh).

The heavier than usual snowfall in Alta., which melted during late March, made the soil excessively wet and delayed the planting of crops in most areas. Rainfall was much above normal in nearly all regions during the growing season. As a result of this high moisture, and low temperatures during April, June, and July, most crops were backward at every stage of development. In general, foliage diseases of nearly all crops were more prevalent than usual, including scald and speckled leaf blotch of barley, halo blight of oats, leaf rust and glume blotch of wheat.

In spite of the weather, very heavy yields of nearly all crops were common. However, the frequent rains and early frost and snow in certain areas during September and October made harvesting very difficult, with damage to both yield and grade. Many acres of potatoes were frozen in the ground (T. R. Davidson).

At Saskatoon, Sask., the mean temperature was 3°F. above average in May, 3° below in June, and 1° below in July, August and September. Rainfall was substantially above average in June and July, and rain fell on 56 days of the 5 months. In general the summer was cool with low evaporation. Sunshine was high in May and June, low in August and average in July and September. During the one important hot spell, 22-28 July, the maximum was 80-87°F. Coming abruptly after cool, wet weather this moderately hot weather damaged crops markedly and contributed largely to the poor filling of wheat. Black mould on cereal crops was the worst for at least 24 years (T. C. Vanterpool). Growing conditions in early May were good in Sask., with high temperatures and abundant moisture, but late in the month the soil was dry and strong winds caused drifting. These conditions, together with delayed seeding owing to spring harvesting caused slow growth and poor germination in some areas. June and July were cool and rainfall irregular. Grain crops headed about 7-10 days late. Frost occurred in mid-August in some northern areas. Moist weather late in the season delayed ripening, favoured leaf diseases and head discolorations and delayed harvest. Much grain sprouted in the swath or was harvested damp (R. C. Russell).

Temperature and precipitation in the Niagara Peninsula, Ont., during the winter were favourable for orchard fruits. Heavy precipitation in March (3.30 in.) and again in April (3.67 in.) hampered the application of dormant sprays. Peach leaf curl was important in orchards where inadequate drainage delayed the dormant spray beyond the critical infection period of 9-16 April. In this period frequent showers, totalling 2.01 in., were recorded at St. Catharines. In some orchards not sprayed before this wet spell, the disease was epidemic. In poorly drained areas the wet ground contributed to the occurrence of crown injury and the death of young peach, plum, and cherry trees. It also stimulated the development of Verticillium wilt, which was prevalent in mid summer.

Apple scab was epidemic in many orchards. Initial ascospore discharge was recorded on 12 April before bud break. Favourable infection conditions occurred 22-25 and 28-29 April. The latter period, with a mean temperature of 54.7°F., was particularly serious and no doubt resulted in much of the primary infection first observed 12 May. Rains on 11-12 and 27-28 May stimulated abundant secondary infection. Five well-marked infection periods occurred in June, and by the end of the month scab was rampant on unsprayed trees. Little further spread of the disease occurred in orchards where earlier control measures were effective. The rains of 11-12 May were important in initiating blossom blight of cherry and providing abundant inoculum for brown rot of the mature fruit. Showery weather in late June induced fruit rot and careful grading was necessary. Brown rot affected the mid-season peaches to some extent but was generally of little importance. Weather conditions during harvest of the later varieties did not favour the disease.

A moderate outbreak of downy mildew of grapes was favoured by showery weather during the bloom period, 13-14 June, of the susceptible Fredonia and President varieties.

Late blight of tomatoes was destructive in early August, but warmer, dry weather checked its widespread development. Similarly there was little tuber infection of potatoes in spite of heavy foliage infection in mid summer (G. C. Chamberlain).

