BEEF CATTLE RESEARCH UPDATE

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May 2019

The Effect of Cow Udder Score on Cow/Calf performance

Beef producers cull cows based on factors that include reproductive failure, structural issues, progeny performance, and disease. Udder conformation has been indicated as an important factor in cow–calf profitability due to management challenges and reduced calf performance. In some cases, cows are culled for udder problem, whereas, in other cases, cows lose their calves because of udder problems and the cows are culled because they fail to wean a calf.[1] University of Nebraska research evaluated the effect of beef cow udder conformation on cow performance, longevity, and pre- and post-weaning progeny performance.[2]

In a 5-year study, crossbred cows at the Gudmundsen Sandhills Laboratory (Whitman, NE) were assigned an udder score each year at calving, from 1 to 5, using an udder and teat combination score. An udder score of 1 or 2 consisted of pendulous udders and large teats, whereas 3 to 5 consisted of tight udders and small, symmetrical teats. An udder score of 3 would be considered the commercial cow average score. The cows were grouped by udder scores and classified as either low udder score (LUS, udder score 1 or 2; 223 cows) or high udder score (HUS, udder score 3 or 4; 1,742 cows). An udder score of 5 was not recorded during the study.

These researchers reported that cow body weight (BW) at pre-breeding and weaning was greater ($P < 0.01$) in LUS cows compared with HUS counterparts. They speculated that BW differences might be attributed to variability of cow size and age over the 5-year period within each udder group since on average LUS cows were older (5 ± 0.5 years) than HUS cows (4 ± 0.5 years). This may have resulted in LUS cows being more mature and having greater weights. Pregnancy rates were not different ($P = 0.35$) between LUS (83.2%) and HUS (86.9%) cows.

If teat and udder conformation limits the ability of a calf to suckle, then udder conformation may limit a calf's genetic potential for growth. However, in this study, calf BW at birth, weaning, and adjusted 205-days BW were similar ($P \geq 0.28$) between udder score groups. Similarly, other researchers have reported no differences in calf weaning BW due to teat conformation of the dam[3, 4] which may indicate a lack of relationship between udder conformation and calf growth. In contrast, other research has reported that dams with poor udder conformation weaned lighter calves compared with well-attached udder counterparts.[5]

Research evaluating the effect of dam udder score on subsequent offspring feedlot performance is limited. Most research on udder conformation on calf performance ends at weaning and not the entire production system. In this study, cow udder score did not influence feedlot entry and final BW or performance (feed intake, average daily gain, and gain:feed ratio of steer progeny. However, steers suckling HUS dams had greater carcass weights (858 vs. 827 lb, $P = 0.04$) and backfat thickness (0.57 vs. 0.50 inches, $P = 0.02$) compared with LUS counterparts. These authors suggested that the conflicting results in carcass weight and finishing BW may have been due to increased variability in final BW from factors such as mud and gut fill. In addition, HUS steers had numerically greater final BW than LUS steers (1385 vs. 1360 lb, $P = 0.30$) which may have influenced the increased carcass weight.

Results from this study suggest that cows with less desirable udder structure may not have a negative impact on calf pre-weaning growth and performance. However, backfat thickness and HCW in the finishing phase were lower in steers from cows with a lower udder score. These authors

concluded that culling cows for poor udder conformation may not be warranted, if calf suckling at birth is not an issue, due to similar postnatal calf performance.

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