

THE ECONOMIC VALUE OF PRODUCTION RECORDS

By H. J. SHOUSE, '26

Official Testing and Cow Testing Association Methods—The Present Standard in Determining the Value of Dairy Cow—Old Methods Proved Unreliable

More and more dairymen are realizing the great importance of production records, not only from the standpoint of the seller but from that of the prospective purchaser as well. Production records, in the broadest sense of the word, show the ability of certain individuals to produce a product, whether it be off-spring, as in the case of swine; fruit, in the case of trees, or what not. The dairyman is concerned with the ability of a cow to produce milk and butter fat, or the ability of a sire to transmit production to his offspring.

Within the cow population this quantity production is of a variable nature. Some cows inherit the ability to produce large quantities of milk and butter fat. Others can produce only small amounts over a given period of time under equally favorable conditions.

When the improvement of the different breeds of dairy cattle was first given serious condition, such points as type, size, conformation, etc., were the basis of determining the worth of the animal. Much advancement was made as it is a fact that the foregoing points are closely correlated with milk production. However, they are not true guides as an animal of very good type, etc., might not come from a high producing strain and, consequently would be a low producer. Another animal of similar appearance, even though she be the progeny of high-producing stock, might not inherit the ability to produce. In neither of the above-mentioned cases would the animals be of particular value in spite of the fact that their general appearance shows them to be good animals. This fact was slowly realized by some of the far-sighted breeders, and it was these breeders who endeavored to correct the mistake. In 1875 the idea of Advanced Registry was conceived. The first association to publish records was the A. J. C. C., which inaugurated the plan in 1884, followed closely by the Holstein breeders. The first volume of these records was published in 1889. Most of the tests were for seven days, and were based on the amount of butter produced under farm conditions, each worker being

under oath as to the accuracy of his record. But, even barring any possible crookedness on the part of the men making the tests, there would necessarily be a great deal of variation in results due to the different methods used in making the butter for the fat content of the butter would be variable. A 14-pound list was established for cows making 14 pounds or more of butter per week. The Holstein breeders first established the plan of having the tests supervised by representatives of the Experiment Station, in 1885, and the other breeds quickly followed. At this time the tests were, for the most part, of seven days duration. This seemed to be satisfactory until it was shown by the experimental data of Eckles, of Missouri, that an abnormally high fat record could be secured by having the cow in high condition just before calving. Then, withholding of the feed to some extent following calving causes the individual to draw upon her body reserves, resulting in an undue high fat content of the milk. With very high producing cows the amount of feed necessary to produce this milk can not be handled by the cow and she consequently draws on the reserve. This soon became common knowledge and the high records secured ceased to be a fair indication of the producing ability of a cow over a long period of time. The following tables, taken from Eckles, illustrate the foregoing conclusively:

| | Record | % Fat | Av. Yr. |
|---|--------|-------|---------|
| Cow fitted | 7-day | 5.1 | 3.4 |
| Cow not fitted | 7-day | 3.63 | 3.34 |
| Yearly records of five cows having over 40 pounds of butter in seven days in same year: | | | |
| | 13,964 | 560 | 4.09 |
| | 29,825 | 952 | 3.12 |
| | 18,819 | 574 | 3.05 |
| | 27,009 | 836 | 3.05 |
| | 17,935 | 685 | 3.81 |
| Av. 21,510 | 721 | 3.43 | 5.32 |

Eckles is responsible for the statement that a milk record is a much more reliable and fairer test for the 7-day period than the butter fat production. However, this is not as true a record as could be secured under

normal conditions with the fat test because the fat percent is not constant for cows within any one breed.

The seven day or short time record has in most cases been replaced by the long time record of 305 day record. The "Holstein Friesian World" in the April 4, 1925 issue states in an editorial that there were two and one half times as many 365 day records than 305 days records in 1924, but from all indications the 1925 tests would show only twice as many of the 365 day records. The 305 day record, with a calving limit of 13 months, has been advocated for some time as it is more the normal activity of a cow to produce a calf every year. With the 365 day record the tendency is to retard calving, 14 or 15 month period, as a more impressive record can be secured which looks better on paper, but the fallacy of the record is at once evident to the sensible dairyman.

One of the greatest objection to the Official Testing is the rather high cost, especially to the man who will not make any exceptional records. In cases where exceedingly high records are made, the value of the animal and her off-spring are automatically increased more than enough to cover the cost of making the record. The average dairyman hasn't enough capital to enter into the high class breeding game for it is in reality a rich mans game, especially when carried on on a large scale. The greatest point in favor of the official testing is the fact that they are very authentic due to the nature of their supervision. Cases have been known where crookedness was practiced, but these attempts have usually been found out.

