

While, as we have seen, the winters vary very considerably in severity, yet, as the spring advances, departures from a normal value diminish, and the summer season throughout the Dominion is subject to relatively small variations. There are differences, however, and in Alberta the summers of the eighties, exclusive of 1881, 1886 and 1889, were distinctly cooler than any term of years since then, while the summers of 1894, 1896, 1898 and 1906 especially were marked by higher temperature. In nearly all other years the mean of the season differed very little from the normal derived from the whole period.

The general character of the summers as regards temperature has been much the same in Manitoba as in the provinces farther west. In the seventies they were warm, while in the eighties they were cool, especially in 1883 and 1885. The nineties were also cool, except '90, '93 and '94, but since 1900 warm summers have predominated, with marked exceptions, however, in 1904 and 1905 and again in 1915.

From Ontario eastward the year 1869 had the coolest summer in 52 years, and after that the coolest summers occurred from 1882 to 1891, exclusive of 1887, and in 1902-3-4. A decade of warm summers commenced in 1892 and then since 1905 warm summers have predominated, but 1912-15 and '17 were comparatively cool. The spell of greatest heat ever recorded in Ontario occurred in the first week of July, 1911, when temperatures above 100° were registered on several consecutive days in the peninsula of Ontario. The summer of 1921 was the warmest on record and July was the warmest month.

There is some evidence of a tendency towards a somewhat higher mean temperature in both summer and autumn months in Ontario, a tendency which is more doubtful in the other provinces. In the early days of settlement in Ontario summer frosts were not uncommon but have since become quite rare. It would appear reasonable to suppose that deforestation of the country east of the Mississippi must lead to greater insolation in the northern United States and this would affect Ontario more than the other provinces.

The dates and severity of late spring and early autumn frosts in the western provinces are not quite conclusive, but the general inference from the longer records combined with those of short period is that there has been no appreciable change since the early days of settlement.

Precipitation.—Fifty-two years of meteorological records afford no ground for belief that the precipitation of the Dominion has changed with the gradual deforestation and the general activities of man in covering the country with a network of railways and wires carrying electrical currents. Variations of a character which suggest cycles, probably due to cosmical causes, are, however, quite apparent, but at the same time perplexing, and it may be assumed with a high degree of probability that there has been no permanent progressive change in either rainfall or snow.

The Winnipeg records and also records from a shorter term of years in the West indicate that the eighties included more dry summers than in any subsequent corresponding period, while the Alberta records show a remarkable period of about six wet summers from 1899 to 1904, and again from 1911 to 1915.

While 1878 was the year of greatest precipitation in Ontario, and also the summer of greatest rainfall, the seventies as a whole had dry summers. In the eighties the summers of '80 and '83 and '85 were wet and others about normal, excepting '87 which was very dry. In the nineties the summers of '95, '96, '98 and '99 were particularly dry, while the other years had an ample but not excessive rainfall. Since 1900 the summers of 1907, 1911 and 1913 were exceptionally dry, while others were nearly normal. At Montreal the year immediately succeeding Confederation