

Holstein-Friesian Cattle.

(From address by B. W. Potter, of Rutland, Mass., before the New England Holstein-Friesian Club, at Waterville, Me.)

I assume that we can exercise more or less influence in shaping this breed of domestic animals to our liking, though we must remember that our artificial means must coincide in the main with the laws of nature. We can multiply the breeds of animals, but the tendency of reversion to the original species is ever present. This variation increases the number of breeds and enlarges their value, but the original species are more hardy and are tormented by fewer natural enemies. When wild and domesticated animals of the same species are exposed to privation or extremes of heat and cold under the same conditions, beasts of the chase are more tenacious of life and capable of greater endurance than farm animals.

Bovine cattle are coeval with the human race. We have no exact knowledge of the size and capabilities of the neat cattle of the ancient world, but the native cows of Great Britain and every other country were small in size and poor performers at the milk pail. Careful breeding and good feeding have increased these.

Holstein-Friesian cattle are almost entitled to be called a species, for they were flourishing in Holland 2,000 years ago. The rich alluvial land around the south shore of the North Sea has ever been well adapted to the breeding of large animals. Owing to the drying weather in the summer and rocky soil, New England pasturage is not equal to that of Holland, and it will be difficult for us to keep up the Dutch size of these cattle. But in the size of cattle, as in everything else, there is a golden mean. We do not look for the best physical or mental type of man from the parentage of giants or dwarfs. Let us strive for the golden mean in size and for quantity combined with quality.

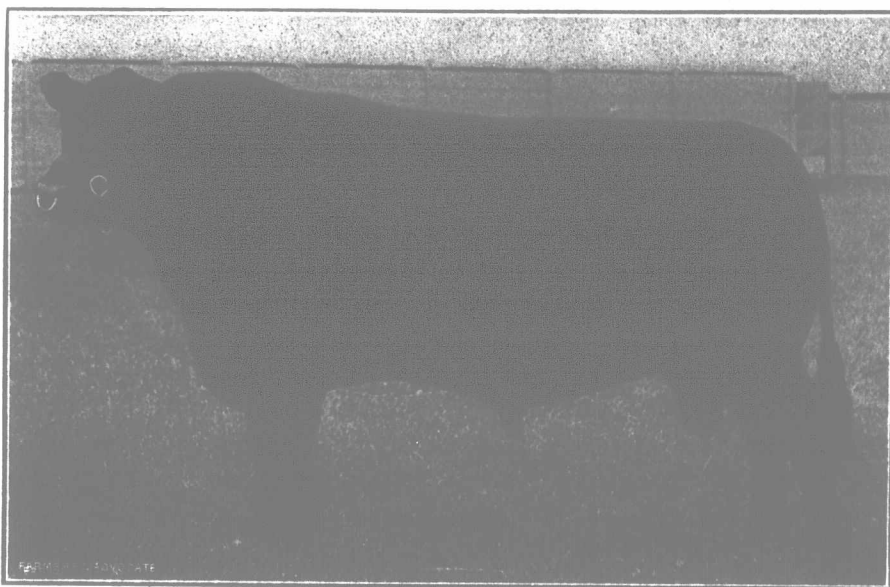
The size for America can best be determined by finding the size of the bulls and cows that have made the best records here. If the size of an animal is an important matter for consideration, then the weight of every animal entered in the Advanced Registry should be recorded. Records, since 1898, of the Wisconsin Agricultural Experiment Station, made to ascertain whether large or small cows of dairy type are more desirable to keep, taking cost of feed and value of product into account, show the average weight of the small group to be 904 pounds, and of the large ones, 1,079 pounds each. The large cows made an average annual net profit of \$42.97, while the small ones made less per cow than the large ones. In the large group were six Holsteins, which made an annual net profit per cow of \$46.30. In the small group were two Holsteins, one of which made a total net profit of \$46.11, and the other \$38.19. All will agree that a cow must have large digestive capacity to do great work. This usually accompanies a large-sized cow, but sometimes the large-sized cow turns her food into beef more than into milk. The champion butter and milk cow is never the largest cow of the breed; hence it might be wise to have a maximum as well as a minimum size of animals that are entered in the Advanced Registry. For dairy purposes I would as lief buy a Holstein cow weighing 900 pounds as one weighing 2,000 pounds. One is undersized; the other oversized. One is only fit for bologna sausage and the other for beefsteak. The weights of 60 of the greatest cows and 25 of the most famous bulls of the Holstein-Friesian breed were then given, having been secured through the assistance of the Secretary of the National Association. The weights of cows ranged from 1,000 to 1,850 pounds, and those of the bulls from 1,800 to 2,650 pounds. The average weight of the cows is 1,383 pounds; that of the bulls is 2,164 pounds. The conclusion is, then, that the proper size of a Holstein cow is from 1,200 to 1,500 pounds, and that of a bull at full age from 2,000 to 2,400 pounds.

