

112 Effects of crude glycerin on feedlot performance and carcass characteristics of finishing wether lambs. P. Gunn*¹, M. Neary¹, R. Lemenager¹, and S. Lake², ¹*Purdue University, West Lafayette, IN*, ²*University of Wyoming, Laramie*.

The objective of this study was to evaluate the effects of crude glycerin (90% pure) on performance and carcass characteristics in finishing wether lambs. Thirty black-faced Suffolk-cross wether lambs (44.1 ± 5.6 kg initial BW) were stratified and blocked by BW, and individually fed one of five isocaloric, isonitrogenous dietary treatments containing 0, 5, 10, 15, or 20% crude glycerin (90% glycerol) on a DM basis. Diets, which were fed once daily for ad libitum consumption, were primarily comprised of 15% chopped hay, 25% dried distiller's grains with solubles, and cracked corn, which was replaced with increasing levels of crude glycerin. Wethers were weighed on 14-d intervals and were selected for harvest when they reached a 12th rib fat depth of 0.51 cm (28 to 84 d on trial). Carcass characteristics were collected following a 24-h chill. There were no differences among treatments for final BW ($P = 0.84$) and days on feed ($P = 0.64$). However, DMI tended ($P = 0.11$) to increase linearly with increasing levels of glycerin. Lambs fed 0, 5, 10, 15 and 20% glycerin had ADG of 0.23, 0.20, 0.28, 0.30, and 0.24 kg, respectively (cubic, $P = 0.06$). Similarly, feeding glycerin had a cubic effect ($P = 0.03$) on G:F with lambs fed 15% glycerin tending ($P = 0.15$) to have greater G:F than lambs fed either 5 or 20% glycerin. Body wall thickness ($P = 0.71$), flank streaking ($P = 0.43$), and leg score ($P = 0.26$) did not differ between dietary treatments. Dressing percent ($P = 0.03$; cubic, $P = 0.002$), HCW ($P = 0.14$; cubic, $P = 0.01$), and LM area ($P = 0.14$; cubic, $P = 0.03$) measurements were optimal in wethers fed 5% glycerin and least in lambs fed 15% glycerin. Adding up to 15% crude glycerin to finishing wether diets improved feedlot performance; however, improvements in carcass traits were greatest when adding glycerin at levels of only 5% DM.

Key Words: dried distiller's grains, crude glycerin, wethers