

were of marvellous development. Yet, notwithstanding, the Kentucky herd was close pressed by the Polled Durhams, and there the award would certainly have gone had the Kentucky herd not been contesting. The *Polled Durhams* were owned by J. H. Miller, of Mexico, Indiana. They were a magnificent lot of cattle, and it may be mentioned here that the breed has had a fine record in the show rings since it first entered the lists for honors in 1888.

The breeders of Polled Durhams doubtless know what they are seeking, but is there not danger that this exhibiting, especially in the beef classes or against beef cattle, is going to prove a snare? The muley blood was resorted to with the two avowed objects of getting hornless cattle and milkers. Now the perfect beef form is not consonant with the highest type of milk production. Therefore the all-purpose animal will possess the same form exactly as the model beef animal. If, therefore, the Polled Durham is to fulfil this mission, it should not be quite the same in form as the model Shorthorn of the highest beef type. To produce much milk, the neck should be longer and not so massive. The ribs should be wider apart, more easily discernible to the eye, and the coupling of the females not too short. There would also have to be some sacrifice of flesh in the thigh and twist. In a word, the Polled Durham should be a close modification of the dairy Shorthorn of England, rather than an exact reproduction of the American Shorthorn of to-day.

The day is not far distant when, in the judgment of the writer, the demand for cattle that will give a fair amount of milk, and that will produce calves which will grow into fine animals for the block, will be in much greater demand than at the present time. Many reasons may be given in support of this view, but space forbids. If it is correct, then the retention of good milking properties will prove of prime importance in all animals of this class, and those which have it in the most marked degree will stand highest in favor with the public.

With the present issue the series on the pure breeds of cattle is concluded. If any have thought it worth while to follow the writer, they will remember that the series commenced several years ago. The work of gathering some of the material used was very considerable, but the hope is here expressed that the labor has not been expended in vain. If the series has furnished information to the farmers of Canada, and particularly to the young men of the farm, the writer will feel that he has received ample compensation.

Quebec Cattle.

The illustration of a typical Quebec cow in our April issue has attracted much attention, and we are in receipt, among other letters, of a description of those interesting cattle from the pen of Dr. J. A. Couture, V.S., Quebec, secretary of the French-Canadian Cattle Herdbook. Dr. Couture writes:

I was pleased to read in your last number your short article on these cattle, and to see the cut representing, as you said, a good specimen of this breed; but I must say that the original is much better than the photograph. It may not be uninteresting to your readers to know a little more concerning these Quebec cattle, or French Canadian cattle, as they are called in this part of the country.

French Canadian cows are small, weighing, on an average, 700 pounds, and are of ex-

tremely kind temper. They are the easiest kept of all breeds of cattle, and the hardest also. They are free from tuberculosis. Their teats are large, and, consequently, they are easily milked. In color, they are solid black, or black with a yellow stripe on the back and around the muzzle, or brown with black points, or brown brindle, or even yellowish. These are the colors that are accepted for registration of females. The males must be black with or without the yellow stripes, for we want to get, in as short a time as possible, the color uniformly black.

As milkers they are the best cows of any breeds in Canada for the average farmer. They will not give the large quantities of milk yielded by the Holsteins or even by some Ayrshires in one day or one week, but they will give a good quantity daily from calf to calf, and the total for the year will be surprising, usually larger than that given by other breeds. The difference in their favor will be still more evident when the cost of keeping is considered.

Here is a farmer, Odilon Robichaud, residing at St. Denis, Ka., P.Q., who owns twenty-four cows of this breed, and who has had the following results from May 12, 1892, to May 12, 1893:

63,193 lbs. milk to cheese factory...	\$ 531 19
1,616 " butter made at home, at 20 cts. per lb.....	323 20
9,125 lbs. milk consumed at home, at 12 cts. per gallon.....	109 50
3 calves fattened with milk.....	12 00
6 " partly brought up with milk.....	18 00

Total of revenue. \$ 993 89
Gross revenue per cow, \$41.41.

EXPENSES.

4,480 bundles hay, at \$6, \$268 80	
2,240 " straw, at \$3, 67 20	
4,800 lbs. bran, at 84 cts. 40 32	
Pasture at \$5 per head.	120 00

Total expenses. \$496 32

Net revenue. \$ 497 57
Gross expenses per head, \$20 68
Net revenue " " 20 73

This farmer has no feed cutter and no ensilage. He gave neither grain nor oil cake; the cattle got only the dry hay and straw and a little bran; still they gave him a profit of 100 per cent. What other cow can give such results?

I know that some of your readers will find that the average yearly yield of milk of each cow of this herd is not very high, but they must think of the poor feeding they got.

When the little Canadian cow is properly fed she repays well for the trouble and expense, as proven by the following result obtained from the cow *Première 1712*, the property of the *Hôpital du Sacre-Cœur*, Quebec. She calved on the 28th August, 1892, when four years old, and was milked until 15th July, 1893, being due to calve again on the 31st of the same month.

During these 318 days she gave (11,310) eleven thousand three hundred and ten pounds of milk, or a daily average of 35 $\frac{3}{8}$ lbs. She weighs about 675 pounds. The food consisted of

Cut hay	10 pounds
Cut straw.	5 "
Ensilage	20 "
Bran.	2 "
Cotton seed and meal. 2 "	

All mixed up, and fermented for twenty-four hours in advance. She was kept all this time in the stable.

I may say that I myself bought this extraordinary cow, when two years old, for \$15.

