

United States,	11 bushels.	
Canada,	10 $\frac{1}{2}$ "	} According to the returns of 1871.
" Nova Scotia,	11 $\frac{1}{2}$ "	
" New Brunswick,	10 $\frac{1}{2}$ "	
" Ontario,	10 $\frac{1}{2}$ "	
" Quebec !!	8 $\frac{1}{2}$ "	

Canadian Beet Sugar Factory.

We have, on many occasions, written strongly in favor of the introduction of the beet-sugar industry into Canada. After ten years' careful study of the subject, both here, and in Europe, we are of opinion that no enterprise can offer in our country a larger moneyed return for the capital invested, and a greater agricultural improvement. Hundreds of experiments in sugar beet culture have been made under our supervision, in various parts of the Province, for several years back. They have undoubtedly proved that the best sugar beets will mature here every year, and that, with the same amount of care, a larger crop can be secured than in the most favored European countries. This is partly accounted for by our especially favorable fall weather, which causes the beets to mature with certainty, and brings out a larger percentage of sugar in the root than can be obtained in Europe.

The very heavy duties on imported sugar in Canada, which amount on an average to 55 % of the original cost price, would secure to the Canadian manufacturer an amount of protection nearly double that allowed to the most favoured articles of Canadian manufacture.

This protection, added to the cost of importation, brings the selling price of sugar here to about double what it is in France, Germany, or Austria; whilst the cost of production, taking every thing into account, should not be much more, if any. We insist on this point, that with the best machinery and able sugar makers, beet sugar need not cost any more to manufacture in Canada, than in Europe. Here, lands, horse labour also, and even fuel are a great deal cheaper.

Manual labour alone is somewhat higher, but this would not be sufficient to counter balance the great advantages we possess, the principal of which lies in the fact that, through our long winters, we are enabled to manufacture fully as long again as they can in Europe, so that the same manufactory, in Europe, which would work for one hundred days, would, were it erected here, exactly double its production.

There is, therefore, a sure profit, and an immense one, in store for those who will have the courage to enter boldly, but systematically, on this new enterprise.

The great drawback here, and, in fact, the only reason which has prevented the erection of a factory so far, is the large capital required to start this industry, according to modern views. In fact, for some time to come, and until we have acquired in Canada the necessary experience in all the various departments of this complicated industry, and until machinery can be made here equal to what is made in Europe, we must command, in America, to obtain success, fully double the capital required by similar establishments in Europe. We have all along stated that, supposing most of the beets to be supplied by the farmers, the first beet sugar establishment here should have a capital of \$200,000, in order to be prepared to meet every emergency.

Within the last few years, a great deal has been said respecting beet-sugar establishments which were not to cost over \$25,000.

To the many who consulted us on this question, we invariably answered that, this amount appeared to us ridiculously inadequate. We are glad to find that the promoter of these cheap factories in America, Mr. Ernest Th. Gennert, Portland, State of Maine, writes, from California, to the *American Cultivator*, stating that he is now engaged to erect

a first class factory in that State, to work 60 tons of beets daily, which will cost, complete \$150,000. As this is just about half the size of the average factories now recommended in Europe, for the economical production of sugar, it shows that our estimate of \$200,000 is a fair one.

There is, at the present time, a considerable stir, in Canada, respecting this industry. Let us hope the day is not far distant when a first class factory will be started. Let it be remembered that we have in the Dominion a market for sugar amounting to \$10,000,000 annually. To manufacture all this would require from thirty to sixty large factories. There is therefore no danger of overcrowding, for many years to come, at least. In an official document, published in 1878, by the Federal Government, we stated that the profits to be expected from this industry, at present prices, should not be less than from 40 to 60 %, annually, on the capital invested, provided the factories work as they should, and with ordinarily careful management.

Why then should so much Canadian capital be seeking investment in Canada at the present moment, where such a munificent return can be safely secured, and an improvement brought to our agriculture which would certainly double the production, and the profits, of all the land devoted to beet sugar cultivation.

Milk, butter and cheese records.

That careful breeding, from well selected thoroughbred animals, is necessary to secure in the progeny a continuation of the best results need not be discussed. The extremely high prices regularly obtained at auction for some of the most renowned short horn families show that, for Durhams, at least, breeders are agreed to what constitutes excellency in the production of beef. It strikes us, however, that in the production of butter and cheese, we have not arrived at any thing like the settled points which tend to assign the highest value to any one family, or, even, to any given set of points. In fact, between breeders, it is yet a controverted point whether the Jersey, or the Ayrshire is the better and more economical producer of butter.

Of late years several breeders, of Jerseys and of Ayrshires, have kept and published records of the milk and butter given by the whole or by a portion only of their respective herds. This is an excellent move, and a useful one as a point of comparison. But, to judge of the real merits of a cow, or of a breed, it is not sufficient to know that a large quantity of butter, or of cheese, is produced; we should also ascertain, as nearly as possible, what proportion of a given kind of food has been consumed to the lb of butter or cheese produced.

However desirable, it is not to be expected that breeders will go to the trouble of solving these intricate points of comparison between breeds. But no breeder worthy of the name should be without a careful record of all the milk, and even butter, produced by each of the cows he breeds from in his herd. This is in fact the only sure test of the value of milk producing breeds, and had these records been kept for half a century, with the same care that the gain in flesh in a given time has been recorded for the short horns, we should now know to a certainty what herds to breed from when milk, butter or cheese are the special objects, and such herds would command the highest prices.

Respecting the comparison between breeds, relating to the largest quantity of cheese or butter produced by a given quantity of food, without loss of flesh to the animal, we are not aware of any set of experiments having been made so far for any length of time. It is very desirable that such experiments should be carefully made and we see none better qualified to do this than the experimental stations connected with agricultural associations, colleges, &c.