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the old stock, but from immigration. There is, as in England, a condition of society productive of a great increase of population, and there is, on the other hand, a condition unfavorable to such increase. There are natural laws in accordance with which an increase or decrease may be anticipated.

While we have no dread of an increase in population such as that predicted by Mr. Hawksby, we look forward to such an increase of population in England and Canada as will cause a continued demand for all our surplus produce, and give us sufficient encouragement for a progressive improvement in agriculture.

Crossing the Buffalo With Milch Cows.

An objection frequently brought against improved live stock is their susceptibility of disease, and their inability to bear the extreme rigor of our northern winter. The old stock of the country could, it is said, bear any degree of cold, endure any amount of hardship and privation, while high bred animals require good shelter and high feeding. The objection, we hold, is more than balanced by the comparatively great profits from improved stock. If they do need and receive proper treatment they bring prices high enough to remunerate the owners well for the additional expense in their care and feeding. The old native stock, it is true, could bear cold better than they, could live on pastures that would be starvation to a Shorthorn or Hereford—they could live, but never become fat, never make beef to bring a paying price in the market. Attempts have been made by a judicious mixture of breeds to obtain a class of animals alike hardy and profitable, and some "grades" have been found to combine the advantages to be derived from each parent. Attempts have been also made lately to improve the well-bred cow by crossing with the buffalo, with the expectation that the offspring would retain the property of their domesticated parent as good dairy cattle, while inheriting the hardiness and superior beef-making qualities of the buffalo. The desired result has been obtained.

Turf, Field and Farm says:—It has been fully demonstrated, and is now an established fact, that the cross of the buffalo with milch cows are of a gentle disposition, and yield a fair amount of very rich milk. The male produce of this cross make excellent bulls, and when crossed with good milkers of any of the milch families yield largely of a rich quality of milk, from which the finest butter can be made. In certain sections of Nebraska, especially in Howard county, half and quarter-bred buffalo stock is quite common. Notwithstanding the dairy stock of that State, crossed originally with the buffalo, were of an ordinary character, the half-breds yield an average of fourteen to sixteen quarts per day, the milk being of a rich and fine flavor, making the best butter, and very nearly equaling the Jerseys in the quantity obtained from a given proportion. These facts are obtained from Mr. J. W. Cunningham, formerly of Howard county, Nebraska, who vouches for their correctness, having largely experimented with these half and quarter-bred buffalo cows. This will prove of great value to thousands of breeders and farmers in the far West, and notably so in view of the fact that besides the dairy qualities which these half-breds possess in a remarkable degree, they take on flesh and fat rapidly, and make excellent beef.

The progeny of the united strains of the well-bred Shorthorn and the buffalo possess the extreme hardiness and good beef-producing properties of the buffalo, with the acquired superior qualities of the English Shorthorn.

The trade in horses between England and Canada is rapidly increasing, and promises to become of great importance. They are found precisely of the stamp desired for useful purposes.

Drainage in the Valley of the Thames

Mr. A., from near Chatham, in a late visit to our editorial chamber, was quite enthusiastic in telling us of the good accomplished by the drainage that had been carried out in that section of country. By removing the obstructions and deepening the beds of the natural water courses, and still further deepening the main channel for carrying off the water, a very valuable tract of rich land, in the townships of Raleigh and Dover, extending fully five miles along the river, has been rescued from the dominion of the water and converted into excellent farming lands, so that hundreds of acres that had formerly borne only coarse grass and sedge of very little value, now produce heavy crops of corn, barley, oats and timothy grass. There are, in what was at one time a waste, unhealthy morass, fields from 100 to 150 acres each in area, bearing crops heavier than are seen elsewhere even in that fertile section of the country. The profits from the drainage must have been great. Though we have not at hand the returns of the cost of the drainage of that locality, we know, however, that the estimated cost of draining such marsh lands under "The Act Respecting Public Works of Ontario," under which this work was executed, varied from 87 cents to \$1.50 per acre of the land to be drained. When we realize the value of the land when improved by draining with what had been its value when covered with water, we must arrive at the conclusion that no other outlay of public money has produced such profitable results. We think that were the Legislature to encourage drainage of lands wherever it is needed by advancing money for the purpose at a very low rate of interest, while the investment would be safe beyond the possibility of a doubt, the profit to the country from the improvement of agriculture and the largely increased yield of the staple products of the country, would far exceed any estimates that would probably be formed by any bureau either of finances or agriculture. Our farmers only require to be enabled to carry out any needed improvements in agriculture, and any advances made for that purpose are sure to be repaid many-fold.

