

# Beef Logic

by Bob Long



## High EPDs not always best in genetic improvement

The development of expected progeny differences (EPDs) is one of the most important advancements in animal breeding technology. An increasing number of beef cattle breeders, both purebred and commercial, are utilizing EPDs in the selection of breeding stock.

EPDs are an excellent tool. An understanding of what EPD numbers mean, however, is necessary if breeders are to realize full value.

EPDs are not a measure of value. The EPD only estimates the expected difference in performance of two animals when used as parents.

For example, assume that Bull A has an EPD for yearling weight of +70 and Bull B an EPD of +10. This means that if these two bulls are mated to similar cows, and the cows and the resulting calves treated alike, the average yearling weight of the calves sired by Bull A will be 60 pounds (70-10 = 60) heavier than those sired by Bull B. The actual yearling weights of this calf crop will be determined by the genetic potential of these two sires and the cow herd, plus the environment.

Unfortunately, human nature is such that whenever performance is measured beef cattle breeders tend to select for extremes rather than efficiency of production. Atypical example is the current fad for higher and higher EPDs for milk. There is a strong positive correlation between the level of milk production of beef cows and the weaning weight of their calves. However, factors other than weaning weight affect efficiency and/or profit.

As in any business, beef producers should not expect "something for nothing." Milk production requires additional protein, energy and other nutrients which translates to increased feed costs. Obviously, an increase in weaning weight must be worth more than the cost of the feed required to produce it if profit is to be realized.

Genetic potential for milk production varies widely. A comparison of cows with low genetic potential for milk with those capable of high milk production helps us

understand the advantages and disadvantages of each.

### Cows with low milk production

Generally speaking, such cows, under range conditions, are capable of weaning 350- to 400-pound calves at 200 days of age. Such cows can produce a spring calf, cycle and rebreed on pasture without supplemental feed. Also, these cows store enough condition during the summer to go through the winter on dormant pasture or low-quality hay with a minimum of protein supplement and no grain.

A herd of this potential requires low inputs of feed, labor and management. However, productivity per cow is also low and quite a large herd is required to support a producer and his/her family. Further, investment in improved pasture and/or increased supplemental feed will not increase individual productivity but result in fat cows with little change in weaning weights.

### Cows with high milk potential

Cows capable of high milk production mated with growthy bulls can routinely wean 700- and even 800-pound calves, provided adequate nutrition is available. Under range conditions heavy milking cows will milk to near their genetic potential for 4 or 5 weeks by drawing on body stores.

At this point, however, milk production not only falls drastically but these now thin cows fail to cycle and rebreed. This leaves producers with only a slight increase in

weaning weight of calves and a high percentage of open cows. Cows with genetic potential for high milk production should only be used in operations producing large quantities of high-quality, high-energy feeds.


It should also be realized that selection for high milk production in beef cattle is in conflict with ideal carcass composition. Heavy milking cows tend toward dairy cattle composition, typified by thin, light muscling and excessive abdominal fat deposition.

The seedstock producer who emphasizes milk production in a selection program and promotes the sale of bulls to commercial producers on the basis of high EPDs for milk is asking for trouble when the daughters of those bulls come into production.

### Move to moderation

A sound program for purebred breeders is to maintain the herd under the same conditions as that used by commercial producers in their area and to select for as much weaning weight as possible without reducing calf crop percentage.

Remember, weaning weight is not everything. Selection programs should consider every factor that contributes to efficiency and profit.

Future columns will discuss the danger of overemphasizing such traits as low birth weight, high yearling weight and thin backfat cover. 

## 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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