

### Breeding and Improving Cattle.

In no other branch of agricultural husbandry has there been so much improvement within the last decade as in the breeding and improving of cattle, and this has been the case notwithstanding the shrinkage in the ordinary receipts from the farm. True, but little has yet been done in proportion to what remains to be done. In every part of the country cows of the old unimproved breeds are still more numerous than grades, and the beef offered in the great majority of cases is such as must be sold for prices that do not pay the feeder, while beefs good enough for exportation to foreign countries are but few. But there is, notwithstanding, a great and—better still—a steadily increasing improvement. There are no better or higher bred cattle to be found than are owned by some of our breeders. This is proved by the high prices paid in the States, and even in England, the native home of the Shorthorns.

Agricultural exhibitions and the agricultural press have been the means of convincing intelligent farmers of the great folly of breeding from any but well bred bulls. The earlier maturity of well bred stock, even of grades, and the much higher price they bring, compel farmers who are wide awake to their own interest to forsake the old idea that the question of breeding was not worthy of a thought. There was one point in favor of the old scrub stock—they were the stock best suited to the careless ways of farming followed by so many. They could live where well bred cattle could not thrive.

This point is in reality a strong argument in favor of well bred stock, whether thorough-breds or grades. Their introduction will compel the negligent to be more diligent than they have been. There must be more thorough cultivation. Clover and grasses of the best kind and most suitable varieties must take the place of weeds. Root crops must be grown for winter feeding. Farmers will not rely entirely upon wheat, impoverishing the land with successive scourging crops. There will be more and better beef and mutton for the home markets and for exportation to Europe.

We see already the beginning of these improvements in breeding cattle in our agriculture in Canada. In the neighboring country, where, if in any place, they appreciate the value of dollars and cents, they are pushing forward in the advance of improvement.

The *Ohio Farmer*, in speaking of the improving of cattle, asks—What has Shorthorned blood accomplished in the dairy and on the farm? In reply it says:—

Whatever individual opinion may be held as to the value of this breed in the dairy, it is an indisputable fact that it has not, to any appreciable degree, superseded the native cows in the dairies of this country.

We now come to the vital question with Shorthorns. What success has this breed met with in engrafting itself upon the agricultural interests of this country as a beef animal? There are a great many ways of looking at this question. The most contracted is through the eyes of Shorthorn breeders. Another is the recorded experiments with Shorthorn grades. A better one is the beef product of States where the breeding of fancy Shorthorns is carried on to a large extent, as in Illinois and Kentucky. A new test is the quality of the beef shipped to England, which one would think ought to be, if it is not, a selected lot. If it could be proved that it was to their interest, the dairy-men of the country could be easily induced to keep Shorthorn bulls, but it so happens they, as a class, have no faith in the blood for making good milkers of the heifers, and none of them raise steers. They are not able to see where the profit comes in. Undoubtedly Shorthorn grades ripen quickly and more kindly than these mountain scrubs, and if a man proposes to raise his steers he should by all means raise grade Shorthorns, but would it be right to advise a change in the practice of these poorer farmers before they had raised their general

condition to a higher plane? Of what benefit would Shorthorn blood be to them when they starve the steer nearly to death the first two years? Would it not be absolute cruelty to this young animal to put delicate and ambitious blood in his veins when his lot is so humble and so hard?

If I am correct in my conclusion that the Shorthorn enemy consists in an army of itinerant scrub bulls, let us see what has been done by the breeders of this country to circumvent the enemy. In what direction have they bent their energies—to ward liberalizing and broadening the principles of breeding so as to reach the "lower classes," as the politicians say? Have they not rather been paying court to the lineal descendants of the royal houses of Bates and Booth? Is not a bull that has only seven crosses of a thoroughbred in his veins just as good for all practical purposes as though he had a thousand? Then, if the purpose of breeding Shorthorns is to benefit the country at large, and the farmers in particular, why do you make so much fuss over these Bates' and Booth's, and almost totally neglect the dissemination of Shorthorn blood among the masses of farmers?

### Sorghum.

Breadstuffs always command a ready market, besides being necessary in the farmers own household. They bring a good return when good yielding crops, for the labour bestowed on its cultivation. It might therefore be expected that the farmer would consider his wheat as his bank from which he is drawn the greater portion of the cash needed for working his farm, and to meet his other expenses, and this has been the case. We have had in consequence wheat succeeding wheat for many years till our land became wheat sick; so that we no longer see such heavy crops of wheat as we were accustomed to from the rich virgin soil. We can restore the fertility of our soil and grow from it in profitable seasons as good crops as it grew in the old times, though not as uninterrupted succession of crops of grain or any other product. We must, if we are to succeed, pursue a more diversified system of farming; and we have no doubt we will find it, on the whole more profitable. To this end it is well to avail ourselves of the experience of others, and also to try experiments for ourselves. In other countries these are public experiment stations.

