

rare. They are exceeded even by some Jerseys and Guernseys whose milk is always of high quality. Records of over 20,000 pounds are credited to Holsteins, whose milk tests considerably lower in fat. The great majority of dairy cows throughout the country are "grades," that is, their blood represents different breeds, and in no definite proportions. As producers of milk, individual grade cows can be selected that will equal thoroughbred animals, but the latter are more satisfactory for breeding purposes. Farrington reports a high grade Shorthorn cow in Wisconsin that gave in one year 11,131.7 pounds of milk containing 584 pounds of butter. The total feed consumed in the year cost \$39.60. The total value of her butter and skimmed milk was \$131.83. The cost of feed consumed for every pound of butter produced was only 6.7 cents. Too often the value of the annual product of a cow is very low,—even less than \$25.00. It is a fact that on account of lack of business methods many such cows are kept at an actual loss to their owners.

Dairymen are divided upon the question as to the merits of the "single-purpose" and "dual-purpose" animals. The latter include those that can be profitably disposed of for beef when their period of usefulness in the dairy is ended. Advocates of the former think that this advantage is purchased at a high cost and that the single-purpose cows are enough more profitable while in the dairy herd to permit of their final disposition at a low figure.

The selection of cows for a dairy herd, regardless of the breed chosen should be based upon individual merit. Small and unprofitable producers as well as unhealthy cows and those of weak constitutions should be avoided, and when they are found in the herd, advantage should be taken of the first opportunity to displace them. It is well said "the bull is half of the herd." When calves are to be raised, as is the rule in most dairies, the influence of the bull upon the development of the herd is readily seen. If possible a bull of proved excellence should be used. It is always well to give special attention to the breeding of the bull, and attach considerable importance to the performances of his dam and grand-dams. The quantity of milk given by each cow, and its fat test, should be recorded at least one day every two weeks for the purpose of showing which animals of the herd are profitable and which are not. The time for breeding cows depends upon the requirements of the milk. Formerly it was the general practice in dairies not supplying