

Nos.	Clay Per cent.	Sand Per cent.	Carb. of Lime. Per cent.	Humus Per ct
1 } First class	74	10	4½	11½
2 } of strong	81	6	4	8½
3 } wheatsoils	79	20	4	6½
4 } Rich Bar-	40	22	36	4
5 } ley Land,	20	67	3	10
6 } good wheat	58	36	122	4
7 } Land,.....	56	39	small	2
8 } ordinary do	60	38	quantities	2
9 } ordinary do	48	50	in each	2
10 } ordinary do	68	30		2
11 } Good Bar-	38	60		2
12 } ley Land,	33	65		2
13 } ordinary do	28	70		2
14 } Oat and rye	23½	75		1½
15 } Land, .....	18½	80		1½

Nos. 1, 2, and 3, are alluvial soils of the richest quality, and they are rendered easily managed by the large quantity of humus, or vegetable mould, which they contain. No. 4, is a fine clay loam, easily worked and kept in heart. No. 5 contains such large proportions of sand and humus mixed with the clay, as to adapt it well to the growth of barley and green crops, and it is therefore well suited for rotation crops. Nos. 6 and 7 are both good soils; the quantity of lime in some measure compensates for the small quantity of humus. Such a soil requires a proportionate quantity of dung to remedy this deficiency. Nos. 9 to 12 are fair average soils, but require the addition of lime or marl. Nos. 14 and 15 are light sands, requiring manure, judicious management, and the aid of a folding flock.

It may here be observed that if the vegetable or surface soil is only about 6 inches deep, its productiveness will be influenced by the character of the subsoil, or undersoil, which may be either too porous or too retentive, and, consequently, produce unfavourable effects in particular seasons. But if the surface soil varies from 9 to 12 inches, the character of the undersoil is of less moment, although a limestone bottom is considered the best.

We are told that the rotation must be governed in some respect by climate. This may be perfectly correct

as regards the value of the produce obtained from the soil; but we do not understand what particular influence climate can exert upon the chemical composition of a soil giving certain principles to, and receiving certain principles from plants, governed by the general laws of the vegetable economy, for wheat in New Brunswick and wheat in England require and receive the same principles and salts from the atmosphere and earth.

The following crops are those generally cultivated in these Provinces, we see no reason why the same system might not be adopted here. The crops are, wheat, barley, oats, rye, beans, peas, clover, potatoes, and turnips. Tares, or vetches, are also used in the rotation in Great Britain, and are appreciated as an excellent food for cattle, sheep, and pigs.

Although it is impossible to define any one system of rotation that will answer equally well in all situations, still "it may be stated as a principle that will hold true in most instances, that *alternate husbandry*, or the system of having green and grain crops to follow each other with some modification, is practicable on every soil," and as all soils by continued tillage will become languid and lose their fertility, notwithstanding manures, *pasturage* is introduced into the rotation to restore the exhausted nature of them.

*Rotation on clay soils.—Heavy clays of a cold nature.*—A well wrought naked summer fallow has been considered the basis of good husbandry on such soils; but when they are well furrow-drained it is thought that the turnip, potatoe, or other green crop might be substituted for the naked fallow. The fallow, generally dressed with lime, cropped with white beans and clover, has constituted the rotation on such soils. A crop of oats has succeeded the wheat, after which the land has been laid down to clover for two or three years, when it was again broken up.

The ordinary rotation on *thin clays*, is, 1. Turnips, well dunged. 2. Oats.