

undesirable. The length of lactation should be governed by the efficiency of the cow as a butterfat-producer.

Progressive dairy-farmers recognize that a prolonged milking-period is the outcome of breeding and feeding for the longer lactation. Here again is driven home the importance of a herd sire chosen with regard to the results of the certificate-of-record testing, which provides for a 365-day production. If it is proved that for several generations certain females can maintain their production for a whole year, then it is a reasonable assumption that by mating a bull from such dams with ordinary herd cows the average term of profitable lactation will in time increase. Dairy-farmers should fully recognize that money spent in the purchase of a butterfat-record purebred sire is well invested.

DUAL VERSUS SPECIAL PURPOSE.

While no cow can do her best in producing milk and butterfat without an ample supply of succulent feed and without kindly treatment, the greatest consideration is the inherent tendency of the individual cow. In the earlier days of dairying in New Zealand the popular cow was what was called the dual-purpose cow, the two purposes being the production of both butterfat and beef from the same animal. In the minds of dairymen the dual-purpose cow was a sort of wonder animal which combined the best qualities of the two types. Experience, however, has proved that dual purpose is often another name for no purpose, and that by attempting to develop each, it happens more often than not that both beef and butterfat are sacrificed. There is perhaps no greater menace to our dairy industry than the dual- or no-purpose cow.

There are four types of cow—namely, (1) beef type, (2) dual purpose inclined toward beef, (3) dual purpose inclined toward dairy, and (4) special-purpose dairy type. Professor Haecker, at the University of Minnesota, conducted experiments with reference to the cost of production by these various types. Strict account was kept of the yield, and of all food consumed by each individual cow. Although the figures are old and may not apply to-day in actual values, it is evident that in proportion they will be as true as ever. The figures representing the feed cost per pound of butterfat were reported as follows: Beef type, 8.75d.; dual purpose inclined toward beef, 7.55d.; dual purpose inclined toward dairy, 7.30d.; dairy type, 6.05d. In every instance a cow of special-purpose dairy type produced a pound of butterfat at a lower feed cost than did any animal in the other three classes.

It is apparent that some animals use their food for the production of milk, others devote the larger proportion to the production of beef, while others—the dual purpose—may produce neither beef nor milk at a profit. It requires a certain amount of food to maintain the body of a cow, and the surplus she eats beyond this goes to milk or beef, or both. The general conformation of the cow is often an indication of what may be expected from her in the way of production.

There is an old argument that when a dual-purpose cow is done with she is worth a fair price to the butcher, whereas the finer-cut true dairy type will fetch very little. Fig. 1 shows a cow which on association test gave 3,268 lb. milk and 136.18 lb. butterfat. Fig 2.