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AGRICULTURE.

WHAT IT IS IN THE PROVINCE OF QUEBEC.

The art of Agriculture may be thus defined: to make the earth produce, without exhaustion, the greatest possible net revenue. In order to arrive at this result it is necessary:

1st. To remove everything that may hinder cultivation—such as trees, roots, brushwood, stones, &c. 2nd. To free the soil from any excess of water which might prove injurious to the growing crop. 3rd. To pulverise the ground so that the seed may be properly covered, and that the roots may easily find the food necessary to their proper development. 4th. To enrich the soil, by restoring to it the fertilising matters which the harvests have removed, and by adding to it that which may be wanting for the fit nourishment of the plants intended to be sown. 5th. To destroy, as much as possible, all weeds. 6th. To sow, under the most favourable conditions, the best seed of the best sorts of the different farm crops; and, lastly; to make the best use of the crops, when they are grown, whether by selling them in their natural state, or by transforming them into other shapes, equally the production of agriculture, but of greater value.

This short description, universal in its application, will help us to establish more clearly, and more surely, the doctrines of the art of agriculture in Canada. It will also help us to find out the means we ought to take to improve the cultivation of our country.

During the last fifty years, an emphatically notable progress has been made in our art. By means of hollow channels placed three or four feet below the surface, *drainage* has succeeded in removing from the soil all the superabundant water retained at that depth and, by that means alone, the yield has been, in many places doubled, and, in some places, trebled; the land, at the same time, being more easily worked, and the expense of cultivating it lessened. By drainage, soils of a wet and compact nature become friable, lighter, and susceptible of cultivation even in damp seasons. The subsoil, instead of remaining cold and wet, and as impermeable to the roots of the plants as a rock; after drainage, is found to be dry, manageable, and easily pulverised; besides, the water, in leaving the soil, forms various interstices through which penetrate the air, the rain, the dew, the heat, and all the different fertilising matters they bring in their train. The subsoil, thus rendered spongy, so to speak, retains its proper degree of humidity ready to restore moisture to the surface when it is required. The entire mass of soil above the drains thus becomes an immense laboratory, where the food necessary for the proper sustenance of the crop is chemically prepared, and the drainage, moreover, by freeing the land from excess of water at all times, winter as well as summer, allows the warmth of the air to penetrate the ground from the beginning of the spring, instead of compelling the earliest powers of the re-invigorated Sun to expend their force in drying up the superfluous moisture, producing

thereby, through their evaporative influence, intense cold, instead of genial heat. Thus the concentrated warmth of the subsoil during summer remains, like a balance at a Bank, liable to the cheques of autumn, and the seasons are, in this way, made longer by several weeks; in itself an incalculable benefit in our climate.

As a sequel to drainage comes subsoil ploughing, which doubles the depth of the root-pasture, and increases, in many ways, the productive powers of the upper soil.

As to the modern improvements in the breeds and races of domestic animals they are positively astounding. Beef, mutton, pork, and wool, are all grown more easily, in a shorter time, and with greater economy of food. Science, too, has given herself of late years to the study of practical agricultural questions, and to her, as we have observed before, are due our thanks for the discovery of artificial manures, and for improvements in the system of feeding animals by which the time and expense devoted to their preparation for market are reduced. Nor are the products of the Dairy, less indebted to the labours of scientific men than the larger implements of the modern farm; by them the work of our Sisters has been sensibly alleviated, by the largely employed churns of improved construction; what we should have done without the new implements, in the scarcity of labour prevalent in the past few years, is known to no one.

Canada has not been slow to seize upon these advantages. She possesses a fair number of farmers who avail themselves of them. The Cochranes, the Beattys, the Snells, and others, have distinguished themselves, as breeders, in Europe and in the United States. The finest specimens of Shorthorns have been produced in our Province. Mr. Cochrane, as may be seen in the European newspapers, has lately sold in England, by auction, a heifer, six months old, for the almost incredible sum of \$21,525.

Canadian bred horses, too, enjoy no mean repute, and many of them have been exported to Europe. They are so favourably looked upon there that we may fairly expect a large and profitable trade in these animals will be done in future.

During the last two years, the exportation of live stock has assumed gigantic proportions; and this, being clearly a profitable business, must lead to a great increase in the breeding and rearing of such animals; but, in spite of the spirited efforts of some few of our countrymen whose herds are not unworthy rivals of their English cousins, we have still much to learn, and still more to unlearn, before we can expect to reap our full harvest of profit from the exportation of our homebred animals. Not less extraordinary has been the increased quantity of Canadian cheese sent abroad. This article, always in demand, deserves all the attention of the farmer; but, like our butter, its manufacture still leaves much to be desired. As for the last named product of the dairy, it can hardly be satisfactory to know that, in the English market, the butters of Normandy, Sweden and Den