The Carleton Sentinel;

AND

FAMILY JOURNAL.

Devoted to Agriculture, Literature, and General Intelligence.

Published and Edited "Our Queen and Constitution." By James S. Segee.

NUMBER 4. TUESDAY, JULY 16, 1850. VOLUME 3.

AGRICULTURE.

REPORT ON THE AGRICULTURAL CAPABILITIES OF THE PROVINCE OF NEW BRUNSWICK.

BY J. F. W. JOHNSTON, F. R. S., S. L. & E.

(Continued from our last.)

The substance of the evils produced upon grass land, as before expressed, 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 fields, 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 or 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 can 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 efficatious 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 neighbourhood 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 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 preserve or plant belts or clumps of trees, which in Great Britain are everywhere found so 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 any where 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 preserved. 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 effects of such shelter, to see how very 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 benefitted by it. I know of one formerly unsheltered locality in the north of England, not exposed to the sea breeze, but to the sweep of the wind coming down a wide valley, the grass upon which, for pasture, was raised from 5s. to 40s. an acre of yearly rent, solely by the planting of belts of trees so as to turn off the prevailing winds.

Whoever travels through New Brunswick will every now and then come to spots where a very little previous experience will enable him to perceive the evil consequences of an ignorance or disregard of the importance of shelter in a country like this. I may instance as a striking case the Parish of New Bandon, along the coasts of the Bay of Chaleur, where the cleared land extends in a narrow strip, skirted on the one side by the sea, and on the other by the original forest.

All the force of the sea winds beats upon the unhappy fields, crops cattle and inhabitants, rendering the natural richness for which the soil of the district is remarkable, of much less avail to its storm-tormented cultivators.

This want of shelter from the sea is one reason why the second range of lots is talked of as better than those on the shore, and which has introduced a mode of speech common along this coast, than one situation, or farm, is so many pea-jackets warmer than another.

Such shelter as I now recommend could, in a country like this, where land is still abundant and cheap, and where young trees can easily be made to grow, be very readily established. Its benefits would be that it would protect the land from the fierce winds, and prevent the grass and clover from being winter killed; it would assuage the severity of the winter both to the stock and to their masters, and it might ultimately, upon dry lands, restore the ability of young winter wheat. The new settler knows that in his first cleared field, while still surrounded by wood, winter wheat grows well, and that its ability to do so decreases as the natural shelter is cleared away.

On the whole, I think we must allow that though the period for out-door labour is shorter in New Brunswick—as it is in the Canadas, Maine, and in the Northern States—than in England, or in parts of Scotland, yet that the action of winter upon the soil is such as materially to lessen the labour necessary to bring it into a proper state of tilth; and though we may not go so far as Mr. Gray, in regard to the comparative amount of work which a pair of horses under proper management may be made to perform during the more brief summer, yet we may, I think, fairly conclude that there is nothing in the length of the winter which ought—where time is diligently employed, and *its value is known*—seriously to interfere with the progress of out-door operations, or materially to add to the expenses of arable cultivation.

2nd. *As to the extent to which the Winter interferes with and diminishes the Farmer's profits.*

We have seen that the harvests of New Brunswick are not to be complained of; that in comparison with other parts of North America, they are large. This secures a sufficient supply of human food, but may not make equally sure that which is required for the healthy nourishment of stock. The crops of hay are not complained of where the land is properly treated, but the long winter of 6 1-2 months, during which all animals must be kept in the house, makes the New Brunswick farmer unable, with the same quantity of hay or other food, to support the same number of stock as the English farmer can. This evil the provincial farmer expresses, by saying "that the winter eats up the Summer."

In regard to this point it is important to bear in mind that the New Brunswick farmer is subject to this evil in common with other parts of northern America; that howsoever he may complain, there is no possibility of shortening the period during which his stock must be fed in the house; that his only resource is to adopt his system of husbandry so as to raise the largest possible amount of food for his stock from the smallest breadth of land; and lastly, that the very climate he complains of affords him some special facilities for doing so. To these latter points it will be most useful in this place to draw Your Excellency's attention.

