



Beef Logic

by Bob Long

Single-trait selection is inadequate

Yearling weight is a performance trait which should not be emphasized in beef cattle selection criteria without qualification. Rapid growth rate is desirable in beef production, but only if growth rate is defined as:

Increase in weight with the resulting carcass composed of a high percentage of juicy, tender, flavorful, lean meat and the carcass of acceptable market weight.

Selection for increasing expected progeny differences (EPDs) for yearling weight, without the above qualifications, frequently results in large frame size as well. Large frame size is in conflict with efficient and profitable beef production for the following reasons:

1. Large frame size is associated with late physiological maturity. This means reduced reproductive efficiency, such as delayed puberty in both sexes, failure of heifers to calve as two-year-old and bulls which are non-breeders as yearlings.
2. Large frame size is associated with late physiological maturity requiring a longer feeding period to develop sufficient marbling for the USDA Choice quality grade.
3. Large framed cattle with average or heavy muscling fed to reach the USDA

Choice grade produce carcasses which are too heavy for the market. This results in docked prices.



Fortunately, it's possible to identify many bulls with high EPDs for yearling weight which are not excessive in frame size. One need only check the Sire Evaluation Report of the American Angus Association for proof. Examination of the bulls with the highest EPDs for yearling weight reveals that all frame sizes are represented. Some are too large – yes, and some are too small.

This variation does have advantages. If a breeder feels the need to change the frame size in a herd, a bull is available to do the job without sacrificing growth rate.

Another trait receiving considerable attention in selection programs is carcass fat thickness. The most recent Beef Quality Audit confirmed again that cattle going to slaughter in the United States carry too much fat.

Furthermore, consumers are “fat conscious” and retailers are offering much leaner cuts by trimming excess fat.

In view of these facts and with increasing amounts of carcass data available, many breeders have begun to search for bulls recording negative EPDs for fat thickness. It's true the British breeds tend to produce carcasses with too much fat cover, resulting in undesirable yield grades and reduced yield of lean beef. Emphasis on leaner cattle without consideration for overall productivity, however, can lead to trouble.

Most British breed cattle are considered superior in maternal traits in range production. For example, most crossbreeding programs require the mother cows to carry a considerable amount of British blood. This ability to function efficiently under range conditions is in part due to the fact that such cows store some fat in the good times, allowing them to handle the droughts and blizzards and still produce.

Therefore, as beef producers strive to improve carcass cutability by reducing fat cover, a goal might well be a happy medium rather than extreme leanness. The carcass cutability can be handled by the use of a lean, heavily muscled terminal cross bull in the crossbreeding program.

The point to remember is that no single performance measure is an adequate selection criterion. Rather, all the factors

which contribute to efficiency and profitability must be measured and considered if true herd and beef improvements are to result.

EPDs are valuable tools, but the breeder must use all of them, not one or two. Beef cattle improvement is a complex, long-term program, but a rewarding one in profits and satisfaction.



We Welcome Your Input!

Our Beef Improvement section has been expanded to include more information for today's performance-minded breeder. Both "Beef Logic" by Bob Long and the "What's Your Beef?" columns serve as a forum for Angus breeders and industry experts to express their opinions on current issues and topics of breed improvement and performance programs.

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