

The effect of vacuum stored high moisture distiller's grains as a protein and energy supplement for beef cows. P. Walker*¹, K. Earing², and L. Mathews¹, ¹*Illinois State University*, ²*University of Kentucky*.

Eighty multiparous beef cows in the third trimester were blocked by BSC and randomly allotted within block to 10 pens subject to variation in BW to evaluate vacuum stored high moisture corn distiller's grains (DGS) as a substitute for shelled corn (C) and soybean meal (S). Control cows (CNTL) were fed corn silage-C-S based diets according to NRC recommendations. DGS were initially included in treatment cow (TRT) diets to balance for CP but were increased as needed over the 182d feeding period to maintain cow BCS. This procedure resulted in TRT diets containing $2.7 \pm 0.3\%$ higher ($P < 0.05$) CP, comparing $14.0 \pm 0.5\%$ vs. $11.3 \pm 0.6\%$ CP for TRT vs. CNTL diets, respectively. The DGS contained $37.1 \pm 0.4\%$ DM, $32.0 \pm 0.5\%$ CP, $7.1 \pm 0.6\%$ ether extract and $20.6 \pm 3.6\%$ ADF. Mean ADFI (wet wt. basis) was 48.8 ± 6.5 kg for CNTL and 50.0 ± 7.0 kg for TRT. DGS represented $21.9 \pm 2.3\%$ of DMI for TRT cows and C + S represented $25.3 \pm 4.6\%$ of DMI for CNTL cows. No differences ($P > 0.05$) were observed in cow BW, BCS changes, conception rates and estimated milk production, and in calf creep feed intake and end of trial calf weights. These data suggest diets containing DGS stored for up to 260 d using a vacuum preservation method can result in similar beef cow performance compared to cows fed corn silage-shelled corn-soybean meal based diets.

Key Words: High moisture distiller's grains, Vacuum stored, Beef cows

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