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 3. TUESDAY, JULY 9, 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.)

From this Table we deduce for the mean period of growth of—

		Months.	Days
1st.	Spring wheat,	3	20
2d.	Barley,	3	6
3d.	Oats,	3	20
4th.	Spring Rye,	4	0
5th.	Buckwheat,	3	3
6th.	Indian Corn,	3	22
	Average period of growth,	3	17

Did my limits permit, I might advert to several interesting points which are either brought out or suggested by a consideration of the dates embodied in these two Tables, and which form a valuable record of the existing climatic conditions of the Province, in so far as they affect some of the most important operations of the farmer.

But returning to our immediate topic, we have—

	Months.	Days.
The average duration of Summer,	6	22
The average period of growth of crops, from the above Table,	3	17
Leaving for the Spring and autumn ploughing, &c., before seed time and after reaping,	3	3

If we examine the second of the above tables, we find that the corn crops are reaped between the 20th August and the end of September. Some of the returns give a later date than the 22nd of October, and that is for Indian corn; but the average latest ploughing deduced from Table XXX. is on the 21st of November, leaving about seven weeks clear for autumn ploughing before the winter sets in. In Spring, therefore, before the average sowing time, there will be about six weeks, during which ploughing and other preparatory treatment of the land can be carried on.

It must be confessed that these periods are short compared with the length of time for out-door labour which the English and more southern Scottish farmers possess.—The effect of this, if other things were all equal, would be to impose upon the New Brunswick farmer the necessity of employing a larger force of men and cattle to perform the work of a farm of equal extent than the British farmer needs to do. If this be so, the effect must be to increase the comparative outlay of the New Brunswick cultivator, and to diminish in a proportionate degree his profits.

Two points, however, have been brought under my notice as in some measure palliating or countervailing any evil which may arise from this cause; thus—

1st. 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 in addition to 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 equible. Rains do not so constantly fall, and when they do descend, the soils in most parts of the Province are so porous as to allow them readily to pass through. Thus the out-door operations of the farmer are less impeded by rain and the disposable time he possess, compared with that of the British farmer, is really not to be measured by the number of days at the disposal of each.

The following Table represents the number of rainy days in the several months of the year for five years, as observed by Mr. Peter Dewar, at Garner's Creek, in the County of Saint John:—

XXXII.

Number of rainy days.

Months.	1845.	1846.	1847.	1848.	1849.	Mean No.
January,	2	1	...	5	3	2 1-5
February,	5	...	1	3	...	1 4-5
March,	4	8	1	2	6	4 1-5
April,	2	3	6	4	5	4
May,	10	8	4	7	6	7
June,	7	10	12	9	5	8 3-5
July,	15	9	7	9	4	8 4-5
August,	7	5	9	9	6	7 1-5
September,	9	4	10	11	6	8
October,	7	6	6	12	8	7 4-5
November,	10	5	5	6	?	?
December,	6	...	9	9	?	?
Rainy days,	84	59	70	86	?	?
Snowy days,	42	33	45	35	20	?

I am informed that in the County of Saint John, where the Register was kept from which the above Table was compiled, more rain falls than is usual throughout the Province; but assuming the above to be a fair average of the rainy days, we have in the month of April and May, in which the Spring ploughing and sowing has to be performed, only eleven rainy days to interrupt the farmer's operations. Again, in October and November, when the Fall weather. Supposing therefore that every one of these rainy days are stormy enough to arrest out-door operations which I imagine cannot be the case, there remain of dry ploughing time in Spring upwards of five weeks, and in Autumn a clear month.

With a single pair of horses, an industrious man will plough, sow and harrow many acres of land during these two periods.

The average number of days during which the River St. John and the New York Canals have been open during the last 25 years respectively, are—

Saint John River is open	218 days.
New York Canals "	240 "
Difference,	22 days.

This indicates a difference in the length of the Winter in the two countries of 22 days, which is almost identical with the difference deduced from the period of closing the canals.

Thus, two facts follow from the numbers in the Tables:

1st. That the winter in Western New York is 22 days shorter than in New Brunswick.

2nd. That this shortness consists in the addition of 21 days to the open weather of the fall, and only one day to the open weather of Spring.

It appears, therefore, for his Spring operations, the New York farmer has only one day's advantage over the New Brunswick farmer, while he has 21 days longer to labour his land in the Autumn.

But two points of importance will more or less affect the advantage he will derive from this greater length of Summer; these are—

1st. The period which elapses on an average between sowing and reaping, or the time which his crops take to grow. Upon this point I am in possession of no data; but if this time be longer in New York, it will lessen in a proportionate degree the time which will remain for plowing and preparing the land in the fall.

