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AGRICULTURE.

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

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(Continued from our last.)

But, as it is to be expected, the above remarks do not apply equally at the present moment to all parts of the Province. Differences of soil, skill and energy, and even diversities of blood, have gradually introduced marked differences also in the practice and produce of different districts. On this point also I introduce some observations handed to me by Mr. Brown, in preference to any of my own. They relate chiefly, it may be seen, to what may be called the externals of agriculture:—

"At the present time, the degree of skill manifested in farming, and the extent of progress made, are more owing to casual or accidental circumstances, than to the relative advantages or natural capabilities of the land in the different Counties. Foremost in agricultural improvement stands the County of Northumberland, where thirty years ago it was confidently affirmed, that as soon as the pine timber disappeared the inhabitants would disappear also. In Newcastle, Douglastown, Chatham, and Napan, in particular, the appearance of the fields, the ploughing, the implements of husbandry, stock, buildings, fences, &c., all indicate an advancement in agricultural skill beyond what is to be found in any other part of the Province.

"In the year 1846 fifteen thousand bushels of wheat were ground in the Chatham Mills, which had been grown in that quarter. These improvements had chiefly arisen from the labour and skill of men bred to farming in the mother country, and from the beneficial effect which their example has wrought in a portion of the native population.

"Next in advancement, and with a soil, capabilities and advantages superior to Northumberland; stand about equally the two Counties of Gloucester and Restigouche, flanked by the bay of Chaleurs and the Restigouche river, and forty years ago deemed only a fit habitation for wild geese and beasts of prey. In agricultural skill and improvements the inhabitants are very little behind those of Northumberland; and the farm of Mr. Ferguson, at Bathurst, is one of the best managed in the Province. In these two Counties as well as those in Northumberland, the success has undoubtedly arisen from the skill, experience and example of old country farmers. There are many settlements of Acadian French in the County of Gloucester, and although they occupy some of the finest lands, and have held them for a long time, they are very far behind their fellow subjects of British origin in agricultural improvement.

"The soil, capabilities and agricultural advancement in the Counties of Charlotte and Saint John, may be ranked together. The town plat of Saint Andrews, and several of the towns within that Parish, with several others in the other Parishes, are not much behind those of Newcastle and Douglastown. The same may be said of many farms in the vicinity of Saint John, and a few in the other parts of the County. The soil of these two Counties is not generally so well adapted to farming pursuits as that of the other two Counties. In Charlotte the progress of improvement is mainly attributable to the exertions of the Agricultural Society. In agricultural advancement, as indicated by the ploughing, the implements of husbandry, stock, fences, buildings &c., Carleton, King's and York may all be put in one class. Carleton has the best soil, King's the best market. The natural capabilities of the soil of both these Counties are very great. The buildings and fences in the Counties of King's and York, taken together, are better than those in the County of Carleton. In all three are to be found excellent farms, well managed, and well cultivated and productive—in all three of them settlers pursuing the exhausting system of their fathers, and deeming every attempted improvement an innovation.

"The other five Counties, viz. Sunbury, Queen's, Kent, Westmorland and Albert, do not differ materially in their state of Agricultural progress. Kent possesses extensive resources, and contains many good farms, and some good farmers; a considerable portion of the farmers are Acadian French, who, like their brethren in other parts of the country, are slow to adopt any of the modern improvements.

"Sunbury and Queen's possess very fine productive and extensive tracts of island and intervale land. This gives many of the inhabitants a decided advantage over those who, in other places have no such privilege; and although there are in both these Counties many well conducted and well cultivated farms, the bulk of the people are more indebted for their success in farming to the natural fertility of the soil, and to the overflowing of the River St. John, than to their own advancement in agricultural knowledge. Westmorland and Albert possess, in like manner, very extensive and valuable marshes, made by the tides of the bay of Fundy, which, besides other produce, yield annually vast quantities of hay. This enables the inhabitants to keep large herds of cattle, and flocks of sheep, by means of which they have obtained the name of being the richest farmers in the country. Unconnected with those marshes there are some good farms; but like the people of Sunbury and Queen's, though some of them possess beautiful and well cultivated farms, the greater part of them are more indebted to the natural fertility of the soil, and to the tide waters of the Bay of Fundy, for their wealth and success, than to their own skill and progress in agricultural improvement."

After these details of Mr. Brown, both as to the general mode of husbandry in the Colony, as to the differences in skill and advancement which are visible in the practice and in implements of the different Counties, in which I generally agree. I shall only add a few brief observations on the more essential defects visible in the mode of managing and manuring the land, and in the kind of crops grown upon it in successive years.

1st. *The mode of managing and manuring the land.*

a. *Shallow ploughing.*—It is a consequence of the want of sufficient strength upon a farm that the work in general is slightly done. The ploughing especially, is shallow, because it is in this way most quickly performed.

This observation is true of all countries. In New Brunswick, according to Mr. Simonds of York County, the ploughing seldom exceeds three or four inches. From the observations of Mr. Brown it will be seen that the system of husbandry followed in the Province is essentially an exhausting system, but the practice of shallow ploughing makes the exhaustion of the surface more rapid and more complete.

In very many cases a deeper ploughing, by bringing up three or four inches of new soil, would renovate and restore the worn out surface, and put the farmer in a condition for beginning a new and less exhausting mode of culture, with the prospect of permanently retaining his land in good condition.

