

is that in which the alternations of heat and cold are most regular, and the changes from one to the other most gradual; but judicious management may guard against even the disadvantages of climate. We seldom (in Canada, at all events,) experience much inconvenience from excessive heat or dryness,—the complaint is generally of wet and cold. The cause of this in America is obvious. As long as a country is, for the most part shaded with trees, the dense foliage intercepts the rays of the sun in their passage to the earth, and consequently prevents them from communicating heat to the soil. Again, from the numerous swamps and rivers, and immense mass of vegetation, fogs and vapours arise, preventing the earth from receiving that modicum of heat which it otherwise would. These fogs and vapours are caused by evaporation, which drives back the heat. When the forest is taken off, and the country drained, these causes no longer exist; and the climate consequently undergoes a change, becoming more favourable to agricultural pursuits. This has been the case long since in Britain; while in America, the change is beginning to take place. We know, that in what are called the "older parts of the country," the winters are said to be less severe, and certainly are of shorter duration, than in the "newly-settled" districts. Still great inconvenience is often felt in the former, as well as the latter, from excess of moisture. This may be obviated by a proper system of draining. This is a subject to which the attention of men of science in Europe is now very generally directed, and their discoveries and discussions have led to much improvement in the system of agriculture, on the other side of the Atlantic, while much waste land has been brought into cultivation by the means.

"Thorough draining," we hold to be the first thing necessary to make a farm available to its full extent, whatever may be the consistency of the soil, and in this Province, as well as elsewhere. Not only does this deserve the attention of the farmers on "old land," which has become, by constant tillage, nearly assupplanted to that of the old country; but also of the "settler," who may, by draining as much as the rough nature of his farm will permit, save to himself the use of such ground, from which the young grain is frequently destroyed by the settling of water.

Vegetation, it should be remembered, is assisted by moisture passing through the soil; it is de-

stroyed and prevented by the stagnation of water in and upon the land. To the numerous class of farmers who have their land undrained, and are great losers in consequence, from the wrong impression, that it does not require draining, being already dry enough, the following passage, from perhaps the most useful work on agriculture that has issued from the press, may be of service:—

"Land," says Mr. Stephens, "though it does not contain such an abundance of water as to obstruct arable culture, may nevertheless, by its inherent wetness, prevent or retard the luxuriant growth of useful plants, as much as decidedly wet land. The truth is, that deficiency of crops on apparently dry land, is frequently attributed to unskillful husbandry, when it really arises from the baleful influence of concealed stagnant water; and the want of skill is shown, not so much in the management of the arable culture of the land, as in the neglecting to remove the true cause of the deficiency of the crop, namely, the concealed stagnant water."*

The same writer gives it as his opinion, that there is scarcely a farm "throughout the kingdom," which would not be much the better for thorough draining. If this be true with regard to Britain, it is certainly so in Canada.

The fact is, that by deep-draining, the agriculturist brings into use an additional portion of soil, and consequently enables his crops to absorb more nutriment. The water being once drawn off, the soil will bear tillage to a greater depth,—it may be ploughed and trenched as deep as the level of the drain; by this means a fresh substance is turned up, and mingled with the surface soil which has become exhausted; but going below the surface again acquires the materials of vegetation. The consequence necessarily is, that the land is rendered capable of yielding a greater number of crops without being exhausted, from the simple fact, that there is much more to exhaust. The farmer, by this means, as has been well said, "adds to the available extent of his possessions."

It is now necessary to speak of the treatment of the different kinds of soils. Draining, of which something has been said, is universally admitted to be useful and necessary to the proper management of all descriptions of soil.

* Stephen's Book of the Farm, as quoted in Blackwood's Magazine.