

Beef Logic

by R.A. "Bob" Long



Use accurate performance measurements—not indicators

Complete and accurate performance records require considerable time, knowledge and effort to acquire, but they are essential if genetic improvement is to be realized. Therefore, breeders should resist the temptation to adopt unproven procedures that are "easier."

A typical example is using a tape to measure the circumference of a newborn calf's front coronary band (the upper part of the hoof) to estimate weight. True, it is much easier to carry a tape and to measure a calf's foot than it is to carry a scale and to lift a 100-pound (lb.) calf while its mother is snorting in your back pocket.

However, there is no data to support that the tape method is an accurate measure of birth weight. The manufacturer's instructions for one such tape state that the

estimate "may vary plus or minus 7 pounds," which is a significant error.

The body of a newborn calf has little fat, so the remaining major tissue is either bone or muscle. The muscle-to-bone ratio in calves easily can range from 2.5-to-1 to 5.0-to-1; therefore, a heavily muscled calf weighs considerably more than a thinly muscled one of the same skeletal size. Among calves with widely differing genetic potential for muscling, the "plus or minus 7 pounds" is far from accurate. Use actual weight, not just an indicator.

Even actual weight requires attention to procedure. Every effort should be made to weigh calves as soon after birth as possible. Several factors — such as elapsed time after birth, whether or not the calf has nursed and

how much, and even a crust of snow or ice on the calf's back — can cause errors.

And an accurate set of scales does not guarantee accuracy. Every effort should be made to weigh the cattle under the same conditions. Time of day, feeding time and length of time standing in the alley must be uniform, or errors can result.

Weighing conditions affect most measures of growth in performance records. For example, at 8 lb./gallon (gal.), a recent 5-gal. drink of water amounts to 40 lb., or 4% of a 1,000-lb. bull, and that results in performance-measurement errors. Similarly, every cattle buyer knows the importance of weighing conditions in estimating carcass yield.

Another example of the use of indicators in the evaluation of cattle is a visual estimation of capacity. Cattlemen often refer to big-middled, paunchy cattle as having "great capacity." Such reference implies that this trait is associated with rate of postweaning gain or general "doing" ability. However, considerable variation among cattle in the amount of residual fill they carry has been observed.

Cattle treated exactly alike may vary greatly in amount of feed and water retained in the gastrointestinal (GI) tract. A big, paunchy yearling easily can retain 50 lb. of fill above the average of his contemporaries. This amounts to 0.35 lb./day for 140 days. It is not an increase in empty body weight, and it results in a significant error in measuring growth rate.

Likewise, big middles can result from heavy deposits of fat on the mesenteries and around the kidneys. Further, thin muscling can allow the abdominal contents to sag outward and downward, which certainly is not a measure of capacity. Use accurate measures of growth rate and body composition, not indicators of "doing ability."

Remember, direct measurements are more reliable than indicators.

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