

Beef Logic

by R.A. (Bob) Long



Nutrition — Not a Solution for Dystocia

Dystocia (calving difficulty) has been of considerable concern in the beef industry during recent years. This problem has, in part, resulted from increased emphasis on growth rate in seedstock selection programs with no ceiling on mature size. The introduction of exotic breeds, particularly the large, heavily muscled types from Europe, furthered the effect. The genetic and physiological aspects of this problem have been discussed in previous "Beef Logic" columns. However, the effect of nutrition has not been addressed, and it is a common subject of conversation among cattlemen.

Many breeders believe a low plane of nutrition during the last trimester of pregnancy will reduce calving difficulty by lowering the birth weight of the calf. However, U.S. Department of Agriculture (USDA) research at Clay Center, Neb., does not support this practice. Hereford and Angus 2-year-old heifers were fed at three different levels for 90 days before calving. The medium group was fed 13.7 pounds (lb.) of total digestible nutrients (TDN), which is approximately the National Research Council (NRC) recommendation. A "low-level" group received 3 lb. less, and a "high-level" group, 3 lb. more.

Reducing the energy intake did lower the birth weights slightly, but it did not reduce calving trouble. Actually, the medium- and high-level groups had a lower incidence of dystocia than the low-level group.

Further, it is established that inadequate nutrition before calving can reduce rebreeding efficiency.

High levels of protein in the diet also have been accused of contributing to calving problems. USDA workers at Miles City, Mont., fed two groups of 2-year-old heifers for 82 days before calving. One group received a diet containing only 86% of the crude protein recommended by NRC. The remaining heifers received 145% of the recommended level.

The high-protein group gained more weight, maintained that weight and weaned heavier calves. There was no difference in

calf birth weight or calving difficulty.

Conclusion: Inadequate nutrition is not a remedy for calving problems.

Implanting heifer calves with growth promotants has been suggested to reduce calving difficulties. Numerous studies with Ralgro® and Synovex® C growth promotants have shown an increase in pelvic size at breeding age. However, this increase did not persist up to calving time, and there was no effect on incidence of dystocia.

Some cattlemen have reported that the use of ionophores (feed additives such as Rumensin® and Bovatec®) have increased calving difficulty, but numerous research studies have found no effect from these compounds on gestation length, calf birth weight, pelvic area or the incidence of difficult birth.

It would appear calving problems can only be solved genetically and by considering every factor that contributes to calving efficiency. Unfortunately, most breeders have believed low birth weights were the answer and have emphasized this trait in bull selection. However, birth weights are the combined result of genetics and environment. Therefore, selection on the basis of individual birth weights is not recommended.

A far better predictor of the birth weight of a bull's calves would be the bulls birth weight expected progeny difference (EPD). Birth weight EPD is a better measure of genetic potential than is a bull's own birth weight.

A chance effect of weather or management can shorten or lengthen a cow's gestation period four days or more. This can result in sizable differences in birth weight not due to genetics. There should be no hesitation in using a bull with a high birth weight if the EPD for birth weight is reasonable.

Even with great accuracy, a low EPD for birth weight is not a guarantee for herd or breed improvement. The fact that a bull with a low birth weight EPD sires calves that are

born easily does not guarantee his daughters will be "easy calvers" and gives absolutely no attention to growth rate or carcass desirability.

Summarizing the birth weight problem, purebred breeders should treat cattle uniformly and under a nutritional and management program typical of the commercial herds in their respective areas.

Replacement heifers, when bred to herd mates, should be required to calve as 2-year-olds without assistance. Steer calves resulting should have the genetic potential to weigh 1,200 lb. at 13-14 months of age and produce a USDA Choice, Yield Grade (YG) 2.0 carcass.

Cattle not meeting these standards should be culled to slaughter. The birth weight will take care of itself.

The "top end" of the cattle that meet these requirements should be retained for herd improvement, and the rest should be offered for sale with complete performance records.

Commercial cow-calf producers should buy bulls from the breeders who follow this kind of program.

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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