

character, both as to color and other properties, to the soil which it forms.

Generally speaking there are two classes of soils—heavy and light ; in the former, clay predominates ; and in the latter, sand or gravel.

CLAY SOILS, though much more difficult to cultivate, possess more enduring fertility than sandy soils.—Clay soils are generally cold and wet, and very soft when wet ; and hard when dry ; and retains for a long time the various manures applied to them ; but require much skill in their management.

Argillaceous or clayey soils, of which there are large tracts in the Lower Provinces, are best adapted to oats, turnips, and the various grasses. The action of frost on this class of soils, having an elevating and pulverising effect, is very beneficial—equal to once ploughing. However, in some cases the frost operates very injuriously on grass lands by disengaging the roots from the soil beneath.

SILECIOUS or light soils, on the other hand, are easily worked—dry, friable, and hungry ; and being of a porous nature, water and manure applied to them escapes readily, and renders them liable to drouth and exhaustion.

The principal part of the land along the Eastern coast of Nova Scotia and New Brunswick, and along the banks of many of the rivers emptying into the Straits of Northumberland, are of this class of soils ; besides numerous large tracts in other sections of the Provinces. However, when such soils are put in a proper state of cultiva-

tion, and when not affected by drouth, they produce good crops of wheat, barley, and potatoes.

In the selection of a farm, it is not best to select lands possessing too large a per centage—say seventy—of either sand or clay. However, the relative position of lands with reference to hills, has an influence on soils ; for example, light soils are most fertile when flat, and situated lower than the surrounding country ; and clayey soils are frequently found more productive when situated on the sides of hills.

Deep soils retain moisture much longer than shallow soils, and afford room for the roots of plants,—therefore they are preferable. If land is too wet, underdraining will remedy the evil. In soils where the surface is clay and the subsoil sand, a good soil may easily be produced ; but if sand underlies sand, and clay underlies clay, without any mixture of vegetable soil, it is unfavourable for agricultural operations.

The improvement of soils is affected either by chemical or mechanical operations. By chemical, various kinds of manures are applied ; and by mechanical, ploughing, subsoil ploughing, draining, &c., are understood. So that under these two departments, which are in a great measure blended, the whole science of agriculture hinges. There are many soils, in their natural state, very unproductive ; but when properly managed are found to be excellent. For instance, take a clayey soil which rests on a subsoil of the same nature, and under drain