The cow *Azilda de Levis* (956), whose picture you published in your last number, gives 8,000 pounds of milk a year on pasture alone in summer, and on fifteen pounds of dry hay and four pounds of grain, oats, bran, and oil cake daily in winter.

Let me say, for the benefit of your readers, that the French-Canadian cow that does not give 6,000 pounds of milk in the year, when she receives reasonable care and food, is not a good cow. On common pasture and dry hay and dry straw, with a handful of bran in water, she ought to give from 4,500 to 5,000 pounds of milk in the year.

This is sufficient to show your readers that with regard to the quantity of milk the little French-Canadian cow can compare favorably, if not better (we say better), than all others.

Is this milk of good quality? Of course it is. The average percentage of fat by the Babcock test is from 4 to 5 $\frac{1}{2}$ per cent. It is sometimes 6 and 6 $\frac{1}{2}$ per cent., but these are extraordinary cases. It scarcely goes below 4 per cent., though some have given only 3 $\frac{1}{2}$ per cent.

Speaking of the matter in this part of the country, we say: Percentage of fat from Jerseys: $\frac{1}{2}$ to 6 per cent.; from Ayrshires, 2 $\frac{1}{2}$ to 4 per cent.; from French-Canadian cows, 4 to 5 $\frac{1}{2}$ per cent.

The above is the average percentage of the three breeds from a large number of tests in the various butter and cheese factories of this part of the country.

We admit that generally the Jersey's milk is somewhat richer, that the Ayrshire gives a larger yield when in her best condition (in June, for instance), but we hold that our little cow gives, everything being equal, from calf to calf, a larger yield than the two others of sufficiently rich milk. We know, also, that for the common farmer she pays better than any other.

Selection and Care of Breeding Stock.

Read by H. HOLLENT, Cassel, at the Canadian Holstein-Friesian Breeders' Association.

I do not expect to be able to tell you anything new on this important subject, yet a good thing cannot be too often repeated, and must ever remain interesting and new. It would seem, after so much has been spoken and written on the question, that every one should be familiar with it, yet my experience during the twelve years since I started breeding purebreds leads me to the conclusion that at least 90 per cent. of the general farmers and breeders of dairy cattle are either ignorant or totally ignore the importance of careful selection. Of the several hundreds of letters of inquiry which I receive every year, at least ninety out of every hundred ask for prices only, and, if anybody else offers an animal \$5 below your price (regardless of what the breeding of the animal may be), of course he is the man to make the sale.

It would seem that the large majority of our farmers have an idea that all purebreds are alike so long as they have a registered pedigree, and must naturally be superior, and here is just where they make the greatest mistake in their career. I will admit that, especially in males, all purebreds are superior to the scrub, or even grades, for breeding purposes, yet there is a vastly greater difference in the superiority among the purebreds than among the scrubs, which, I admit, are all alike for breeding purposes, and are so alike

that they never should be used, as they are so sure to transmit their qualities to their offspring that nothing but scrubs will and can be produced from them.

There are also purebred scrubs and weeds which have a registered pedigree, and may be fitted up to have the appearance of fairly good individuals; but, when used for breeding purposes, they can no more than reproduce themselves, and their offspring will be scrubs. In speaking on this subject at an institute meeting, one of our pioneer and leading dairymen said that he had used purebred Shorthorn sires for many years in his dairy, and that his cows, which at one time stood above any other herd in this section as milkers, were now hardly paying to milk them, as they had all gone to beef. I asked him if he had paid any attention as to whether the sires used had descended from milking strains, and whether their dams, grandams, and great grandams had been superior milkers. The answer was: "No; all I looked to was that the bull I purchased had a registered pedigree." No wonder that he failed and had to begin anew, and, though he had changed to another breed, yet, if he still pursues the same slipshod course, the result will be exactly the same. Now, let us consider this from the purely financial standpoint of profit and loss. At the late Western Dairymen's convention it was stated that the largest amount received per cow in 1893 from a herd was \$65, and the lowest \$9.96—quite a difference, I should say. Both herds had to be maintained, one at a loss, the other at a profit, or, if the cows that made \$10 profit proved remunerative, the others must have been a gold mine. What an object lesson for all to strive to possess the \$65 herd! But this grand result was not obtained by mere chance, it was the result of careful selection, breeding, and feeding. It is an admitted fact that the sire is one-half of the herd, and I claim that he is the better half, as every calf produced in the herd springs from his loins, and, if he is inferior, the calf must naturally be the same; but, if he is descended through many generations (on both sides) from superior producers only, and is himself a good individual, satisfactory results must follow, especially if only the best of his get are selected. Since the difference between a poor and a good cow is \$55 in a single year, I would ask, Is it wise economy to look at \$15 or \$20, or even \$50, on the price when selecting a sire, when one of his calves will more than pay the difference in a single season? This, of course, may be an extreme case, but let us take only one-half of the amount, say, \$28 per season, and, if you continue to milk your cow for ten years, you have a net gain of \$280 in favor of the superior cow, and, if you raised ten such cows from the superior sire, I would ask you to carefully consider what the difference in your bank book would be, and whether you can afford, for the sake of a few paltry dollars, to use a poor sire in preference to a superior one. Just think over this when you again select a sire. It should be an object lesson.

Now as to selection. My advice would be to go to a reliable breeder, who has a reputation at stake, and to buy the best bull within your reach. See that he is possessed of a strong, healthy, and vigorous constitution (do not begrudge a few extra dollars for a superior individual; they are well spent), investigate carefully what his dam, sire's dam, grandams, and great grandams on both sides have been doing as milk and butter producers. If there are any sisters, see what they are doing in the dairy. See that he is a purebred