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# FARM AND DAIRY & RURAL HOME



We Welcome Practical Progressive Ideas

The Recognized Exponent of Dairying in Canada

Trade increases the wealth and glory of a country; but its real strength and stamina are to be looked for among the cultivators of the land.—Lord Chatham

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No. 43

## Common Grades, High Grades and Pure Breds Compared\*

Demonstrating the Influence of a Good Sire in Increasing Milk Production

G. H. HUTTON, Superintendent, Lacombe Experimental Farm.

NOMINALLY, men are supposed to keep cattle for the profit they get out of them, but in reality many must keep them for the privilege of associating with cows. Where the average production is only 3,800 lbs., it necessarily means that there are many cows that do not produce 2,500 lbs., and the cow which is milked for the whole lactation period and during that period produces only 2,500 lbs. is not a profitable cow. She is a boarder, and every year she is kept means a loss, and the man who keeps her must charge up a great deal to her credit because of the fact that she keeps him from being idle, and so keeps Satan from finding mischief for his otherwise idle hands. This is about the only way in which I know a profit could be figured for a great many cows which our dairymen are providing with bed and board.

As I have sta'd, we have some figures here which show what can be done to remedy this state of affairs. We have here three charts giving the production of three herds of dairy cattle. The first chart shows the production of cows which were purchased with the idea of securing a herd which would represent a common dairy herd. This herd is, however, not so common after all, as the average production is about 3,600 lbs. higher than the average production of the Province. The herd of high grade Holsteins under the same conditions of feed and shelter produced in the same number of days over 2,000 lbs. a head more than the common herd, while the pure-bred herd produced about 3,200 lbs. more during the lactation period, averaging the same number of days.

Increasing Production by Breeding. In order to amplify the figures here presented, we have had under way during the past two years an experiment to further show the importance of breeding in increasing the production of dairy cattle. This common grade herd is being bred to a pure-bred Holstein bull, whose dam has a record of 86 lbs. of milk a day for 30 days, testing an average of four per cent. fat. As he is a grandson of Pontiac Koradyk there are many cows in his pedigree showing a production of more than 30 lbs. of butter in seven days. His own immediate dam has a record of only slightly under 30 lbs. in seven days. A bull whose pedigree shows such a large number of high producing dams as this one should prove prepotent, and we are hoping that with such a bull constituting one side of our herd, and with these cows whose average production for the last year was between 6,000 and 7,000 lbs., constituting the other side of the herd, we will secure some figures showing exactly what advantage a pure-bred bull will have when used on individuals whose records run from 2,000 lbs. upwards. We expect to add additional

demonstrative testimony to the advantage of use of a pure-bred sire on our common cows.

The first chart shows the production of the common grade herd, and all of the animals of this herd are matured cows. It will be noticed that the records show extreme variation, a variation much greater than will be seen in the two other herds, which have the advantage of both breeding and selection. Cow number four in this herd has a record of only slightly better than

3,000 lbs., but she gave about 900 lbs. of this total production in the first 30 days. Had we not been weighing the milk this cow's fairly liberal production on the beginning would have resulted in the impression that she was well worth keeping. These figures illustrate the truth of the statement that an intimate knowledge of individual production could be obtained only by weighing and by testing the milk from each individual in the herd. The use of the scales—the "weighing in the balance" of the product of each cow—is the only means of arriving at a true estimate of the individual worth of each animal. By adding to a knowledge of quantity, information as to quality by the use of the Babcock Test at least once a month, the commentary as to merit is complete as far as production influences profit. The records of feed consumed will then furnish full data for guidance.

### The High Grade Herd.

Let us now turn to the chart showing the production of the high grade Holsteins as illustrating the evolution which may be brought about by the use of good bulls. Of course, the lactation period is longer in this case than in the case of the other herds whose records are shown on these charts. This long lactation period is explained by the facts, first that these were heifers with their first calves, and we therefore wished to establish in them the long milking habit, and, second, we wished to hold them over for calving the second time this fall. We are willing to concede that the long lactation period gives these heifers a distinct advantage over the other herds, but not sufficient advantage to lower their record below favorable comparison with the common grade herd.

In the pure-bred herd there is one mature cow whose record is shown. The lactation period is about average, and yet, though nearly all the animals whose records are shown are heifers, the average production for the lactation period is 10,133 lbs., with an average per cent. fat of 2.18. Had the records of the high grade heifers been computed for the same length of time, the production would have been 8,649 lbs., and the production of the three herds would then stand as follows: the common grade herd, 6,885.7 lbs.; the high grade herd (for the same length of lactation period), 8,649 lbs., and the pure-bred herd 10,133 lbs. These figures carry greater weight than any argument or general comment which could be made in favor of pure-bred sires.

By careful selection of the head of our breeding herd, by careful weighing and testing the milk from each cow in the herd, our dairymen will rapidly change the figures showing the annual production of the dairy cows by increases of 25, 50 and even 100 per cent. "Let us slumber not in the tents of our fathers. The world is advancing."



### The Herds Compared

#### Records of Common Grade Cattle.

No. of Cow	Lbs. Milk	Butter Fat
Grade No. 1	6,418.2	3.6
Grade No. 2	4,933.9	4.4
Grade No. 3	3,011.3	4.0
Grade No. 4	12,586.4	3.9
Grade No. 7	8,493.4	4.0
Grade No. 20	4,988.2	3.6
Grade No. 31	4,421.3	3.0
Grade No. 33	10,272.2	5.2
Grade No. 34	6,885.7	3.5
Average No. of days in lactation period	341	
Average pounds of milk a day	20.1	

#### Records of Grade Holsteins.

No. of Cow	Lbs. Milk	Butter Fat
Grade No. 11	13,319.5	3.7
Grade No. 12	13,435.8	4.2
Grade No. 13	8,430.2	3.8
Grade No. 14	10,341.4	3.4
Grade No. 15	11,917.6	3.9
Grade No. 17	10,201.2	4.4
Grade No. 18	7,193.1	3.4
Grade No. 19	8,278.1	3.4
Grade No. 20	13,528.2	3.7
Grade No. 21	10,720.0	3.7
Average No. of days in lactation period	483	
Average pounds of milk a day	22.3	

#### Records of Pure Bred Holsteins.

Name	Lbs. Milk	Butter Fat
Daisy Johanna Ormsby	10,806.0	3.4
Lawncrest Lee Beets	13,242.2	3.1
Lawncrest Rosa Echo	10,240.0	3.0
Princess Margaret Hebron	10,091.1	3.4
Maud Barcastic	7,253.8	3.0
Nina Gem Lutské	12,038.1	3.1
Rhoda DeKol Beets	7,364.2	2.8
Vreese B. 3rd	9,194.5	3.1
Average	10,915.8	3.18
Average No. of days in lactation period	335	
Average pounds of milk a day	29.8	

\*From an Address delivered at a Convention of Dairymen in Calgary, Alta., last winter.