2nd. The number of rainy days which occur during the fall, in comparison with New Brunswick, and in the months of April and May, when the Spring work is performed—

These were, for Rochester and New York, and for St John, in New Brunswick, 1848:—

XXXV.

	Rochester.	New York.	St. John, N. B.
April,	6	6	4
May,	15	15	7
September,	13	8	11
October,	13	9	12
November,	4	7	6
	51	45	40

If we were entitled to consider these as averages, which of course we cannot safely do, we should conclude that the 22 days longer weather which the New York farmer has for out-door labour, is diminished at Rochester one half, by the greater number of rainy days, and at New York, one fourth.

All that we can safely conclude from the above data is, that the New York farmer, if his crops grow as fast as they do on the New Brunswick farms, has from ten to fifteen days longer for fall ploughing—a difference which, to an industrious farmer, is not without its value. In both countries equal haste must be exercised in despatching the Spring operations.

This last remark brings me to consider the second point in reference to the New Brunswick winter, which is supposed to be of importance in connection with its effect upon the farmer's out-door labour.

2nd. I am informed that the severe frosts in winter generally penetrate so deep into the ground, especially when it is not covered with grass, as to raise up and separate the particles from each other to a considerable depth; so that when the thaw comes, it is already so loose and open as scarcely to require ploughing at all, or if plonghed, to be done with little force and great speed.

There is much truth in the fact thus stated, and much apparent reason in the statement which follows it. This effect of the frost may also cause us to hesitate before we condemn as niggardly and universally wrong, the prevailing custom of giving the land, in nearly all cases only one ploughing. In so far as the mere mechanical lossening of the soil is concerned, this one ploughing in New Brunswick, may, with the aid of the winter, be equal to two ploughings in Great Britain. But ploughing has also other purposes to serve, to which I shall return on a subsequent occasion.

The practical point to ascertain is, how far this day of the Winter of preparatory labours of the farm—thus lessen the expense of cultivation, and virtually prolong the season of out-door employment. I have been favoured with many opinions in reference to the general effects of the frost in opening, mellowing and rendering friable, soils of every description; but few of them advert specifically to the degree of economical benefit which the farm derives from it. Mr. Robert Gray, of York County, whose long familiarity with Scottish Agriculture, as a practical farmer give his opinion much weight, writes me as follows:—"The frost of winter leaves the land in a very friable state, and in better order for green crops than any number of ploughings done in winter could make it. On this account I believe a pair of horses could work as much land here under a given rotation as they would in Scotland."

This opinion of Mr. Gray appears to settle the whole question; which is altogether an economical one. We are inquiring whether the shortness of Summer will necessarily impose upon the New Brunswick farmer the necessity of maintaining a larger force of men and horses than the British farmer would require, to do the same work, plough and sow the same number of acres, and so on, and Mr. Gray, taking into account only the effects of the frost upon the soil, distinctly answers that it will not.

Did I feel myself justified in adopting the opinion of one man only on so important a matter, I should have much hesitation in dissenting from that of a practical man so cautious, so experienced, and so skilful as Mr. Gray.—I have thought it my duty therefore to consult others also, and without any selection or omission, I insert all the answers I have received as to the effects of the winter upon the soils.

A. Its effects on ploughed land are favourable.

1. Advantageous to ploughed land, by pulverizing and saving labour in ploughing; the effects of the heavy covering of snow remaining on the ground during the whole of the winter are decidedly in favour of the future crop.

D. B. Stevens, *Saint John.*

2. The effects of long winters on the soil are good, if the snow lies on until April.

Joseph Walton, *Charlotte.*

3. Not injurious when well covered with snow.

David Mowatt, *Charlotte.*

4. Long winters pulverize and enrich the soil, particularly when the snow lies late.

James Stevenson, *Charlotte.*

6. On fallow I consider the effect beneficial.

John Farmer, *Charlotte.*

8. The effect of the long winters is to interrupt decomposition and change therein, and it is retained in the same state as it is at the setting in of the frost. It has however the tendency to pulverize and loosen the soil, and save some labour of the plough.

R. K. Gilbert, *Westmorland.*

10. If the land is frozen in the fall, and covered with snow during the winter, it is favourable for crops the following Spring. R. B. Chapman, *Westmorland.*

12. If the snow falls early and remains on the ground until the weather becomes mild in the Spring, it is considered favourable to the soil.

Wm. Crane, *Westmorland.*