The Canadian Winter Port.

The first Allan steamer, with Canadian mails, which had travelled over an all Canadian route, left Halifax on the 3rd of December. After this no more mail matter will go or come by Portland. The people of the Dominion have in a voice not to be misunderstood insisted on this patriotic measure. When we reported the opening of that great Canadian work, we foretold the near advent of our independence of other ports or R. R. lines than our own in communication with Europe; and in a few months our anticipations have been realized. We never had a doubt of the inestimable value of that great undertaking in binding with bonds stronger than iron the separate members of British North America. By it we are enabled to supply from Ontario the distant Maritime Provinces with those necessary commodities that the neighboring Republic had been in the habit of supplying, and the day is not far distant when the coal and fish of Nova Scotia will be a staple article of the freighting of that line of our consumption. It was held until lately that railway travel would be impossible in winter through much of the country where the Intercolonial has been constructed, on account of the heavy snow-falls, but every precaution that human ingenuity could devise has been taken, and it is hoped, will be successful. Between Moncton and Riviere du Loup ten miles of snow-sheds have been erected. The snow-fences will be fully twenty-eight miles long. Liberal supplies of snow-plows

and ice-scrapers have been provided. Those required in the northern part of the line are at the different engine houses, and ready for work. The snow-sheds and snow-fences are, we are informed, completed, and the whole number of engines of the road may be engaged solely in dealing with the traffic of the line. The coal sheds along the line are now filled with fuel, and a coal train goes north daily to keep up the supply. All that foresight and labor and money can do to provide against a snow-blockade of the line in winter has been done. A sum of \$200,000 has been expended on the snow-sheds and fencing alone. We learn with pleasure that the traffic on the road is fully equal to the expectations. Already very considerable freights of fish, gypsum, grindstones and agricultural products have passed over the line, and other commodities of the Maritime Provinces only await the application of capital and enterprise to ensure a greatly increased business. The natural resources of these provinces in minerals and fisheries will doubtless make them the centres of active industries, and the abode of a prosperous people. There is nothing to prevent the iron and coal of Nova Scotia being worked to great advantage. English capital will be available for stimulating Canadian industries, and the Intercolonial will doubtless be a means of developing these industries and thereby opening up a good market for the agricultural products of Ontario.

Barley Dull.

As day follows day, and market succeeds market, the words "Barley dull" meet us in the market report. In the report of to-day, barley prices are quoted one dollar to one dollar and forty cents per hundred pounds. At this time it may be said to pay the farmer better than wheat at two cents per pound; but still the market for barley is dull. Neither in Canada nor the United States is there the same brisk demand for this grain that there was for the crop of 1875, and the prices are very much lower. This may be attributed to the inferior quality of very many of the samples that are sent to market. It is a fact well known in the grain trade that a large quantity of any variety of grain of an inferior quality depreciates the market price of samples of that grain that may even be A No. 1. When farmers have learned the value of barley for feeding their farm stock and use their barley for that purpose, if from any cause it is to be graded under No. 2 at the very lowest, sending none to market but really good samples, they may expect not to see the market note "Barley dull;" the demand will then be brisk with remunerative prices. The value of feeding barley is but little known here. We have till now been compelled by the want of good markets for our beef and mutton to rely wholly on the cash received for our grain, chiefly our wheat, in our own markets. When the prices realized for Canadian meat in English markets shall have taught us what are the profits feeding well, we will learn that there is a profit to be made in feeding on the farm all coarse and inferior grain, as the farmer does in Britain.

Another cause of the barley market being dull is its having been brought to market in large quantities earlier in the season than usual. The partial failure of the wheat crop compelled farmers to. They had based their calculations on wheat crops such as they had been used to harvest. In this they were disappointed, and the barley was taken to market that would, were the circumstances otherwise, have been held till later in the season. The market, in consequence, was overstocked and prices ruled low. Speculators were the only buyers. Masters held back waiting, till later in the season. The stocks in the hands of farmers, it is said are pretty high exhausted, if this opinion be correct