THE MINERAL WEALTH OF CANADA.

thirty-ninth parallel of latitude, the point to which the ice-sheet extended. South of this line they are the prevailing class, except in the river valleys. Soils derived from the disintegration of sandstone are of course very sandy, containing only the small amount of clay present in the original rock. Shales and soft slates weather to clay soils undesirably heavy and compact, except where the shale contained considerable sand. The disintegration of a limestone is usually accompanied by solution, so that the resulting soil is largely composed of the original impurities, chiefly clay and iron. Indeed, a calcareous shale will, on weathering to a clay, retain much of the lime, while a soil resulting from the disintegration of a limestone may be nearly devoid of calcareous material. Sedentary soils formed from granitic rocks are usually thin and poor. When decomposition is very rapid, the felspars and micas yield a clay retaining some of the alkaline and calcareous ingredients of the original rock, and this mixed with the abundant silica furnishes a fair soil. All of these sedentary soils gradually merge by coarser materials into the rocks on which they rest.

Transported soils embrace those which have been formed through the agency of water or glacial ice, and which bear no relationship to the rocks beneath them. In Canada, those due to glacial action are by far the most extensive and among the most fertile. These soils have been spread over the country often to a depth of several hundred feet, obliterating frequently the old drainage systems and giving a new

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