The Dairy.

How Long should Cows be Retained in the Dairy

BY L. B. ARNOLD.

Now that the milking season is about completed, it is a good time to look over the herd and see what changes it is advisable to make for the coming year. Cows that are becoming aged do not pay to winter. They lose more by depreciation in value than they return in profit on their keeping, unless they are extraordinary milkers. Those who make the most money by dairying turn their cows before they can properly be called *old*—while they will fatten readily and make good beef. Holding on to them too long spoils them for this purpose. The flesh of old animals is tough and insipid, and full of gristle or cartilage, and it costs very much more to put fat and flesh on them than on younger animals. It is true with animals generally that as they advance in years, assimilation goes on more slowly, while waste is more rapid, and digestion slower and less complete. Depreciation in the power of assimilation begins as soon as animals get their growth, and even before. A pig ten or twelve months old does not assimilate with as much vigor as one two or three months old, although it will continue growing slowly for some time longer. A pig two months old will put on a pound of live weight from the consumption of ten pounds of milk. At twelve months old it will require from fifteen to twenty pounds of milk to make the same gain. The life of the domesticated hog is short and soon terminated, at the best, and accordingly it begins early to depreciate in the activity of its vital forces. The bovine race have a longer period of longevity, and their vital activity does not begin to abate so soon, but it begins to depreciate before growth is completed. It has been found by beef producers that it costs more food to effect a given weight of gain upon a steer five years old than upon one two or three years old, and more even on a three-year-old than on a two-year old steer. Meat-producers are all leaning toward the practice of making meat from young animals, because they make it at less cost than older ones. The dairyman should not lose sight of this general rule in the operation of the vital forces of the animals under his care. Making meat and making milk are similar operations, and depend on the same vital laws for their accomplishment, and the intelligent dairyman may well expect that similar results will occur in his line of production that do in meat-production, and it is so. It costs more to make milk from old cows than it does from young ones having the same milk-producing capacity. The period of profitable milking does not terminate at the same age with all cows alike. Some hold out longer than others, but, as a rule, the best effects do not often reach beyond the eighth year of the cow's age. The quantity of milk given generally keeps up till a cow is about ten years old, and sometimes it will considerably longer; but after a cow has reached her eighth year her milk is produced at a greater cost of feed, and after that age it costs more to fatten her, and her flesh depreciates in quality, so that some of the most thorough-going dairymen think it the most profitable to turn them at eight, while they will fatten easily and make good beef, than to retain them till their milk and flesh and feeding capacity all fail together, as they will usually do at about the age of ten. The body of a cow that is kept till her milk fails is just about lost. It is really not worth anything as a basis for putting more flesh on. If anybody outside of the dairy can make any use of her so as to give something for her, he is the man to handle her. The dairyman had better let her go for whatever he can get. It will not pay him to feed her for fattening. She will eat herself up, so to speak, before she is fit for food. I have tried this way of disposing of superannuated cows several times, and always lost by it. The cost of fattening was more than the animals would bring after feeding, and if disposed of to a local butcher there was very sure to come back a growl about the quality of the meat.

The best disposition I ever made of cows to be turned off, was to turn them at eight or nine, keeping them farrow the last year I intended to milk them, and feed and fatten while milking them. The milk helped to pay for the feed for fattening, and sometimes for the whole of it. The milk, under high feeding, gradually reduced in quantity and became very rich and valuable. I have had it rich enough to get a pound of cheese from seven and a half pounds of milk, and a pound of butter from twelve and three quarter pounds, the cows fed being common natives. Milk so rich as that does not require a large quantity to pay the cost of keeping and give the owner a clear profit on the gain in weight and quality of flesh.

If there are in the herd milkers of doubtful merit, they had better be turned now at the beginning of winter, no matter how young they may be, and their keeping saved for the support of the better milkers. If there is any question about their being paying milkers, they should not, like criminals, have the benefit of the doubt. They had better be weeded out, and only such ones kept as the proprietor is *sure* will give him a profit. This is what a dairy is kept for, and the proprietor should take no chances on questionable merit, for he cannot afford it. Nor can he afford to winter more animals than he can keep well. If he has too many cows for his stock of fodder, and has none but good ones, it is far better to reduce them to the number he can carry through in good condition, than to squeeze through the winter by pinching along till the whole herd comes out in the spring with only a hide and a bony frame to start on for a summer's work. It don't pay to pinch cows at any time, and most assuredly it don't pay to pinch them in the winter. It is better to err on the side of safety in this question of how many cows to winter, and have a little fodder left over for another year, and the herd come out in good condition, than to have the skin and bones of a herd left, and their fodder and flesh all gone before grass comes. In the spring of 1882, I made cheese in a number of factories in Eastern Ontario from the milk of such cows, which was so poor that the patrons said they could not make butter from it, and it took 11½ pounds of it to make a pound of green cheese. As grass came in it gradually improved in quality, but the profits of the first half of the season were entirely lost by over-stocking the previous winter. A timely weeding out at the beginning of winter would have brought the remainder of the herd through in good condition, and would have given their owners more milk and of better quality, and a profit instead of a loss.

