

only attempts to introduce improvements approved by experience, in countries whose circumstances resemble those of our own. If it have a fault in this respect, it is that of not going sufficiently far in those directions in which the school systems of all parts of this continent are now steadily advancing. As already stated, some of its details will require modification to adapt it to the growth of another year, but in its main provisions it is hoped that it will prove acceptable to the intelligence of the country and to a majority of the legislature.

REMARKS

On the Climate and Soil of Nova Scotia, in reference to their agricultural capabilities.

[Continued from last number.]

Admitting, however, that the annual produce of the soil in Nova Scotia, will bear comparison with that of the best grain growing districts in America, our farmers may still be liable to some disadvantages from the nature of the climate, and especially from the length of the winter.

1. There may be a deficiency of time for farm work. Prof. Johnston on inquiring into this subject in relation to New Brunswick, finds that the average time of latest ploughing is the 17th November, and the average time of earliest sowing the 21st April. He infers from this that the average duration of summer, including under this term the working time of spring and autumn, is six months and twenty-two days. He then takes three months and 17 days as the average time required for the growth of spring grain, and calculates that the time for spring and autumn work before sowing and after reaping, is three months and three days. These numbers are equally applicable to Nova Scotia, taking the average between the earliest districts in the western countries and the latest parts of the eastern hills. On comparing these dates with those for western New York, Prof. Johnston finds; "1st, that the winter in Western New York is 22 days shorter than that in New Brunswick; 2nd, that this shortness consists in the addition of 21 days to the open weather of fall and one day to the open weather of spring." To counterbalance this advantage, he finds that the New York farmer has a somewhat larger number of rainy days, which reduce his extra time in fall to between 10 and 15 days. These facts would induce us to conclude that the advantage in regard to open weather in New York and Upper Canada as compared with Nova Scotia, does not exceed 20 working days in the year, and this almost altogether in the fall. The farmers in those countries appear to have as much reason to complain of short springs as we have.

There can be no doubt that the period for out of door labour in Nova Scotia is

much shorter than in England or Scotland. It must be remembered, however, that the number of rainy days in those countries is much greater than with us, and that the action of the frost on the soil here tends to allow the farmer to dispense with the repeated ploughings necessary there. It appears from the meteorological register of Mr. Poole, of the Albion Mines, that we have an average number of 114 days of rain and 60 of snow. This is greater than the number for New Brunswick as given by Johnston, but considerably less than that for most parts of Britain. On this subject Johnston remarks:

"The number of days during which rain impedes the operations of the British farmer is notoriously very great. In some Counties, which possess soils of a peculiarly tenacious character, it brings in another evil than that which attends the New Brunswick winter. It not only shortens the period during which the work of preparing the land can be done, but it also makes it heavier or more difficult to do. Thus the farmer's expenses in Great Britain are considerably increased by the precarious nature of the climate he lives in.

But in New Brunswick the climate is more steady and equable. Rains do not so constantly fall, and when they do descend, the soils in most parts of the Province are so porous as readily to allow them to pass through. Thus the out-door operations of the farmer are less impeded by rain, and the disposable time he possesses, compared with that of the British farmer, is really not to be measured by the number of days at the disposal of each."

2. The winter may exert injurious influences on grass lands, on stock and on the employment of labour, which may seriously diminish the Farmers' profits. On the former of these subjects I quote the following remarks from Johnston

"The substance of the evils produced upon grass land are—That when the winter is changeable, so that a thaw comes on and fills the ground with water, which freezes afterwards, or when the ground, before being covered with snow, is subjected to a severe frost, the grass in old pastures and meadows, and the clover in artificial grass lands, is liable to be thrown out and winter killed,—that for the same reason winter grain cannot be sown,—that this effect is less on dry and light lands than on such as are wet and heavy, and that early spring rolling very much remedies the evil in grass lands,—that when uncovered the fine soil is sometimes drifted before the winds in winter,—that the melting of the snows in spring occasionally chills the soils, causes them to run to moss, and sometimes washes them and diminishes their strength.

The evils complained of here, except the last, which is doubtful, are experienced by New Brunswick in common

with all the northern parts of America. They are only occasional, however, and incidental, and to a certain degree cannot be prevented.

The inability to grow winter grain is not unfrequent in some parts of Scotland, owing to a similar action of the frost, and the winter killing of the clover is very generally complained of both in England and Scotland, and many unavailing remedies have been tried to prevent it.

Only two methods can be depended upon, as likely to be efficacious in lessening the effects of the alternate frosts and thaws.

These are, first, a thorough drainage of the land most subject to be winter killed or chilled in spring, that the water may have a more speedy escape, and thus to a less extent linger and freeze in it. The other is the early rolling in spring, recommended by Mr Farmer of Charlotte County, and practised with so much advantage in the old country. Where land is in good heart, these two methods will often prevent the evils complained of, but for the occasional scorching effects of the cold winds, which, like the north west winds in the neighborhood of Saint Andrews, sweeps over the ground when naked, and appears actually to burn up the grass, there is one other remedy, in regard to which I may here introduce a few general observations, which may apply also to other cases similar to the present.

On the farms of New Brunswick, wood is to a certain extent considered a nuisance which it is desirable to get rid of, and hence it has almost every where been cut down indiscriminately, and few attempts have been made to plant belts or clumps of trees, which in Great Britain are every where found necessary for the purpose of shelter. The consequence of this is, that almost every cleared section of the country is exposed to certain cold or prevailing winds, which scarcely fail every now and then in producing evidently injurious effects upon the farmer's crops.

Against these winds it is very desirable that shelter should be procured. If belts or clumps of the original forests refuse to withstand the winds to which they have been unaccustomed, when the trees which sheltered them have been cut down, as I understand is very generally the case, then plantations should be made across the course of the prevailing or most injurious winds. It will surprise persons who have no experience as to the effect of such shelter, to see how much good is produced by it. Not only are the stock kept warm, which feed in pastures so protected, but the herbage and all the other crops are remarkably benefited by it. I know of one formerly unsheltered locality in the north of England, not exposed to the sweep of the sea breeze, but to the sweep of the wind coming down a wide valley, the grass upon which