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Purebred Dairy Bulls Pay

Horace M. Jones

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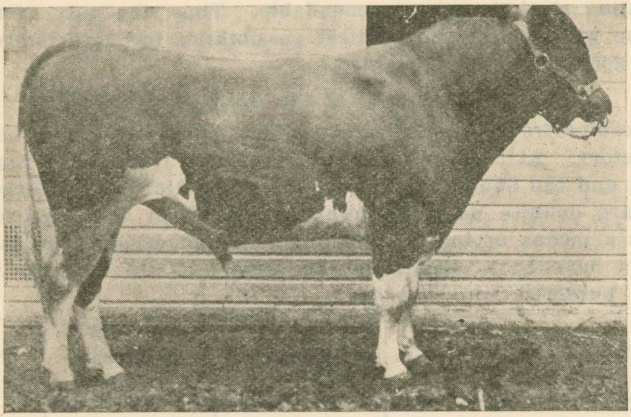
PUREBRED DAIRY BULLS PAY

By Horace M. Jones, Extension Dairy Specialist



Sir Korndyke Bess Piebe, former herd sire of the State college Holstein herd. His daughters are exceptionally high producers.

A cow is like a machine in many respects. The difference in the capacity of machines is illustrative of the great variations in producing ability which exist between dairy cows. What causes this difference? The chief causes are the surroundings amid which the cow happens to be placed and the characteristics which she inherits from her ancestors.

Milk Producing Tendencies

A great many cows are handicapped in their production by poor feeding and care, but there are also a great many whose production is limited not by feed and care but rather by their utter lack of a tendency to produce milk and butterfat. Some cows have a strong tendency to use their feed for laying on flesh. Others have an equally strong tendency to use their feed for the manufacture of milk. These tendencies come from the characteristics of a long line of ancestors.

Inheritance

A cow will usually inherit the characteristics of one ancestor more strongly than those of another. In general, she inherits one-

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half of her characteristics from her two parents, one-fourth from her four grandparents, one-eighth from her eight great grandparents and so on. However, full sisters may carry the characteristics of entirely different animals. Hence, the difference which has been known to be found among animals of almost identical breeding.

Animals are most likely to resemble in appearance and producing ability their nearest ancestors, and for this reason great importance is attached to the merits of the dam and sire used. It is often a poor policy to invest heavily in cows in the hope of acquiring a dairy herd quickly, although the purchase of a **few good cows** for foundation stock is very commendable. Thus, the only avenue left, and one which offers the greatest possibilities for herd improvement, is the good purebred dairy sire.

Influence of the Dairy Sire

Results from the use of purebred dairy sires have been very satisfactory. At almost the same time (1907) the Iowa Experiment station and the South Dakota Experiment station started experiments to secure definite data regarding the value of the purebred dairy sire as a means of increasing the production of dairy herds. Their findings have been essentially the same and are strongly in favor of the purebred herd header:

STATE	Dam's Butterfat Production	Daughter's Butterfat Production	Percent Increase
Iowa	171.57	261.25	52
South Dakota	165.06	260.06	57

These two stations, working independently of each other, arrived at practically the same conclusion, namely: that the use of purebred dairy sires on scrub or grade cows results in over 50 percent increase in production the first cross. Iowa found that one purebred cross increased the milk production 64 percent. South Dakota found an increase of 67 percent. The above figures are the averages for five cows in 21 lactation periods in the case of Iowa; nine cows in 28 lactation periods in the case of South Dakota. Both stations used Holstein, Guernsey, and Jersey sires on the same cows. The averages are for all breeds.

There Are Also Inferior Purebreds

It must not be inferred that all purebred sires will increase the production of the offspring. Some will not. "Papers" are not enough. Producing ability and type must go with them. Of six purebred bulls used in developing the dairy herd of the University of Missouri, three sired daughters producing from 8 to 29 percent less than their dams; the other three sired daughters producing from 1 to 68 percent more than their dams. The dams were exceptionally good cows.

Any of these bulls might have proved an asset to many an average herd. The actual value of a bull can be properly determined only by the performance of his daughters.

Cow testing association reports from Wisconsin show that cows sired by purebred bulls produce annually from 49 to 85 pounds more butterfat each than do cows sired by grade or scrub bulls.

Grades and Scrubs in the Majority

In spite of the preponderance of evidence in favor of using the purebred dairy sire, the vast majority of dairy herds are still headed by grades and scrubs. The census of 1920 reveals the fact that on 43,406 farms in South Dakota reporting dairy cattle, there are only 1,544 purebred dairy bulls in use. Thus, there is but one purebred dairy sire for each 28 farms reporting dairy cattle. There is but one purebred dairy bull to every 300 dairy cows. The balance are grades and scrubs.

