

PHYSICAL CHARACTERISTICS OF CANADA.

Islands.—The northern and western coasts of Canada are skirted by clusters of islands. Those on the north are mostly within the Arctic circle. On the west Vancouver and Queen Charlotte Islands are the largest and most important. On the east, besides the separate island colony of Newfoundland, there are the Cape Breton Island, forming part of the province of Nova Scotia, Prince Edward Island, forming one of the nine provinces of Canada, the Magdalen Islands and the island of Anticosti. To the south of Newfoundland are the two small islands of St. Pierre and Miquelon belonging to France. In lake Huron is the island of Manitoulin and the so-called Thirty Thousand Islands of Georgian Bay. In the St. Lawrence river, just below lake Ontario, are the picturesque Thousand Islands.

GEOLOGY IN RELATION TO AGRICULTURE IN CANADA.

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The agricultural possibilities of any country are dependent upon the character of the soil and on the physiographic features. Both of these are closely related to the geology and geological history of the country.

Soils.—Soil, strictly speaking, consists of but a thin surface layer of loose material containing humus, derived from the decomposition of organic matter and other compounds suitable for plant growth. The great proportion of both the soil and the subsoil consists of mineral matter. From the mineral constituents are derived potash and phosphoric acid, two of the chief compounds essential to the growth of vegetation. The mineral constituents are derived from rocks that through various processes have been decomposed into incoherent particles. Soils may be wholly residual, that is, they may consist of material derived from the decay of immediately underlying rocks; or they may consist of transported material or of a mixture of residual and transported material.

The level, hilly or mountainous character of the country is dependent on the nature of the rocks and on the processes of uplift, folding and erosion to which they have been subjected. Sedimentary rocks like sandstones and shales yield readily to the action of such destructive agents as variations of temperature, frost, rain, wind, running water and ice, and of chemical processes such as oxidation, hydration and carbonation. The harder rocks, on the other hand, such as quartzites, slates and granites are more resistant; mountains composed of these are therefore more slowly subdued than are those composed of sandstones and shales.

Agricultural Regions.—The portion of Canada, the climatic conditions of which are favourable to agriculture, may be divided into five great regions:

1. The Laurentian plateau, consisting of the vast upland surrounding Hudson bay and underlain chiefly by igneous rocks, such as granite, together with a less amount of hardened sediments.