

Apart from the marked increase in average yield in each case will be noted the increase in length of average milking-period. High yield and long lactation, provided the cow herself is right, usually go hand-in-hand.

By way of deduction it may be pointed out that in Association A the increase is about 66.67 lb. butterfat. Had the 430 cows on test in the first year averaged the same as the 620 on test in the fourth year, it would have meant an increased total yield of 28,668 lb. butterfat, which, at 1s. 6d. per pound, means £2,150. On a similar basis the Association B results work out at about £1,085.

THE BUTTERFAT TEST.

Supplying a dairy factory often tends to emphasize in the minds of suppliers the *percentage* of butterfat in the milk supplied—commonly called the “test”—rather than the *quantity* of butterfat. Although the education which herd-testing has helped to develop has done much toward dispelling this tendency to think in terms of “test,” one still finds many dairymen who are apt to overstress the importance of the butterfat percentage. Unless the herd is used for supplying milk for human consumption, when a certain legal minimum of fat has to be adhered to, the “test” itself can be taken too seriously. And, after all, even dairy factories do not pay out on test, but on test multiplied by weight of milk supplied—a very different matter. There is also a tendency, though less frequent, to stress milk-quantity; this is not as common in New Zealand as in those countries where records are taken for yield of milk alone.

A good example of the inaccuracy of judging milk-production by test alone or quantity of milk alone is found in a study of the records of purebred cows under C.O.R. test in New Zealand. Taking all Friesians (413) in the two-year-old class which have gained certificates since the commencement of the C.O.R. system in 1912 to the end of 1923, it is found that the six highest-testing individuals averaged 4.74 per cent., and the six lowest only 2.79 per cent. Judging from the test alone the first mentioned were 69 per cent. better cows than the lower testers. On milk alone the higher testers yielded on the average 9,601.4 lb., and the lower group 16,012 lb.; so that, judged on milk alone, the one group was approximately 67 per cent. better than the other. When one comes to butterfat, however, it is found that the average production for the groups was 455.19 lb. for the six higher testers and 447.26 lb. for the lower—an actual difference in production of only 7.93 lb., or, on a percentage basis, 1.8. Surely this speaks for itself.

All things considered, therefore, it is not right to judge a cow by milk alone or by test alone. The only fair and accurate guide to the ability of the dairy cow is her season butterfat-yield.

TEST VARIATION.

Another phase of the test problem which plays a prominent part in the minds of persons interested is that of the variation in the percentage of butterfat in milk. This matter has been fully dealt with by special articles in the *Journal*, but a few general remarks may not be inappropriate here. The examples quoted are gleaned