The introduction of a new system of tillage or of plants or seeds not before known in our locality may be found very profitable. In a former number of the *ADVOCATE*, we brought to our readers notice a variety of the maize; the Sorghum is now extensively grown in the Western States and still farther north it has been grown successfully. The *Prairie Farmer*, writing of it, states as an instance of the profit to be derived from its cultivation, that Wm. Ireland planted a piece of ground five rods less than half an acre. It took three men, two days to cut the cane and take it to the mill, and from it were obtained 110 gallons of syrup, worth 75 cents per gallon, making \$82.50c for the crop.

### Our Linseed Oil Manufactures.

The *American Agriculturist* under this heading speaks of the great value of oil cake to cattle feeders, a subject of the highest importance to us Canadian farmers and too little thought of. He says:—

"The extent to which the manufacturer of linseed oil is now carried on in the West may be shown by the fact there are three mills in Chicago, each turning out about 10,000 barrels of oil, and 4,000 tons of oil cake yearly, using to produce these 250,000 bushels of flax seed all the growth of near by localities. St. Louis competes very closely with Chicago if it does not surpass these figures. While we congratulate ourselves on this fact, we have to regret that the 12,000 tons of oil cake are worse than lost to us because we sell them to our competitors in Europe, who feed this

nutritious substance to cattle, making wheat and manure with which their large crops are grown. This is a serious loss to us who should use every pound of our product and sell the meat and grain grown by it."

The cultivation of flax is one of the many branches of farming in which we Canadians can successfully compete with any farmers in America. Our soil and climate are admirably adapted to the growth of the plant and the preparation of the fibre. Many who are now prosperous farmers in our Dominion are well versed in its cultivation, having been engaged in it when farming in Europe, where it has been estimated very extensively and has been more remunerative than any other farm crop. There is always a brisk demand with remunerative prices for the fibre, the linseed oil and the oil cake.

The profit of the flax crop is not limited to the fibre. The seed of itself pays a good profit to the producer. Both linseed oil and oil cake are always in demand in the market, and command good prices. But the latter is so valuable for feeding stock that it should be always fed on the farm. It is, however nearly all sent to England for consumption, the farmers in Canada not perceiving the advantages to be derived from feeding it to their cattle, as a means of feeding beef and also enriching the farm-yard manure. The average yield of seed to the acre in Canada is about two bushels, producing to one hundred bushels of seed one hundred and seventy-five gallons of oil and about two tons of oil cake.

### Lime on Fallows.

"What is the most effectual remedy for wireworms? Will an application of lime to the field infested with them exterminate them?" *Farmer*.

It is very difficult to free land from worms; like other pests, whether animal or vegetable they multiply so fast that nothing but the most persistent exertions can stamp them out. They feed on the roots of grains and cereals as well as roots of every herb and vegetable that grows in field or garden. To the great abundance of food they are sure to have in every sod where they attain access their great increase is partly to be attributed. Other animal foes of the gardener and farmer may be starved out by not growing such varieties as constitute their food. This is the case with the Hessian Fly, which was starved out of large tracts of the country in the State of New York, by not sowing wheat for some years. Even the potato beetle, notwithstanding its marvellous increase, can be starved out. But in order to starve out the wireworm, as every crop sown in field or garden supplies them with food, the land must be kept entirely bare of every herbage. Even in land not cropped they have sufficient food in the roots of weeds, if they suffered to grow.

We have known land that had been greatly infested with them to be entirely freed from them by a heavy application of salt. They had done great injury to the previous crops. At the time of seed sowing the salt was sown liberally and harrowed in with the seed oats. The worms were all killed.

We have in our garden applied soot for the same purpose and it has had the desired effect. Lime is said to be serviceable for this purpose as well as others, though we do not think is so effectual a remedy as either salt or soot; and even they must be applied liberally. A farmer in one of the Channel Islands whose crops were entirely destroyed by wireworms top-dressed his field with a mixture of salt, lime and soot, but it did not in the least check their ravages. He then tried guano and it was thoroughly effectual. Another remedy as effectual as any other that can be applied is the refuse gas lime from gas works. There