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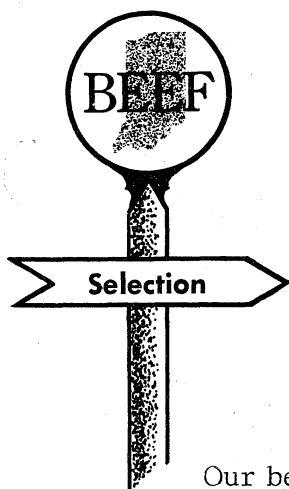
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Beef Cattle Improvement

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Our beef industry has seen many improvements in the past 50 years. These changes have been brought about by the changing desires of all people involved with the beef industry; purebred breeders, commercial calf producers, cattle feeders, packers, retailers, and finally, the consumers.

Generally, people involved with different phases of beef production have been primarily interested in improving only those traits which directly affect their profits or satisfy their desires. This is understandable. But one "weak-link" in this beef production chain could very well cause a large economic loss to every other part of the beef industry. On the other hand, certain improvements in our beef cattle can increase the profits for everyone concerned.

Let's look at some of the factors which affect beef consumption and beef cattle profits. Let's look at how each person involved in production is affected. And, let's look briefly at how each factor can be improved. Here, listed in order of benefit to the entire beef industry, are traits that should be improved.

Fertility and Calving Percent

Many herds, commercial and purebred, annually wean calves from less than 75 percent of their cows. Weaning percentage has a terrific affect on overall cow herd profits. For instance, if a 100-cow herd

produced 95 calves selling for \$125.00 per head, each of the 100 cows would have produced a gross of \$118.75. However, if only 75 calves were sold, each of the 100 cows would have produced a gross of \$93.75. This is a difference of \$25.00 per cow or \$2500.00 for the 100-cow herd.

How can calving percent be improved? By proper nutrition and care of the herd bull and cows in addition to close observation of the cow herd. It is important to remember that feeding too much may be as detrimental to fertility as feeding too little. Other practices such as keeping breeding records and making pregnancy checks are also of great value. Carrying an open cow through the winter is costly.

Growth Rate and Feed Efficiency

Growth rate and feed efficiency are almost one and the same; that is, the fast gaining animals are generally the more efficient users of feed. Feedlot gain and feed efficiency can make or break the cattle feeder.

Both gain and efficiency can be readily improved by selecting animals sired by fast-gaining bulls. Widespread use of performance and progeny testing to compare the real value of possible herd sires can result in better beef cattle for all parts of the beef industry.

Proportion of High-Quality Lean Meat

This is the final criterion of the value of any meat animal. Consumer acceptance

of beef has been based on the quality and flavor of the product. However, cattle of the same carcass grade and weight frequently differ as much as \$40.00 in the value of salable meat.

Research has suggested that about half of the variation in carcass desirability is determined by genetic differences. Therefore, the quantity and quality of lean meat can be increased by selecting bulls that sire animals with highly desirable carcasses. This requires carcass evaluation of progeny groups.

Slaughtering animals at lighter weights and more extensive use of forages may also result in leaner but acceptable carcasses.

Mothering Ability

The cost of keeping a beef cow accounts for a large proportion of the total cost of producing a slaughter animal. However, the pre-weaning calf can make more efficient weight gains than at any other time during its life. Therefore, mothering ability, as reflected by weaning weight, is a very important trait. Large differences exist between the producing ability of individual beef cows. Almost every herd contains cows that vary as much as \$35.00 in their average yearly net production.

Mothering ability may best be improved by using a good performance testing program--one that accurately tells the yearly production of each cow and bull in the herd. Selection of herd bulls from good milking lines of cows should also help to improve this trait.

Live Grade and Conformation

What is good beef type? Many different answers could be given to this question. Basically, beef conformation or type should be an expression of the skeletal and muscular

soundness, straightness, symmetry, and quality of an animal. To contribute to the overall improvement of beef cattle, conformation must reflect the potential quantity and quality of edible meat, as well as the animal's structural soundness.

Past selection of breeding stock has been based primarily on type. This has resulted in marked improvement in beef type (according to present ideals), but has not appreciably increased the gainability, feed efficiency, or carcass leanness of our beef cattle. Why? Because the animal's gainability, feed efficiency, or carcass desirability cannot be accurately known by visual appraisal. Therefore, in a herd improvement program, conformation, gainability, and carcass desirability must be measured separately.

Many commercial producers need to further improve the conformation of their feeder calves. Feeder grade may be increased by two-thirds of a grade by using a herd sire of more acceptable beef conformation.

Constitution and Longevity

These are important because of the conditions under which our beef cattle are raised. Hardiness is almost as important on Midwestern farms as on the Western ranges. Although hardiness and longevity are probably not highly inherited, certain lines of breeding tend to be more hardy and longer-lived than others. Many beef breeders expose their cow herds and calf crops to very high levels of nutrition. Using high levels of nutrition does not allow individual animals to express their true genetic potential for productivity and hardiness.

Genetic Defects

Spreading of genetic defects, such as dwarfism and hydrocephalus, can cause a great economic loss to the beef cow herd

operator and the entire industry. Naturally the occurrence of these defects can be decreased through sound selection of breeding stock, discarding of "dirty" pedigreed animals, and general reputability of seed-stock producers.

Although this big beef business involves many different people, the consumer dictates the type of beef which should be produced. Also, there is one person who

determines whether or not our industry will grow and prosper; the beef cattle breeder. His improvements in the gaining ability, efficiency and quality of our cattle will be reflected in the profits for each of the different links in the beef production chain.

The question is: "Are we to rest on our past laurels or are we to move ahead?" Only the cattlemen can answer this question.

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