At Ottawa, January to April, inclusive, were mild, cloudy and rainy. Snowfall was close to average, but because of rain and mild weather snow cover was generally light. A single very cold spell in early February (min. -33°F.) apparently caused no appreciable damage. May was warm, dry and sunny, but June, July and August were cool and cloudy. Rainfall was actually somewhat below average, but was evenly distributed and there were few heavy showers with extensive run-off. The highest temperature recorded was 88°F. The ground was wet enough to limit seriously the growth of corn. The only rainless period of any importance was 22-30 July, inclusive, with daily maxima from 78 to 88°F. The humid weather favoured late blight of potato and tomato and a variety of leaf-spotting fungi; but the ubiquitous powdery mildew of phlox was less conspicuous than usual. The moist cool summer was unusually favourable for the development of a great variety of early and mid season mushrooms. Following 1.57 in. of rain on 6 Sept., the weather improved, and most of September and October were warm and dry, providing good harvesting conditions for late crops. Heavy snow fell in early November. Although this snow all melted, further light falls occurred near the end of the month. Heavy snow after mid December left a cover of about 18 in. at the end of the year (D. B. O. Savile).

The abundant snow cover that accumulated till the end of March, at Ste. Anne de la Pocatière, Que., disappeared rapidly during April following prolonged rains.

Dry, cool conditions prevailed in May and June, checking fungus diseases but allowing good growth of flowering plants. Aecial stages of rusts were very scarce. July and August were characterized by alternating short periods of rain and sunshine. Only traces of most diseases were observed; most crops were healthier than usual. Mushrooms were exceptionally abundant in protected places. September was very cool and moderately rainy. A few plant diseases, including apple scab, late blight and grey mould on strawberry, Pelargonium and Zinnia, became epidemic. October was favourable for the harvest of late crops (A. Payette).

The year opened at Fredericton, N. B., with 6 in. of frost in the ground under a very light snow cover. During January 26 in. snow fell, but heavy rain reduced the depth to 6 in. February was mild, but with the lowest sunshine (66 hours) ever recorded. Despite 29 in. snow, heavy rain left the fields bare from 7 to 23 Feb. March was also mild and cloudy. Despite heavy snow early in the month, over 1.5 in. of rain left the fields bare by the 15th. In April rain fell on 21 days, totalling 5.17 in. The mean temperature was 4° above average but the 85 hours of sunshine was the lowest on record. The frost was out of the ground by 24 April and, with warm, sunny weather during the last week of the month, the land dried out rapidly.

Light showers on 7 May and rainstorms on 11 and 12 May caused heavy discharges of apple scab ascospores. Fine weather during 13-23 May permitted seeding on well-drained land, but the last week of the month was very wet. Meadows made excellent growth. From 1 to 8 June 1.25 in. rain fell, but a dry spell from 9-22 June allowed about half the grain to be sown before further wet weather set in. Rain totalling 6.6 in. fell on 16 days in July, August was also wet and cloudy, with 4.4 in. rain falling on 12 days. The weather made haying difficult, caused lodging of early oats and barley, and induced the most severe epidemic of potato late blight for 25 years. September and most of October were warm and sunny and harvesting conditions were good. Heavy snow fell on 28 Oct. but quickly melted. Nearly 5 in. rain and 15 in. snow fell in November. Ploughing ceased on 22 Nov. and the St. John River froze over on 28 Nov.; but very mild weather in early December caused the river to reopen and it refroze on 14 Dec. Snowfall totalled 51 in. during December and snow cover was 8 in. at the end of the month (J. L. Howatt).

April and May were wet in N. S. and the early part of the growing season warmer than average. Early June was wet, which, with heavy rain in late May caused heavy apple scab infections throughout the Annapolis Valley. The rest of June was dry. The rainfall in July was normal and evenly distributed; it was sufficient to allow potato late blight to spread slowly from seed-piece infection. Temperatures were normal in August but rainfall was high and occurred on 17 days. Late blight rapidly became epidemic, especially in some coastal areas where all but resistant varieties rotted in the ground before harvest. Foliage diseases generally became abundant. September was warm with normal rainfall and late blight was checked. October was dry with normal temperatures (J. F. Hockey).

May was fine in P. E. I. and an unusual acreage of potatoes was planted early; but heavy, prolonged rains and cool weather in June caused many stands to be poor due to seed-piece decay. Orchards could not be adequately sprayed during this wet weather and apple scab became heavy. Willow blight also reappeared after many years of quiescence. Rain on 16 days in July, together with fogs and heavy dews, caused potato late blight to become serious by mid August; and apple scab caused heavy losses. Greatly improved weather in September and October allowed adequate spraying of potatoes and made harvesting simple. Some late-harvested potatoes broke down from field frost (R. R. Hurst).