

n hand The young heifers of both breeds are plentiful and excellent in quality. Old Casso still leads the Hereford herd, and with all his wealth of flesh, is still useful. Sometime he may yet have an opportunity of being pronounced the sweepstakes bull of any breed in America, a place to which he has strong claims if my judgment is not in fault. There are two show herds of Aberdeen-Angus Polls that would be hard to beat anywhere, in any country. They reflect much credit on Mr. Cochrane's skill as a breeder, for notwithstanding that his herd rests upon imported foundations finely pedigreed, nearly all the animals in the herd at the present time, for show purposes, were bred at Hillhurst.

I would that all our breeders were as particular in excluding culls from their premises. Careful breeding will reduce their number to a minimum, but now and then one will come, so long as the laws which govern breeding remain as at present. But when they do come, there is no profit in retaining them. The unsightly, unattractive things should be early consigned to their rightful destination, the butcher's stall, where an oblivion that is fitting awaits them. Why should breeders suffer the days of culls to be prolonged, in the hope that some cull of a breeder will some day come along and pick them up to add to his herd because he can get such rubbish cheaply?

Hillhurst has a historic past as well as a successful present, as anyone at all intimately acquainted with the live stock history of the country must know. It is not my purpose at present to refer to that past, further than to say that any live stock establishment that has won Dominion sweepstakes' medals of gold and silver to such an extent that they are made into and worn as girdles by the ladies of the household, cannot but have a history that will live as long as the chroniclers of live stock lore shall be sought for by the student and the antiquarian of long ages yet to come.

MR. DRUMMOND'S AYRSHIRES.

There can be no denying it: Mr. Drummond, of Petite Cote, just below Montreal, has one of the best herds of Ayrshires in the Dominion to-day. They number about 60 head. Some of them are wonderful milkers, and all are in fine, serviceable condition. As mentioned in the November number of THE JOURNAL, this herd carried the day at the Toronto Industrial, and came back from Ontario laden with honors.

Mr. Drummond is very chary about selling his best animals, and so he should be, so long as he intends to breed Ayrshires. Many of our breeders make shipwreck here. They sell because the price is tempting, forgetting that the best can seldom be produced from what is inferior, or from what is only fairly good. There is a limit to the price offered which a breeder should refuse for any animal, however good, but those who possess the best will find that very generally it takes a large sum to replace animals of this class which they may have to sell. Even in common herds or flocks, it is miserable policy to be frequently selling the best.

This herd gives evidence of the most careful breeding and attention. The animals comprising it are all good, and I am told the herd has proved a source of much profit to the owner.

For the CANADIAN LIVE STOCK AND FARM JOURNAL.

The General Purpose Cow.

For years there has been no question which has been more fully discussed and which is less near to a satisfactory answer than as to which is the most suitable breed for the every day farmer. As a general rule those who have a partiality for a particular breed

are decided in their opinions that their breed is the most suitable, and claim it to be infinitely superior to any other breed. There is little doubt that the cow that is most sought after is that which is called "the general purpose cow," an animal which yields a good supply of milk and which, when dry, will also lay on flesh easily and rapidly, and it is for this reason that the Shorthorn has been so great a favorite with the large majority of English agriculturists. Many breeds have in turn each claimed the position of the general purpose cow, an animal which some have gone so far as to say has no really good points, a statement which has a certain amount of truth in it, for it is not often that the two conditions of beef and milk are combined in any very superlative degree. In selecting a breed many matters require to be taken into consideration, such as climate, soil, location, and other minor points, but perhaps not the least important is the quantity of food consumed, for this particular item may just determine whether the balance be on the Cr or Dr. side. A few years ago, during a visit to the Quebec Quarantine, a discussion arose as to which breed consumed the least food, and it was considered that a rough average as far as the beef breeds were concerned, for none of the milk breeds were represented at that time in the quarantine, could be obtained from the books of one of the principal feed merchants who supplied the quarantine. An inspection of his books revealed that the Hereford came first in point of consumption of food, next came the Polled Angus and Shorthorn, with a trifle, but very little, in favor of the Polled Angus, the Galloway consuming more than any of the other three breeds. This, of course, can only be taken as a rough estimate, the Galloway and Polled Angus being chiefly yearlings, while some of the Herefords and Shorthorns were older, and in addition were being pushed on as fast as possible. From it we may, however, safely assume that the Hereford will fatten on less food than any other beef breed, but owing to the deficiency in milking qualities neither it nor the Polled Angus can be included under the definition of a general purpose cow. Comparing the Shorthorn with the Ayrshire we may glean some information from an experiment made some time ago on a farm in Ayrshire, where a number of both breeds were kept and fed together for the purpose; weight for weight the Shorthorns were about 50 per cent. heavier than the Ayrshires and they required about one-third more food, for it is a commonly known fact among those who have made tests in feeding cattle that an animal that is 50 per cent. larger than another does not therefore necessarily require 50 per cent. more food. At the same time in the case in point it was found that the Ayrshires yielded quite as much milk as the Shorthorns. The difference in favor of the latter being that they maintained more flesh than the Ayrshires, kept their money value better together, and could be finished for the butcher with greater ease and more satisfactory results. Another interesting experiment as to the relative cost of feeding large and small cattle was made by Baron Ocket between the Ayrshire and the Holstein; the animals weighed in the former breed 806 lbs., and in the latter 1,016 lbs. each; the Ayrshire consumed for every 100 lbs. of live weight 3.3 lbs. per diem, whereas the Holstein consumed 2.8 lbs. Subsequently, two Holsteins weighing 2,112 lbs. were pitted against two others scaling only 1,537 lbs.; these two pairs were fed in the month of June for 16 days in separate stalls, the whole of the food being accurately weighed. The heaviest pair consumed 492 lbs. of green lucerne, or 14.6 lbs. per 100 lbs. of the live weight, and yielded 340 quarts of milk which gave 7.4 quarts per 100 lbs. food; the lighter pair only consumed 3,859 of the same food, which, however, was