First. As to the growth of hay, upon which all kinds of stock have hitherto been fed almost exclusively, the practice of mowing the grass land year after year, for ten to twelve or even twenty years in succession, is a sure way of not only exhausting the land, and finally of making it much more expensive to cultivate, but also of making it necessary to devote a much larger portion of the cleared surface to the production of food for the cattle, than under more reasonable management would be required. Let the farmer cease to cut his grass so frequently from the same fields without giving them any manure, and he will reap more from each when he does cut them. When the grain crop is reaped the land should always be sown down with grass seed instead of being left as it so frequently is in some districts, to cover itself with any wild grasses or weeds that choose to spring up; and where the presence of stumps upon new land prevents its being ploughed, after two or three years, let it be pastured only till the roots can be taken up, or let it be top dressed with manure to some extent, so long as it must be cut for hay. This top dressing might be easily effected on new land, if the manure which is of necessity made, but which by new settlers is so generally neglected and allowed to run to waste, were carefully collected and spread over the grass land in early spring. The ease with which first crops are raised by new settlers from burned land, without any manure, and the practice of clearing and taking the corn crops off a fresh portion every year, has led to this waste of manure, and to the starved crops of hay which so much of the cleared land now yields.

This custom of neglecting the hay land ought now to be given up by every settler, new and old, and after two years' cutting at the most, except where it is very rank, they ought to be ploughed up and cropped after being manured, or where the stumps still remain and the land cannot be ploughed, it should be top dressed in the Spring when the young grass begins to sprout. Thus larger crops of hay would be universally obtained, and a smaller portion of the cleared surface of the Province be taken up in the feeding of its stock.

Second. But another equally important step in this direction, which it is the duty of the New Brunswick farmer to take, is the growth of green crops in much greater abundance, and over a larger portion of his land, than he has ever hitherto devoted to this purpose; and it is here that the special adaption of the climate to which I have alluded tells. The Tables of produce given in a preceding Chapter, have shown that in potatoes and turnips this Province greatly exceeds the present average produce of any of the other parts of North America, with which we have compared it. The quantity of crop thus reaped, confirms the uniform testimony borne to myself personally, in all parts of the Province, as to the remarkable manner in which all root crops appear to thrive; and the frost which appears to give annoyance in so many ways, is one of the agents by which this peculiar adaption to root crops is brought about. It opens and pulverizes the soil, and "renders it fitter for green crops than any number of ploughings in winter could do." (Mr. Gray.)

This adaption to the growth of roots, enables the soil to produce large crops, and these large crops go farther in the feeding of cattle, than the hay off the same quantity of land will do, even where it has been manured as I have above recommended.

According to some, an acre of land in turnips will go three times as far as the same acre under hay. Crops vary so much however, that no general rule can be established. It is certain only, that by feeding cattle partly with turnips and partly with hay or other dry food, not only will the same extent of land support more stock, but the same weight of food will go farther than when either of the two is given to cattle singly.

Nor is the good conferred upon the farmer by large green crops confined to the immediate influence upon the cattle and upon the extent of land necessary to support them; but the manure of a rich quality, which they are the means of placing at the farmer's disposal, enables the same extent of land to produce more corn than before, so that in a double sense he is benefitted by this culture. He employs less land than before in feeding his cattle, and he grows more corn per acre on the remainder of his farm.

If therefore it be possible to shorten in fact the period of time during which the stock must be tended and fed in the house, the profit of the farmer, by improvements in his present system of cultivation and of feeding, may be increased in a degree equal to what, with his present system of management, would follow from an actual shortening of the winter.

I would press the above considerations upon the practical farmer, as vitally important to his own individual profit, as well as to the fundamental interest of the Province.

Another way in which, according to some, the winter is hurtful to the interest of the New Brunswick farmer, is the directly injurious effect which it produces upon his stock. There can be no question that extreme cold, if animals are exposed to it, must be injurious to their health, and must interfere with the farmer's profit in keeping them. But if cattle are properly sheltered and fed, this cold in itself ought to produce no other effect, than simply to cause the consumpton of a quantity of food per day, somewhat larger than under a milder atmosphere would be required. As however the climate of the Province might exercise, besides this, some special evil influence upon cattle, which a stranger to its winters could not anticipate, I have thought it right to consult the practical men of the Province, and I have been favoured with the following opinions upon the subject:—Effect of the winter upon stock.

1. Where proper care is taken, as housing, &c., the effects of the long winter are not injurious. Cattle in this country are not generally subject to disease.

D. B. Stevens, *Saint John.*