

GEOLOGY IN RELATION TO AGRICULTURE IN CANADA

2. The Appalachian region, occupying the Maritime Provinces and eastern Quebec and underlain by folded sediments and igneous rocks.

3. The St. Lawrence lowlands of southern Quebec and southern Ontario underlain by nearly horizontal sediments.

4. The Plain region of Manitoba, Saskatchewan and Alberta underlain by flat-lying sediments.

5. The Cordilleran region, the mountainous region extending from the Rocky mountains to the Pacific coast and underlain by folded sediments and igneous rocks.

These five regions have all been exposed to weathering for a long time. The Laurentian plateau is the oldest land area of any great extent in Canada.

During the long ages that this Laurentian continent has been exposed, the area to the southeast, south and west has been submerged for long periods beneath the sea, and great thicknesses of sandstones, shales, and limestones have been laid down. These sediments have been elevated subsequently above sea level, certain sections such as southwestern Quebec, southern Ontario and the plains of Manitoba, Saskatchewan and Alberta rising so gently as to produce little disturbance of the rock strata; while in eastern Quebec, New Brunswick, Nova Scotia and British Columbia the strata have been folded and crushed into mountain ranges and intruded by igneous rocks.

The soils derived from these rocks by long subjection to decomposing agencies were greatly disturbed in recent times by glaciation. Nearly the whole of Canada was covered by ice, which in the southern part of the country had a general southerly movement. The result of the glaciation was that great stretches of country were denuded of soil, and other areas received accessions of a great quantity of transported material. Towards the close of the Glacial period the outlets of many depressions were closed by lobes of the retreating glaciers and became filled with water. These lakes formed areas for the deposition of fine sediments, such as clay and silt, and on the final melting of the glaciers large stretches of level fertile land remained.

Laurentian Plateau.—The most extensive physiographic unit of Canada is the subdued Laurentian plateau. This is a gently sloping plateau of rather even surface, comparatively low and seldom rising 2,000 feet above the sea. The hills breaking the even surface rise but a few hundred feet at most above the general level.

It is a great U-shaped area surrounding Hudson bay and extends from the Atlantic ocean, on the Labrador coast, west to a line running northwest through Lake Winnipeg, Lake Athabaska, Great Slave lake and Great Bear lake. It extends south to Lake Huron and Lake Superior, and occupies nearly all the provinces of Ontario and Quebec, except the area southwest of a line running from Kingston to Georgian bay, that part of eastern Ontario forming the angle between the Ottawa and St. Lawrence rivers, and that part of Quebec south of St. Lawrence river.