The Cow testing Association was first promoted in Michigan in 1905 to take care of the man with the grade herd, thus providing an efficient and economical way for a man to determine the producing ability of his cows. In many states the Extension Dairyman from the Experiment Station will aid in organizing the Association, but they differ from the official test system in that the Experiment Station does not employ the tester or O. K. the records. The Association elect their own officers,

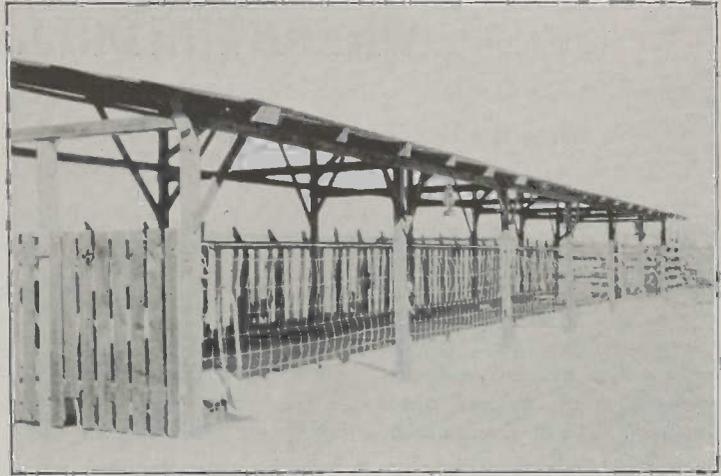
hire the testers and pay them according to the number of cows tested. The average cost will vary from \$1.50 to \$2.50 per cow per year as compared to about \$15.00 per cow on the official test for twelve months.

The tester figures the production of each cow, the cost of her feed, and the profit or loss. A majority of the dairymen would not take time to do all this figuring, or probably does not have the time to do it, hence the Cow Testing Association serves a good purpose in giving them a check on the productiveness of their cows and more efficient basis on which to cull.

There is much more chance for fraud as it would be easier for the unscrupulous dairyman to bribe the tester, thus getting his cows credited with a high production. For this reason the Cow Testing Association records are not given so much weight by the experienced buyer as are the records of the Official Tests.

The Cow Testing Association idea has done much for the dairy industry as a whole, however, as has been pointed out by J. A. Cramer of Wisconsin in the Breeders Gazette for September 17, 1925. The annual report for Wisconsin for the year ending July 1, 1925 shows that there were 3,253 members belonging to 125 cow testing associations, and that the 57,947 cows owned by the members of the associations produced on the average 6,858 pounds of 3.9% milk, giving them an annual production of 271 pounds of fat. This exceeded the state average by 80 pounds and was 120 pounds above the average of the United States. 16% of the herds averaged 300 pounds per cow or better which is a very creditable herd production. 17% of the cows in the associations are purebred as compared to 7% six years ago. Also 90% of the bulls are purebreds, which certainly shows a desire for better stock. 70% of the members fed balanced rations, 33% fed grain in the summer, 55% fed grain to dry cows, 65% own barns provided with drinking cups, and 2,268 herds tested for T.B. showed 750 fully accredited. A great deal of this advancement must be due to the association as it arouses the interest of the members by friendly rivalry in making records.

Within the last few years the Ayrshire breeders have been advocating a Herd Test Plan. Last year they succeeded in getting the American trial. The aims of the plan are brief-nize their plan and to sanction its



A cheap but sanitary milk shed. This shed was constructed in January, 1921, at a cost of \$275 for material and labor.

Dairy Science Association to recognize as follows:

1. To furnish at a minimum cost the production records of the entire herd.
2. Make possible the intelligent judgment of the herd and to aid in buying bulls, cows, etc.
3. Advance the purebreds in protecting the best cows from exploitation to the detriment of their reproductive powers.

The main features are:

1. All cows in the herd tested—both grades and purebreds. Cost of feed considered.
2. Milk twice per day only, except in cases of exception production.
3. Figure profit and loss of herd on 12 months basis.
4. Herd average emphasized especially in connection with size of herd.
5. Records to be supervised by one-day inspection and frequent surprise tests.
6. Permanent record book to be furnished breeder by association.
7. Test to be conducted at minimum cost.

The herd test plan was devised to strike a medium between the official test and the cow testing association. The aim was to lower the high cost of the former by testing for only one day and yet secure an authentic, unbiased record. Another strong argument in its favor is the fact herd production is emphasized, which lessens the incentive for delayed culling and makes the breeding up of the entire herd the major aim, instead of high records on a few cows.

The whole situation is still in the formative stage and time will tell as to its merits and demerits.

All of the systems of testing for production advanced so far have had

for their major objective the establishing of a rating whereby the cow could be more accurately appraised as to her worth. The results have been very gratifying, as the production of the different breeds have been increased greatly, both in milk and in fat production. In years to come the average production will no doubt be raised considerably as more dairymen become interested in quality cows and put their cows on some test.

Another value resulting from production records is the aid they give in culling. All progressive dairymen agree to the advisability of culling—that it is an absolute necessity in successful dairying. The old method of culling by the comparative femininity, conformation, milk veins, etc., were fairly accurate, but could not be depended upon. A fairly definite relation between the 2-year-old record and mature production has now been worked out, and it is possible to determine the worth of a cow after she has finished her first year's production. Many cows with poor dairy conformation have proved to be good producers, and vice versa, so it is wise to cull on production first, then, if desirable, cull according to appearance.

Production records also serve as good advertising, especially if they are exceptional records, the results being published as news in many of the agricultural publications.

The exports of frozen mutton and lamb from Argentina in 1925 were 83,422 tons, the heaviest in some years. The shipments from Uruguay were only 9,115 tons, a heavy decrease from the previous two years. Argentina has around 35,000,000 head of sheep and Uruguay about 14,500,000 head.