The trench plough is deserving the attention of Agricultural Societies, as applicable to the improvement of deep loams, according to this principle. In many other cases where it would be unsafe at once to bring up the under soil, because of its noxious qualities, the use of the sub-soil plough, made light so as to follow in the furrow of the common plough, would be eminently beneficial both to the root and corn crops.

b. *Autumn ploughing.*—From the experience I have had of the New Brunswick Fall, might be advantageously and perfectly performed to a much greater extent than at present is generally the case. This autumn ploughing not only lessens the labours of the ensuing spring, and thus forwards the work at a pressing season, but it buries again the manure of the potato fields, which the digging of the roots brings to the surface; it also exposes to the ameliorating action of the frost and of the winter air, the under soil which the plough has brought up.

c. *Drainage,* by means of leading drains, called French drains in this Province, or by smaller drains, open or covered, is in many localities much required before deeper ploughing or sub-soiling can be advantageously or economically introduced.

The want of drainage, so universal over many of the old countries of Europe, cannot be a matter of special reproach to the farmers of the New World. It is rather to be recommended to them as a practice which all experience has shown to be productive of profit, wherever it has been tried, and which has also been found, and for this reason is, deserving of their especial consideration. I shall have occasion to return to this point hereafter.

d. *Imperfect cleaning* of the land is another defect which the stranger remarks in New Brunswick farming. If double labour applied to the cleaning and preparing of one acre make it produce a double crop, it must not only be pleasanter to look upon than two acres half filled with weeds, but must on the whole be more economically farmed.

e. *Neglect of shelter,* I have already alluded to, as starving the fields and crops, as injurious to the stock, and as

lessening the comfort of the farmer, and increasing his consumption of fuel.

f. *Waste of manure.*—How this waste, originating at first in the ready growth of crops without manure, becomes a habit of the farmer and his children, as appears from the history of the prevailing mode of clearing and settling land which I have quoted from Mr. Brown.

This habit affects the practice of the farmer in two ways: *First*, by making him believe that manure may be safely wasted, and that it is the fault of the land if it does not produce good crops without manure; and, *Secondly*, after his mind is disabused by instruction or experience upon this point and he has begun to add something to his land, by causing him to overlook or intentionally to pass by, many opportunities of collecting or saving manuring substances, which though individually small in quantity are large in the aggregate, and in the course of the year would add considerably to the means of enriching his fields—thus, his liquid manure runs to waste; the rains wash his dung heaps in his stable yard, and too often the lesser heaps, after they are laid out in the fields, and before they are ploughed in; his straw is not carefully saved and converted into manure; and animal and vegetable matters of various kinds, such as potato and turnip tops, the straw of buckwheat and Indian Corn, the bones of his stock, the scouring of his ditches, &c., are made comparatively little use of, if not entirely neglected.

2nd. *The kind of crops grown upon his land.* As regards his crops, the New Brunswick farmer follows a system which, even where regular manuring is practised, would injure the land, and which is therefore condemned and avoided by all good farmers; but which, combined with the waste of manures, and neglect of manuring, is certain to entail an early exhaustion.

I mention particularly—
a. *The repeated successive crops of hay* which are taken year after year from the same fields.

This custom, which is characteristic of these North American Provinces, and has been naturally fallen into in consequence of the necessity of providing a large supply of winter food for the stock, is very injurious to the land. This I believe is generally acknowledged; but the plea of necessity is urged as an excuse. It is not necessary however to cut hay off the same land year after year, without returning to it any manure; neither is it necessary to feed the stock altogether upon hay. To these points I have already adverted, when considering the effects of the New Brunswick winter upon stock, and the means of employing the winter season profitably to the farmer. I shall in a subsequent chapter return to the subject of feeding.

I infer that the land of this Province, when fairly treated, must be prone to produce abundantly from the large returns which the farmers expect and actually rob the soil of, after once manuring. I visited the farm of a most intelligent gentleman, one of the best farmers of his neighbourhood, and I believe most desirous to improve, who informed me that after one dressing with mussel mud from the sea bank, not far from his farm, he had taken one crop of potatoes or turnips, one of wheat, and *eight successive crops of hay*, and he seemed to think that the land had used him ill in not having given him more. For the first four crops from such an application, a British rent-paying farmer would have been thankful and content, and in taking these he would have been thought rather hard upon his land too.

b. *The repeated succession of crops of grain* is open to similar reprobation. In remote districts of Scotland and England the practice may be found still lingering, but it brings on ultimately a species of exhaustion which is exceedingly difficult and expensive to repair.

c. *The want of rotation of crops* is evident wherever the above mentioned practices of taking successive hay or grain crops prevail. But generally throughout the Province the neglect of a proper and profitable rotation must be reckoned among the defects of the prevailing husbandry. Wherever the system of regular and copious manuring takes root as an indispensable means of melioration, a well considered rotation of crops must accompany it, if the full benefits of good manuring are to reward the farmer's labours.

d. *The small extent to which green crops are cultivated,* may be mentioned as a special defect in the agriculture of a country, which by its climate and soils, seems well adapted to their growth. I believe that recent experience is gradually spreading the conviction, that the cultivation of green crops is not only likely to succeed, but likely to be profitable also to the farmer and to the country in a variety of ways. To raise them the farmer must prepare, must save, and must husband his manures; he must feed his cattle better, and will thus be led to improve his breeds of stock; while the better harvests of grain he obtains after the green crops, will make these grain crops them-