Official reports show that there are about 600 creameries in the State of Iowa, and the yield of butter is estimated at 100,000,000 pounds per annum, which, at twenty-five cents per pound, amounts to $25,000,000. The cheese product is valued at $2,000,000, making a total of $27,000,000 from that branch of industry alone. Iowa has one-thirtieth of all the milch cows in the United States.

The following are said to be the rules of the Hollander respecting his cows: When you see a good cow, buy her. When you have a good cow, keep her. When you find you have a bad cow, sell her.

The Province of Quebec Dairymen's Convention

Was held at St. Hyacinthe. P. Q., commencing on the 15th inst. After the usual routine

Hon. Mr. de Labruere, explained the object of the meeting, which was to study the best means of developing the dairy interest in the Province of Quebec. Science, he said, was necessary to agriculture. If so many lands were barren in our country, it was owing to a lack of agricultural knowledge among our farmers. If the French Canadian agriculturist worked his farm with more science and more reason, he would not be obliged to emigrate to the United States. The best means of checking emigration would be to give a sound agricultural education to farmers' boys. The most important branch of agriculture in Quebec was the dairy.

Mr. Barnard, Vice-President, made some remarks on the Canadian dairy. He said it was necessary to obtain good milk to manufacture good butter or good cheese. To obtain good milk farmers must give rich and abundant food to cattle. Canadian cattle are not of an inferior race. Some Canadian cows give one pound of butter to 9½ pounds of milk, while the best in America gave but one pound of butter to 10½ pounds of milk. If a farmer feeds his cows on straw during the winter he cannot expect them to give much milk in the spring. A cow will give one-third of what she can give with ordinary food, but with rich nourishment she will give three times as much Canadian farmers export so much hay to the United States, and sell so much grain on the market. that nothing is left for the cattle.

Mr. J. A. Couture, quarantine inspector, then read a paper on cattle. He said the best breeds of cows for producing butter were the Jersey, the Guernsey and the Canadian, and for cheese the Ayshire and the Holstein. In order to prove the superiority of the Jersey cow, it is reported in the Breeders' Gazette that the cow Mercedes, belonging to Mr. I. B. Wanes, in 31 days gave 99 pounds of unsalted butter The Canadian breed. he said, has nearly disappeared from the Province, but there remain still a few cows in the district of Quebec. That race of cows descends evidently from the Jersey and the Guernsey. It was highly important for dairymen to preserve and improve the breed of their cattle. He thought that with proper care Canadian cows would compare with imported breeds.

Mr. S. M Barre, professor in the Dairy School of Ste. Marie de Beauce, then addressed the convention on the advantages of butter-making by the centrifugal process He gave the result of comparative experiments of producing butter from milk in six different ways These methods were divided as follows: The deep setting in the ice during ten hours; the same process during 34 hours; water at 50 degrees Fahrenheit; the pan system; the centrifugal system, and the churning of milk These experiments were made at Copenhagen, by Professor Fjord, under the auspices of the Royal Society of Agriculture of Denmark. It took about one year to make them, from April, 1882, to March, 1883. Two kinds of milk were used in the experiments, milk from one single dairy and milk obtained from several dairies, in order to find out the effect of cooling and transportation on the skimming. An average rendering of 2 to 3 per cent. was obtained in equal conditions with the milk from private dairies, which had not been cooled or transported. This inconvenience might have been remedied by warming the milk before skimming it. In the case of the milk from private dairies, the centrifugal system rendered more butter than the following system, viz: 20 per 100 more than the deep setting in ice during ten hours; 12 per 100 more than the deep setting in ice at 33° Fahrenheit during 10 hours; 30 per 100 more than cold water at 50°; 11 per 100 more than the pan system, and 8 per 100 more than the churning of milk. After the results obtained in Europe and those obtained in this country, there is no doubt that the centrifugal system is bound to supersede all other known systems for skimming milk, and producing a greater quantity and a better quality of butter.

Mr. W. H. Lynch addressed the Convention in French. He said that the bringing out of Professor Sheldon had the effect of satisfying the people of Canada, there represented, that nothing they could send us from England is calculated to help us; it also had the effect of drawing attention to the simple utensils before the meeting that had been exhibited so long as two years ago in the Lower Provinces, and which are now endorsed by authorities, Canadian, American and English, and