Holsteins are pre-eminently a dairy breed, and their beef capability only an incident that enhances their dairy value for furnishing good veal all the time and good beef when their dairy life is ended. It is admitted by all that they produce more milk than cows of other breeds. As to the quality of the milk, there is a golden mean for the milk ratio the same as there is in the size of cattle, and we find that the Holstein cow gives the golden mean milk. Thirteen per cent. of total solids and four per cent. of butter-fat is about the correct ratio in milk. We must breed for this standard. It would be a great mistake to breed for lower, considering the various uses of milk.

To attain our ideal we must begin with the bull. He must be one that will sire deep-milking offspring, and endow them with vigorous constitutions. When young he must be selected for his individuality and pedigree, and the performance of his forbears; when older, for his own record of performance. If we would utilize the services of the good old bulls more than we do, we should avoid chances of disappointment, and also improve our stock. Some of our finest bulls are sent to the shambles prematurely, before the qualities of their offspring are known. We are all tolerably familiar with the proper type of dairy cow, but there is difference of opinion on the method of feeding her. To my mind the rapacious appetite of the Holstein cow is one of her most valuable traits. All the good cows I have owned have had capacious stomachs and paunches, and

have been capable of turning large quantities of food into good milk. Cows can no more make milk without food than men can make bricks without straw. If we desire to preserve the size and capacity of the Holstein cow, we must give her plenty of food from birth to death. I believe there is little danger of exhausting vitality by high feeding if fed at suitable times on suitable food. Animals are not apt to exceed their natural capacity. There are no well-ascertained facts to support the belief that the enormous milk and butter yields of the champion cows of the world have exhausted their vitality to such an extent that there is a loss of vigor in these cows and their progeny. We must feed up to natural capacity—not, of course, overfeeding or stimulating by use of drugs.

The same principles will apply to the feeding of our calves. They should be fed so abundantly that they will grow vigorously and continuously from birth to maturity. They should have plenty of milk, with rowen and some grain; should be kept in dry stalls or yards, and be fed out of clean pails. They should not be bred until they are 14 or 15 months old. A heifer when she comes in milk should weigh from 800 to 1,000 pounds. Our greatest danger of deterioration in the size of our cattle comes from the improper feeding and care of our calves. Too many of our breeders have no real knowledge of calf raising. Our farmers are mostly engaged in milk production alone, and many of them have lost the art of calf-raising. And right here is the opportunity of breeders of pure-blooded stock to raise good cows for the milk farmers, who will demand Holsteins when they find that a good cow of that breed which will produce 10,000 or 12,000 pounds of milk per year is cheaper at \$200 or \$300 than an ordinary cow is at \$50.



Lord Fearless.

Aberdeen-Angus bull. Winner of Polled Cattle Society's gold medal at the Royal Counties and Bath & West of England Shows, 1906.

Dipping for Ticks.

