VETERINARY CALL

by Bob Larson, Kansas State University

Heifer Development Efforts Pay Off With Longevity

Taking extra steps in the early stages of heifer development can have a positive influence on their place in the herd.

Optimum heifer development results in a high percentage of replacements becoming pregnant early in the first breeding season, delivering a live calf and becoming pregnant early again in the next breeding season when she is nursing her first calf.

Replacement heifers require a greater labor commitment than adult cows, but being willing to commit focused attention on the selection and development of heifers can result in many positive outcomes. Heifers that calve early during their first calving season have increased lifetime pounds of calf weaned as well as increased longevity in the herd, which decreases cow depreciation costs — one of the major expenses associated with long-term cow ownership.

In order to calve at approximately 24 months of age and to reach puberty several weeks before the start of the mature cow breeding season, heifers must reach puberty by 12 to 13 months of age. Because puberty is age dependent, only heifers born early enough in the calving season to reach puberty prior to the start of breeding should be selected as potential replacements.

Also, because weight is a primary factor determining the onset of puberty, ensuring average daily gain requirements are being met nutritionally from weaning to breeding is critical. Nutritionally developing heifers postweaning so they reach 55-65% of their mature weight ensures most will be cycling by the start of breeding.

Current tools to evaluate the breeding soundness of replacement heifers includes collecting body weight, days of age, reproductive tract maturity and, occasionally, pelvic area data. Heifers with undesirable structural conformation of feet and legs, as well as heifers with a family history of potentially heritable problems, should not be included in the replacement pool.

Expected progeny differences (EPDs) for the sires of individual heifers should be examined to find heifers predicted to meet herd goals for mature size, growth rate, milking ability and calving ease.

In addition, all bulls used to breed heifers should be evaluated to be certain their EPDs for calving ease are consistent with the ranch's goals. To ensure bulls can deliver fertile semen to the reproductive tract of heifers, a thorough breeding soundness examination (sometimes referred to as a BSE) to evaluate semen quality, structural soundness and health should be done a few weeks prior to the start of the breeding season.

The final culling of prospective replacement heifers is done once pregnancy status is determined soon after the end of the breeding season. By selecting only heifers that conceive to an artificial insemination (AI) sire or to natural service during a short breeding season, producers can be assured of selecting for females that reach puberty at a young age and conceive early in the breeding season.

Proper heifer development that results in a high percentage of heifers becoming pregnant early in the first breeding season, having a calf with little to no assistance, and rebreeding early in the second breeding season is essential for efficient and profitable beef cattle production but requires a significant investment in labor and management. AJ

Editor's note: Robert L. Larson is a professor of production medicine and executive director of Veterinary Medicine Continuing Education at Kansas State University.