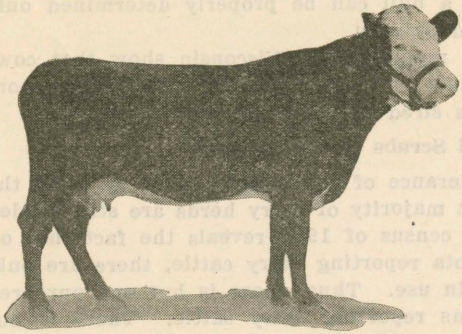
Denmark, Switzerland, and the Netherlands have learned their lesson. They insist upon using only purebred bulls. The average yearly milk production of cows in the various countries is as follows: Netherlands, 7,585; Switzerland, 6,950; Denmark, 5,666; United States, 3,412.

As the number of purebred dairy bulls in use is increased, the milk production of the average cow in the United States and in South Dakota may be expected to approach more nearly the averages attained in foreign countries where purebred sires are the rule.

A great loss is occasioned by the slaughter of bulls before the producing ability of their daughters becomes known. The best plan is to keep a bull in the community until his daughters have been tested. Loan him out if necessary rather than sell him outright. Then, when his ability has been proved, return him to the herd to bring about further improvements. Thousands of bulls are slaughtered every year before their daughters have become producers.

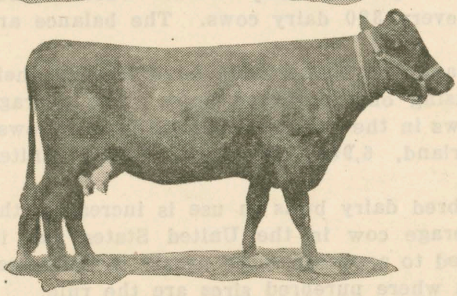
Aside from production, attention should also be given to improving the type and uniformity of the herd. Obviously, the herd which presents a good appearance and shows uniformity of animals has a great advantage over one which is lacking in these respects. There are certain standards of dairy type to guide the breeder. Both bulls and cows should be selected with a view to improving the type of the herd.

Herd improvement and elimination must go hand in hand. A good herd is not necessarily built by retaining every animal born into it. There are bound to be some inferior ones. Herd improvement depends not only upon selecting the best individuals to keep as breeders, but also upon getting rid of those that fail to make good. Records of production combined with the use of a purebred dairy sire are the two greatest factors in developing a dairy herd of high producing cows.



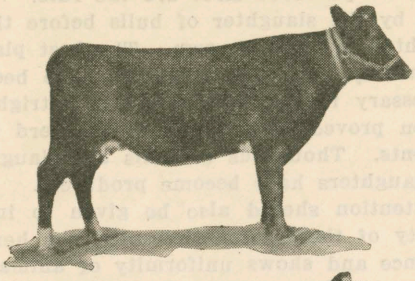
FOUNDATION COW

Laura 196. Grade Hereford. Average production, 5 lactations—3607.7 lbs. milk, 153.82 lbs. fat.



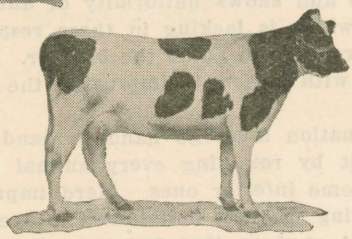
1ST HOLSTEIN CROSS

Lotta 192. 50 percent Holstein blood. Average production, 5 lactations—7340.2 lbs. milk, 264.97 lbs. fat.



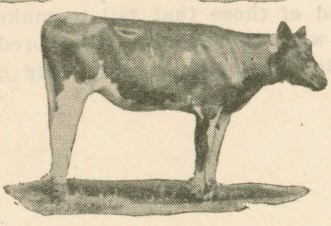
2ND HOLSTEIN CROSS

Lotta 2nd 184. 75 percent Holstein blood. Average production, 2 lactations—9598.5 lbs. milk, 348.03 lbs. fat.



3RD HOLSTEIN CROSS

Lead 163. 87½ percent Holstein blood. Average production, 2 lactations — 4850 lbs. milk, 173.05 lbs. fat.



4TH HOLSTEIN CROSS

Lida 152. 93¾ percent Holstein blood. No production record. Note the improvement in type.

—S. D. Exp. Sta. Bul. 198.