

SIZE

LEAD IN

by Dr. C. K. Allen

Beef cattle size is a popular and controversial subject. At the recent Angus Outlook Conference at Colorado State University, size and traits related to size were discussed thoroughly, both in and out of the formal program. How you let the beef cattle size controversy affect your breeding program could have a long-range effect on your profits.

Many breeders vividly remember the '50s and '60s when cattle breeders went too far with the trend of making cattle earlier maturing. They wonder if Angus breeders will benefit from past experiences and avoid the time and cost of selection for traits that will not be needed in the future.

Controversy rages over selection for frame size and its relationship to growth rate. On the other hand, most breeders agree that Angus producers needed to change from the compact cattle of the past. The rate that the Angus breed has changed speaks well for the broad genetic Angus base and the skill of many Angus breeders.

The Controversy

Many feel that we need to put more emphasis on larger mature size, while others strongly disagree and favor selection of cattle for size at logical slaughter end points. Part of this controversy results from a belief that selection just for weight at a given age may not eliminate cattle that quit growing before they reach desirable slaughter weights. The strong correlation between successive weights means that we can make progress on selection for 365-day weights, but we might be able to make even more progress if we could sort off the cattle that would stop producing lean tissue and start laying on fat between 365 days and the time they reach a logical slaughter weight.

On the other hand, selection for frame size will increase the mature size of the breed, but unless we also select for growth rate, it may not increase growth. Height and growth rate are correlated, but that correlation is not perfect. There is a strong indication that the rate of maturing and growth rate are two different traits. This means that we can have late-maturing cattle that are fast growers and late-maturing cattle that are slow growers—and we sure don't need the latter type.

Ideal

It would be ideal if we could performance test all Angus breeding cattle until they reach a desirable slaughter weight before making our selections. However, this is not possible because many management

systems do not permit intensive feeding. Moreover, it would decrease the value of cattle for breeding if they did.

The preferred slaughter weight varies around the country. Also, feeders can efficiently feed cattle of different frame sizes if they match feed resources and feed these cattle to an equal degree of finish.

However, cattle that must be slaughtered at less than 900 lb. live weight create a problem. The fixed costs of production, which include costs such as labor, facilities, preventive maintenance and equipment, are costs that are incurred on a per head rather than on a per pound of gain basis. This puts cattle that weigh 900 lb. or less at a disadvantage. For example, if the fixed cost for a slaughter animal amounts to \$200 per head, this figures 22.2¢ per lb. for a 900-lb. slaughter animal and only 16.7¢ a lb. for a 1,200-lb. animal.

Cow Size

Very large slaughter cattle require large cows. The extra cow size necessary to produce larger slaughter animals is compounded, because larger replacements and larger seed stock herds also must be maintained. However, some of the increased maintenance cost is paid by increased salvage value of the cows.

The real cost of larger cows is incurred if reproduction is reduced. It is well documented that the larger breeds have considerably more reproduction problems than the British breeds and especially more problems than the Angus breed. The reduced calf crop from these larger breeds is a cumulative effect of later puberty, greater calf loss at birth (especially among first- and second-calf heifers), slower re-breeding performance of the cow herd and greater calf loss after birth. As we get Angus cattle bigger, they will have some of the same problems unless we select strongly against them.

Feed Costs

Grain prices are relatively low today and have been for the last three or four years. In 1974 and 1975, grain prices were very high in comparison to cattle prices, and at that stage a real premium was paid for cattle that had enough condition to be marketed with a short grain feeding. Later maturing cattle need more grain to reach market condition than earlier maturing cattle. It is inevitable that future grain will become higher priced in relation to beef prices. This could have a dramatic effect on desired cattle types.

Some breeders have developed cow herd management systems that involve feeding grain to cows, especially during the breeding season. In fact, several of the larger breeds require grain feeding to get cows bred. Management systems of this nature could result in cattle that cannot function efficiently without grain and could lead to cattle that are unfit for practical production in the future.

Calving Ease

A recent survey of commercial cattlemen across the country indicates that they consider calving ease as the major advantage of Angus cattle. On the other hand, commercial cattlemen consider insufficient size and growth as the major disadvantage of Angus cattle. Interestingly enough, 50% of the commercial breeders surveyed have some crossbred cows, and more than 82% of the breeders with crossbred cows have Angus crosses.

When these commercial producers were asked what they consider most important in bull selection, they indicated growth or size and conformation were the major things they considered. Some 70% of the breeders surveyed indicated that they preferred to buy bulls from production tested herds.

We also surveyed a group of Angus breeders who replied that most of their new bull customers indicated that they were selecting Angus bulls to get away from calving problems with other breeds or to be used on first-calf heifers.

Important Considerations

Clearly there are several things that are very important to Angus producers as they prepare for the future. Breeders should maintain accurate performance records and keep as many birth weights as possible. Accurate records provide the opportunity to continue to select for growth and identify easy calving lines at the same time.

In the future there probably will be more emphasis on selection for optimal growth and size, and there may be more emphasis on cattle that grow efficiently to logical slaughter end points. We must continue to offer Angus cattle with good growth and size—but avoid extremes in both weight and size. Above all, we should make no excuses for reproductive failures as we increase the size of Angus cattle. The better Angus now offer as much growth as most other breeds but are more efficient, easier keepers and don't have problems with reproduction. 