

The Dairy.

The Best Dairy Breeds.

The most important point to be decided this month is the changes to be made in your dairy herd. No discussion need take place with reference to your beef herd, this being now a dead issue. We have insisted over and over again that you should select bulls from one of the three leading beef breeds, but you should studiously avoid those which have been pampered for prizes and awards, no matter how long a pedigree they may have.

With reference to our dairy breeds, advice is not so easily given. Although there are many excellent milkers amongst the Shorthorns, they should not be classed as a dairy breed, but for those who still adhere to general purpose cows, this breed is their only choice. The great majority of intelligent and close-calculating dairymen, who have no special interest in any breed, repudiate the general purpose cow, and we have more than once exposed the folly of attempting to combine milk and beef in the same animal. A cow may be a good beefeer and at the same time a good milker, but this only proves that she would be an extraordinary animal if she were bred and fed exclusively for one object—either beef or milk. Those who make a specialty of dairying should particularly evade the general purpose cow.

Amongst the dairying classes, those worthy of special mention are the Jerseys, the Holsteins, the Ayrshires and our Natives. If you ask us which of these is the best for our conditions and circumstances, we frankly tell you that we don't know; and we insist, moreover, that nobody else knows. Interested parties are too ready to give advice, and it should be received with extreme caution. In countries where milk brings a price based upon its quality, any given breed would not have the same value as here, where all grades of milk are sold at the same price; and therefore the first question for us to decide is, Shall we continue this practice? The answer to this question will decide the breed which you should patronize.

It is quite probable that in the near future standards will be adopted whereby farmers who send their milk or cream to the creamery will receive pay according to quality; but our cheese makers, notwithstanding their Government grant, are lagging far behind the times. We recently heard a prominent cheese-maker say that if he paid farmers for their milk according to its quality, his business would be ruined. That is as much as to say that a large number of farmers would not send their milk to the factory unless they received a share of their neighbors' profits. The fact is, our cheese-men commenced at the wrong end of their business, and they did not realize this fact until recently. They have found that they must commence with the farmer, and that they cannot make honest cheese without honest milk. This may give an impetus for paying according to quality.

At present there is a war raging between the Jersey and the Holstein men. The discussions are of no practical use, as they confuse more than they educate, but the champions of these breeds have seized an opportunity for booming up their herds, and it is quite likely that, as usual, many innocent farmers will suffer the

consequences. We have been quoted as saying that, "Of all the dairy breeds the Holstein is the best for general purposes." It is true we have said so, but we have also said that we don't want general purpose breeds. We do not make this statement in disparagement of the Holstein; we only mean that, of all dairy breeds, the Holstein has the greatest tendency to put on flesh, and as this flesh is not of a fatty nature, it is a benefit to the breed as milkers, and in reality the flesh is much more wholesome and nutritious than that of over-fed beef animals.

Between the Holstein and the Jersey, certain facts are placed beyond all possibility of dispute. We have before us a large number of analyses of the milk of these breeds; we have figured up the averages, with the following results:

ANALYSES OF JERSEY AND HOLSTEIN MILK.

Breed.	Water.	Fat.	Solids not fat.	Total Solids.
Jerseys	85.4	5.9	8.7	14.6
Holsteins	88.1	3.4	8.5	11.9

These are the averages of thousands of analyses made in different parts of the world by chemists who have no personal interest in breeds or breeders, and it may be regarded as an established fact that the Jersey milk is considerably richer, both in fat and in other solids, than that of the Holstein. With regard to the quantity, however, no reliable averages can be given; for most of the tests recorded have been made by boomers, and we have only maximum results which are of doubtful accuracy. It may be regarded as proven, however, that the Holsteins are deeper milkers than the Jerseys, but how much deeper cannot be safely affirmed, and little or nothing is known about the comparative cost of production. We therefore cry for more facts and less "braggadocio." The Jersey men stake their reputation on the quality of their milk, and the Holstein men are just as vociferous in demanding quantity as the standard, admitting the inferior quality. If any of these men will unite with us, taking the farmers' interests as the standard of their investigations, we will undertake to do them more good in six months than they can do in five years with all their booming.

The percentage of fat is the true standard of milk, and the best cow is the one that will turn an acre of food into the most butter fat. The problem is one of compound proportion, which any school boy can work out. Let us illustrate by the following statement, by which the relation between cause and effect may be seen at a glance:

Cause:	Effect:	Cause:	Effect:
12 cents.	3500 lbs.	15 cents.	X lbs.
	5.9 fat.		3.4 fat.

This statement may be read as follows: If a cow eating 12 cents worth of food per day produces 3,500 lbs. of milk in a year, containing 5.9 percent of fat, how many pounds, per year, containing 3.4 percent of fat, should a cow produce, which consumes 15 cents worth of food per day? By working out the value of X in the above ratios, we get 7,592 lbs. (nearly) as the value of the unknown quantity. In the same manner we may substitute X for any of the above quantities and find its value. It will be observed that we used the figures contained in the table of analysis, and we have supposed

that the Jersey, consuming 12 cents worth of food in a day, produces 3,500 lbs. of milk in a year, and the problem proves that if a Holstein, consuming 15 cents worth per day, produces 7,592 lbs. of milk, containing 3.4 percent of fat, her value will be precisely equal to that of the Jersey.

A distinction must be drawn between scientific accuracy, and a result which is sufficiently accurate for all practical purposes. We have not yet the time or the means to be scientifically accurate, and we must approach this standard step by step. All we are at present concerned in is to know that our existing dairying system is not accurate enough for practical purposes; neither is our boom method for testing the respective merits of our dairy breeds. For greater accuracy we should, for cheese making purposes, have included the percentage of solids other than fat in the above problem, but for our present purposes it is sufficient to know that milk rich in fat is also rich in other solids, so that very little injustice would be done by adopting the fat standard for all purposes. For scientific accuracy, the quality of the butter, the skim milk, and the butter milk, as well as the quantity and the quality of the manure, should be considered, but these are not practical questions at the present time.

In the Ayrshires and in our Natives, there is considerable variation both in the quantity and the quality of their milk. Although we have spoken so much of the Holstein and the Jersey, we are not yet prepared to recommend them as being superior, taking all our circumstances and conditions into consideration, to the Ayrshires or our Natives. All this talking and blustering add no more to their genuine qualities than the length of their pedigrees. It is well known that some of our Natives are equal to any breed, and yet there is engrafted in the skulls and gizzards of some miserable, grovelling hucksters, who would barter their immortal souls, if they had any, a debased, vile, and treacherous principle, whereby, instead of encouraging free, fair and open investigation, they seek to exterminate our Native stock from the face of the earth in order that its merits shall not become known.

Any farmer who fails to improve the dairy herd which he has cannot do so by the introduction of pedigreed stock; it would be utterly folly for him to attempt it. Entire dependence upon a piece of paper giving the genealogy of an improved bull is the very worst sort of "book farming;" the farmer must be able to judge the intrinsic merits as well. If a farmer has say ten cows, he would probably improve them more rapidly by weeding out one or two of the worst every year, keeping a bull from the best, than by introducing pedigreed blood; but the highest improvement can only be attained by weeding out the worst and at the same time introducing the best. Until the battle of the breeds is fought and honorably won, our advice to the farmer is, BREED UP YOUR NATIVE BEST.

The centrifugal separator produces better skim-milk for calves than the skim from the ordinary method of separation. Although separated milk contains less butter fat, its extra freshness and sweetness more than compensates for the extra percentage of fat in ordinary skim milk. Milk is constantly depreciating in value from the moment it is drawn, and much of it, even after only 12 hours standing, is scarcely fit for raising calves.