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FORWARD OR BACKWARD.

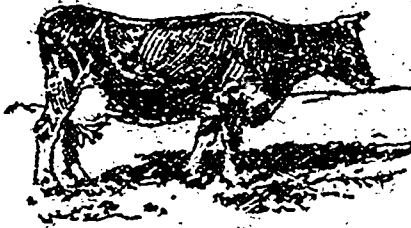
Impossible to Keep a Dairy Herd at a Standstill.

A dairyman has no choice in the matter, says Hoard's Dairyman. He can't stand still with his stock. The tendency is always to retrograde, to return to the original type, where only enough milk is produced to feed the calf. Remember that the modern dairy animal is the result of long continued selection in one direction, and in so far as we have deviated from the normal animal and succeeded in raising her above the normal standard of milk production, just that proportion have we increased the tendency to return to the lower level. The production of a special purpose animal in whatever line is a long, tedious process. Careful selection, training and feeding through many generations will often produce wonderful results, but when we have arrived at what seems to be the goal just ahead we can often see still further improvements to be made, still higher results to be obtained. On the other hand, the process of retrogression or atavism is both rapid and easy. Given poor feed, carelessness and neglect, and Brown Bessie herself will slide down the heights so painfully attained with a rapidity a little less than marvelous. Neglect for a few generations will undo the work of many years of the utmost care in breeding and selection.

A poor farmer can take the finest type of dairy or beef animals and bring their progeny back to their original nondescript condition in but a few generations. The cattle of such a farmer are doubtless better adapted for the struggle against wind, weather and starvation, but they are not adapted for increasing the contents of his pocketbook. On the other hand, the keeping the animals at their highest capacity means careful, intelligent selection and feeding. It is harder work than the first method, but the results are commensurate. The dairyman can choose for himself the road he desires, butter or beef. But if through neglect in breeding and feeding he arrives at that mongrel result known as the special dual purpose animal and finds that her returns are not encouraging it is only because he has taken the wrong road, and his results follow as a consequence. There is no business where results follow so directly the conditions, nor where the carelessness of the producer can have such a decided lowering of results as the dairy, and the neglectful owner feels his neglect in the most tender spot—his pocketbook.

Champion English Milker.

This Guernsey cow, Bon Espoir V, won the first prize and Lord Mayor's cup in the recent milking trials at the London dairy show. She has also car-



GUERNSEY COW BON ESPOIR V.

ried off several other first prizes this year. Naturally, her owner, E. A. Hambro, is proud of her.—London Sketch.

Effect of Food on Butter.

The solidity of butter is affected to a certain extent by the feed of the cows. As nearly all dairymen know, when cows come from dry winter feed to fresh grass in the spring the butter has less "body." The difference caused by the different kinds of winter feed is very

marked. This is evidenced by the arrangement of dairymen on this point. For instance, one is positive that cornmeal will make harder butter than wheat bran, while the next one you ask will tell you the opposite is true—that oatmeal makes the softer butter of the two. In my experimenting there were only two feeds that I could say with any certainty affected the solidity of the butter, and they did not to a very great extent. When in making up a grain ration two or three pounds of cottonseed meal a day was used, it hardened the butter slightly; when the same amount of oilmeal was used instead of cottonseed meal, the butter was a little softer. An experiment was tried at the Iowa experiment station in 1895 with the object of determining the effect of cottonseed meal on butter the details of which are published in bulletin 89 of that station. Professor Curlliss found that feeding as high as five or six pounds a day per cow of cottonseed meal had but a slight effect on the flavor or solidity of the butter, though it must be said that at some other experiment stations a greater effect was noticed where a large amount of the meal was fed. But I must repeat that with the quantity that any careful dairymen would feed the effect of the different kinds of meals or grains on the solidity of the butter would be scarcely noticeable.—C. P. Goodrich in Breeder's Gazette.

Experiments with Milk.

The Kansas college dairy took three cans of milk as they came from the barn. The first was left standing in the milkhouse without aerating or cooling. The second can was cooled to 62 degrees and left standing by the side of the first. The third can was treated the same as the second, except that after cooling it was placed in a tub of cool water and covered with wet gauzy sacks. The next morning samples were taken from each can and submitted to Dr. Fischer, the bacteriologist, who determined the number of bacteria. The milk placed in cool water contained 8,837,428 bacteria per cubic inch; the can aerated, cooled and left standing in the milkhouse contained 24,678,103 bacteria per cubic inch and the can left standing in the milkhouse, as it came from the barn, contained 124,057,972 bacteria per cubic inch.—Hoard's Dairyman.

Very Old Cows.

Has the cow, under domestication, ever lived beyond the age of about 35 years? asks the London Live Stock Journal. The writer recalls to memory three recorded instances of cows living to the ages exceeding 30 years. The first in order of time is mentioned in the "General View of the Agriculture of the County of Norfolk," written for the board of agriculture in the year 1804. The author states that he saw upon Mr. Money's farm at Rainham a Norfolk horned cow which was then undoubtedly 35 years old. She had not bred a calf for about ten years, and although "old to the eye," was in good condition and had no marks of age excepting stiffness in moving and a halting gait, as if her feet were sore. As she was one of the then remaining specimens of the old horned breed of that county, her horns, unless cast off by accident, must have been sufficiently large to show tokens of age by the annual rings, the first of which, in that not particularly early maturing breed, would have been shown at the age of about three years. But of this test we have no mention. Of course we should not expect, at that great age, all the rings to be perfectly distinct, and it would be interesting to learn whether they are still increasing in number by one added each year to the very end of so long a life, which indeed may have continued for some time beyond 1804.