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Using corn stover and DDGS to conserve stockpiled forages and improve reproductive performance and progeny growth in fall-calving beef cows

Angus-cross, fall-calving beef cows ($n = 153$; $BCS = 5.4 \pm 0.5$) were used to determine if incorporating a period of corn stover and dried distiller grains with solubles (DDGS) feeding into a preexisting nutritional program that included grazing stockpiled fescue impacts reproductive performance and progeny growth. Calving began on Julian d 243. On Julian d 267, cows were stratified and allotted by BW, BCS, and calving date (if calved) to receive 1 of 2 isocaloric dietary treatments through timed-AI (TAI): stockpiled fescue (CON) or corn stover and DDGS (DG; DDGS at 0.7% BW per d). Following TAI, CON cows were fed grass hay, and DG cows were placed on stockpiled fescue until grass was exhausted (Julian d 20) and then fed grass hay. Cow BW and BCS were assessed every 28 d during supplementation. Estrous cycling status was determined by evaluation of progesterone in 2 blood samples taken at and 10 d prior to estrous synchronization, and on Julian d 336, TAI was conducted. Pregnancy determination was done by transrectal ultrasonography 35 d after TAI and the end of the breeding season. Calf weights were recorded at 62 ± 16 and 146 ± 16 d of age and again at weaning (steers and heifers were weaned at 144 ± 16 and 208 ± 18 d of age, respectively). Categorical and continuous data were analyzed with the GLIMMIX and MIXED procedures of SAS, respectively. Cow BW and BCS did not differ during the supplementation period. The proportion of cows cycling at breeding season initiation tended ($P = 0.06$) to be greater in CON (92.2%) than DG (80.6%) treated cows. TAI pregnancy rates did not differ between the CON (42.4%) and DG (50.0%) treatment. However, breeding season pregnancy rates were greater ($P = 0.03$) in the DG (89.6%) than CON

(74.2%) treatment. DG progeny were heavier at 62 d of age and at weaning and had a greater 205 d adjusted weaning wt ($P \leq 0.03$) than CON progeny. In summary, including a dietary period of corn stover and DDGS to a traditional management practice of grazing stockpiled fescue and feeding hay resulted in greater breeding season pregnancy rates and heavier progeny.

Beef cow, DDGS, fertility