

Southern Quebec is frequently invaded in summer by warm air masses from the southwest and temperatures in excess of 90°F. are not infrequent. As in Southern Ontario, very oppressive conditions result when these hot spells are accompanied by high humidity. Fortunately, such conditions are usually of relatively short duration.

The longest frost-free season in Quebec occurs in the lower Ottawa Valley and in the Montreal region where the growing season extends from early May to late September (135 to 155 days). Southward from the St. Lawrence River the frost-free season falls off with increasing elevation to less than 100 days in the Thetford Mines-Disraeli area. Most localities in the Saguenay Valley and in the Lake St. John region experience a season free of frost slightly in excess of 100 days but in the Laurentian Hills to the west the growing season decreases to 80 to 100 days for the most part, depending on local topography and exposure. At stations along the shore of the Gaspé Peninsula, the proximity to the water is responsible for a frost-free season of 120 to 140 days but the growing season is drastically curtailed to less than 100 days at higher elevations. There is also a relatively long period of three to four months free from frost immediately along the north shore of the Gulf of St. Lawrence. Throughout the northern interior of the province the season continuously free of freezing temperatures varies from 40 to 80 days. A large section of northwestern Quebec has permanently frozen sub-soil. The limit of permafrost or the southern limit of permanently frozen soil or sub-soil extends across the northern part of Ungava peninsula in a wide arc from a point north of Port Harrison on Hudson Bay to Knob Lake at latitude 55°N. and thence northeastward into Labrador.

The total annual precipitation ranges from 30 to 40 inches over most of southern Quebec and, while quite evenly distributed throughout the year, there is a tendency toward a maximum in the summer and early autumn. Precipitation is substantially heavier in the middle St. Lawrence Valley and in the Eastern Townships than in the Lower Lakes region of Ontario. The annual total at Montreal is 41.8 inches as compared to 30.9 inches at Toronto. Not only is the total fall greater but the number of days with measurable precipitation increases from 143 days at Toronto to 160 days at Montreal. Severe droughts are unusual throughout the agricultural area of southern Quebec.

North of the St. Lawrence River and Gulf, precipitation varies considerably with topography and elevation. Where stations are situated near the crest of steeply rising slopes but facing the river, the precipitation is considerably increased, particularly in the Laurentide Park region between Quebec City and Lake St. John. Annual precipitation is quite heavy in the central interior of the province averaging 40 inches at Chibougamau, 36 inches at Lake Manouan, 29 inches at Mistassini Post, and 31 inches at Nitchequon, but decreases toward the west and northwest to 21 inches at Fort McKenzie, 16 inches at Fort Chimo, 14 inches at Cape Hopes Advance, and 15 inches at Port Harrison.

Winter snowfall is heavy everywhere in Quebec, and over a large section of the central interior of the province the accumulation on the ground at the end of winter exceeds four or even five feet. The heavy snow is welcomed by foresters and farmers as well as by tourists and sportsmen at winter resorts in the Laurentian Highlands. Average winter snowfall varies from 80 to 100 inches throughout most of the Ottawa and middle St. Lawrence Valleys but below Quebec City and in the Appalachian Highlands larger totals of 100 to 125 inches are general. The heaviest snowfall in Eastern Canada, 120 to more than 160 inches occurs north of the Gulf of St. Lawrence where moisture-laden air is forced against the steep slopes of the north shore. In this area winter is the season of maximum precipitation.

In the far north, west of Ungava Bay, the average snowfall is less than 60 inches but amounts increase rapidly toward the interior and at higher elevations of the eastern portion of the Canadian Shield where the total winter snowfall exceeds ten feet.

The Maritime Provinces

Lying between 43° and 48°N. latitude, the Maritime Provinces comprise 51,000 sq. miles, an area almost equal to that of Southern Ontario. The region is one of varied relief and as a result of the long and deeply indented coastline no part of the area is more