Sheep should, invariably, be treated for the destruction of ticks twice each year—in the late fall, before going into winter quarters, and at shearing time, in spring. Some successful flockmasters believe in dipping in the fall as well as in the spring, while others claim that there is economy in pouring at this season, when the wool is so heavy and absorbs or retains so much of the dip, and that the sheep are less liable to take cold, though if kept in a warm shed for a few hours after there is really but little risk. Pouring is quickly done where three men or boys are available, the sheep being laid upon a clean straw bed, one attendant holding it first upon its rump, while another sheds the wool with his hands along the belly, breast and neck, at intervals of four or five inches, and the third pours in the warm dip from a coffee pot. The sheep is then turned first on one side and then on the other, the shedding and pouring being continued, and is then allowed to stand up while a last shedding is made the full length of the back to the forehead, and a final pouring is made and the job is done, taking only about five minutes to each sheep. The dip should be kept quite warm throughout the performance, as it spreads and works more thoroughly. In this way three hands can easily treat sixty or seventy sheep in a day, and the owner, if he has a tender conscience, will sleep better all winter from the knowledge that his duty has been done, that his flock is comfortable and thriving; and it will pay well financially, too, as the better health of the sheep and increased growth of wool will repay the cost many times, and the owner will be saved the humiliation of seeing his flock suffering towards spring from the depredations of an army of bloodsuckers, and losing their wool by rubbing and scratching on fences to rid themselves of their tormentors. The same treatment is also an insurance against scab and other skin diseases, which may lead to serious loss, and it should be made an unbreakable rule to make sure that the flock be treated some time between now and the end of the year, as when the ewes become forward with lamb there is more danger to them in handling them for this operation.

Dealing with Hog Cholera.

The recurrence of a few cases of hog cholera in Western Ontario this season, revives interest in the question, How shall the farmer protect his herd from the disease; and, second, What shall he do when he is certain that his hogs have an outbreak of genuine cholera?

One of the best methods for protection against the disease, says Wallace's Farmer, is that of maintaining the highest possible vitality in the herd. This cannot be done at once, nor now. Measures can be taken to secure high vitality in the hog crop next year, first by giving them a constant supply of pure water, preferably from a deep well, never from a creek or river or stream which heads in some other man's farm, and never from a mudhole or hog-wallow. Next to cleanliness, a plentiful use of lime and other disinfectants around the hog-yards is required. Next, by limiting the number of hogs on a farm to about one hundred about one set of buildings. The feeding of a balanced ration, as near as possible, and plenty of exercise, is another important question; and, last, but not least, avoidance, as near as possible, of inbreeding. In our judgment, the greatest menace to the vitality of hogs in the West is the continuous close line-breeding, which is unavoidable, except with the greatest care. By this we mean, if you buy a boar this fall, extend its pedigree five generations; you will in all probability find that it runs many times to some one noted hog, and this is especially true if you buy from some prominent breeder who has been taking prizes in the show-ring. If the next year

you extend the pedigree on the boar you purchased, you will probably find he runs to the same hogs. In time the effect is cumulative; the first thing you know you have hogs that are very closely line-bred, almost inbred.

The next thing is, how will you do when your neighbor's hogs begin to come down with cholera? First, thoroughly clean up your yards and disinfect. Second, keep away from your neighbors, and keep your neighbors away from you. Tie up your dog at night, and persuade your neighbor to tie up his dog. Keep everything sold off as far as possible as soon as it is fit to go. If your hogs weigh 175 to 180 pounds, sell them. When the disease attacks your herd, and you ascertain it by post-mortem examination, or, if you are not competent, by a competent veterinarian, our advice would be to kill off all your little pigs. Sell all your shoats that are big enough to sell before they are taken down with the disease. Separate your well ones from the sick, turn them out in pasture, feed them little or nothing. Grass and pumpkins are all that they need. Scatter them just as widely as you can over your farm. Leave your diseased hogs in the pen or yard in which they were taken sick, and you will not lose much, if the disease is of the virulent form, if you will kill everything under six months old. Take your chances on the rest. If your conscience compels you to buy a "dead-sure hog-cholera cure," buy a dollar's worth, put it up on the mantel, and look at it. It will do just as much good as if you gave it to your hogs. If you give anything, give the Government formula:

	Pounds.
Wood charcoal	1
Sulphur	1
Sodium sulphate	1
Antimony sulphide	1
Sodium bicarbonate	2
Sodium chloride	2
Sodium hyposulphite	2

These ingredients should be completely pulverized and thoroughly mixed. Dose: One large tablespoonful of the mixture once a day for each 200 pounds weight of the hogs treated. The medicine should be given in soft feed, as corn meal or oats, ground or crushed; crushed wheat, mixed with bran; or middlings, well mixed with hot water.

You can buy the ingredients at the drug-store. If you lose one-half your sows, and the rest prove to be breeders, you have not lost much, for the sows that have gone through the cholera are immune. Those of lowered vitality and