Poor reproductive performance on a beef operation – a population based approach
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Beef operation productivity is determined by annual calf crop (pounds of beef produced per number of cows exposed). Pregnancy achieved earlier in the breeding season and overall breeding season pregnancy rates (BSPR) are two critical factors affecting annual calf crop. Commercial beef producers should aim for a 95% cow calving rate during a nine-week period, with a calving distribution of 65-70% calved in the first three weeks, followed by 20% in the second three weeks, and 10% in the third three weeks.

A pasture based cow-calf operation in northern Washington was investigated for poor BSPR and calving spread, with an average BSPR of 80.2% and a cumulative calving distribution of 51, 70 and 81% in the 30, 45 and 60 day window, respectively. The operation raised 350 females with an 85 day breeding season. Management included comprehensive vaccinations and loose mineral supplementation programs. Investigation revealed a 1:20 bull to cow ratio, with all bulls trichomoniasis negative and considered satisfactory for breeding potential. Body condition scores (BCS) revealed 68, 23 and 9% of females moderate to good, thin, and obese, respectively. Plasma and serum from 20 individuals revealed normal abortion panel titers, but were found to be deficient in trace minerals, including copper, selenium, and zinc.

An enriched mineral supplementation program for all females, and energy supplementation to thin females was implemented. Injectable minerals were given. Additional loose mineral supplements were placed and positioned closer to water resources. In the subsequent season, essential blood trace mineral concentrations were found to be within normal range. Average BSPR improved by 13.8% and 30, 45 and 60 day calving distribution was 64, 19 and 11%, respectively.

Minerals are important for bodily functions and processes. Nutritional management should address mineral requirements throughout the year, particularly for pasture based operations in mineral deficient locations.

Suggested references