

TH282 Effects of added protein and dietary fat on lamb performance and carcass characteristics when fed differing levels of dried distiller's grains with solubles. M. L. Van Emon*, A. F. Musselman, P. J. Gunn, M. K. Neary, R. P. Lemenager, and S. L. Lake, *Purdue University, West Lafayette, IN.*

The objective of this study was to evaluate the influence of dietary protein and fat in dried distiller's grains with solubles (DDGS) on feedlot performance and carcass characteristics in finishing lambs. Sixty crossbred lambs were allotted (33.17 ± 4.67 kg) into pairs (ewe and wether) and fed one of five isocaloric dietary treatments: 1) a corn based diet with DDGS included to meet CP requirements (25% of DM; CON), 2) CON with DDGS included at twice the amount of CON (50% of DM; 50DDGS), 3) CON with added protein to equal the CP in the 50DDGS diet (CON+CP), 4) CON with added vegetable oil to equal the fat in the 50DDGS diet (CON+VO), and 5) CON with protein and fat added to equal the CP and fat in the 50DDGS diet (CON+CPVO). Lambs were harvested when they obtained an approximate 12th rib fat

depth of 0.51 cm. Average number of days on study did not differ ($P = 0.78$) between treatments. Average daily gain ($P = 0.48$) and final BW ($P = 0.69$) were not influenced by treatments. However, G:F tended ($P = 0.13$) to be lower in CON (0.0480 ± 0.0042), CON+CP (0.0448 ± 0.0053), and CON+VO (0.0476 ± 0.0064) than 50DDGS (0.0732 ± 0.0374) and DMI tended ($P = 0.14$) to be higher in CON (4.92 ± 0.90 kg/pen/d) and CON+VO (4.82 ± 0.66 kg/pen/d) than 50DDGS (3.62 ± 1.34 kg/pen/d). Dietary treatment did not affect HCW ($P = 0.79$), dressing percentage ($P = 0.34$), 12th rib fat depth ($P = 0.71$), LM area ($P = 0.67$), body wall thickness ($P = 0.57$), yield grade ($P = 0.71$), flank streaking ($P = 0.62$), leg score ($P = 0.96$), or ether extract ($P = 0.36$). Although DMI tended to decrease and G:F tended to increase in the 50DDGS treatment, added CP or fat from DDGS had no overall effect on lamb performance or carcass characteristics. Therefore, these data indicate that DDGS can be included in feedlot lamb diets at levels up to 50% of DM without affecting overall performance or carcass quality.

Key Words: Distiller's Grains with Solubles, Lamb, Performance