16 lbs. per 100 lbs. of live weight, while their yield in milk was 240 quarts or 5.5 quarts per 100 lbs. of live weight, and in both instances the original weight was maintained. Experiments made by Caspari to ascertain what quantity of hay or its equivalent was required to produce 100 lbs. of milk corroborate the previous one. He found that 100 lbs. of hay given to the Oldenburger cows of North Germany produced 25.4 quarts to Holstein cows 26.10 quarts, to common cows 23.65 quarts, and to the Allgauer cows 30 quarts. The last named race, although bred and kept extensively in South Germany under that name, is almost essentially the same as the famous Schwyzzer breed of Switzerland, which upon hay and grass alone yield as much milk as any known race, not excepting the Holstein. The above figures were taken by Caspari from no less than eleven Saxon dairies, the common or mongrel cow being the smallest in size, and the Allgauer the largest. From these tests it would appear that the largest animals are the most economical, having a less surface of body for the radiation of heat in proportion to weight than the smaller ones, and consequently a larger quantity of the food is available for conversion into milk: hence it is evident that the Shorthorn is superior in its claims to the Ayrshire as a general purpose cow. The Holstein is the latest claimant as an animal of general ability, and its merits as a milk producer, especially in some instances, is undeniable; but as a beef producer we are rather in the dark, as at no fat stock show of any note in this country has a fat steer or even a grade, as far as I am aware, been shown, and it is surprising that no breeder of Holsteins has had sufficient enterprise to exhibit a fat Holstein steer at one or other of the large shows, and thus practically demonstrate the right of this breed to occupy the position which has been claimed for it. But the breeders of Holsteins are not the only men who are backward in bringing forward their especial favorites. The other breeds are almost equally unrepresented. Where are the Hereford men, the Polled Angus, the Galloway, the Devon, etc? Rarely, if ever, do we find exhibits of their breeds in the fat classes, and the competition appears to be almost entirely confined to the Shorthorn and its grades. This is not as it should be, and such lack of enterprise on the part of breeders does not contribute to enhance the popularity of any breeds. Among our cousins on the other side we see representatives of all breeds, victory crowning the brow of one and sometimes another, and materially adding to the interest of the shows, besides enabling farmers to form an opinion as to the respective merits of the different breeds, and perhaps contributing in a measure to decide that *rexata questio* as to the best general purpose cow.

Apropos of dairying, in the XIII. bulletin issued by the Cornell University, is a report of an interesting experiment which, if correct, is of much importance to milkmen. It is a test as to the effect of a grain ration on cows at pasture. Two lots of cows were fed, one on grass only in the pasture, the other beside the pasture receiving a grain ration of 2 lbs. of cotton seed meal and 2 lbs. of wheat bran per cow per diem; the pasture, it should be remarked, being at the same time excellent. The result would be somewhat surprising were it not a confirmation of a previous one made by Prof. Shelton, of Kansas, which plainly showed that grain in the case of corn meal bran and oats was fed at a loss, the grain fed added materially to the milk yield; corn meal showing the greatest increase but the grain did not nearly pay expenses, while Prof. Roberts' results were scarcely as favorable to a grain ration as Prof. Shelton. One feature in the experiment is pregnant with importance to milkmen, viz.,