

Twelve Angus steers (BW 694.1 ± 47.4 kg) fitted ruminal cannulae were used to examine the effect of molybdenum (Mo) supplemented in drinking water or feed on apparent absorption and retention of Mo and copper (Cu). Steers were fed a low-quality grass hay diet (DM basis: 6.5% CP; 0.13% S, 3.4 mg Cu/kg, 2.4 mg Mo/kg) for 14 d. Steers were then housed in individual metabolism stalls for 3 d to determine DMI. Steers were then blocked by BW and DMI and randomly assigned within block to one of three treatments (n = 4 steers per treatment). Treatments consisted of: 1) Control (no supplemental Mo); 2) 5.0 mg Mo/kg DM from sodium molybdate dihydrate (Mo-diet), and 3) 1.5 mg Mo/l from sodium molybdate dihydrate delivered in the drinking water (Mo-water). After the 3d DMI determination period, total fecal and urine output was collected for 5 d. Dry matter intake and DM digestibility were similar across treatments. Data were analyzed using a mixed effects model (PROC MIXED, SAS) for a completely randomized block design. Apparent absorption of Cu was greater ( $P < 0.05$ ) in Control and Mo-water steers when compared to Mo-diet steers. Apparent retention of Cu was greater ( $P < 0.05$ ) in Control steers when compared to Mo-diet steers. Steers receiving Mo-water had a similar apparent retention of Cu when compared to Control and Mo-diet steers. By design, treatment was a significant ( $P < 0.01$ ) source of variation for Mo intake. Control steers had lesser ( $P < 0.05$ ) Mo intake when compared to Mo-diet and Mo-water supplemented steers. Apparent absorption and retention of Mo were greater ( $P < 0.05$ ) in Mo-diet steers compared to Control and Mo-water steers. These data indicate that Mo metabolism and apparent absorption of Cu are different when Mo is supplemented in water relative to feed.

**Key Words:** molybdenum, copper, water

High-grain diets have been used with great success in the feedlot systems for lambs production in Brazil. Then it became important to define the ideal dietary fiber content in the diet when the goal is to produce heavy lambs for early slaughter. The objective in this trial was to evaluate the levels of fiber on performance of lambs feed high-grain diet. Fifty-eight Dorper x Santa Inês ram lambs (initial BW 20.7 ± 1.19 kg and 75 ± 10.83 d old) were assigned to a randomized complete block design. The treatments were defined by the fiber ("Coastcross" hay) content in diets (CP: 16,12% ± 0.92); 0F: no forage diet (NDF: 10.4%); 5F: 5% of forage (NDF: 12.1%); 10F: 10% of forage (NDF: 15%); 15F: 15% of forage (NDF: 15.5%); 20F: 20% of forage (NDF: 20.8%) and 25F: 25% of forage (NDF: 23.5%). The experiment lasted 89 days and lambs were weighted after 16 hours fasting on days 0, 31, 57 and 89. DMI, ADG and FE were determined in each period. There was no interaction effect between diets and periods. There was a quadratic effect in DMI (0F: 0.96; 5F: 0.97; 10F: 1.04; 15F: 1.00; 20F: 1.02; 25F: 0.88 kg/d;  $P = 0.02$ ), ADG (0F: 0.27; 5F: 0.26; 10F: 0.28; 15F: 0.28; 20F: 0.26; 25F: 0.21 kg/d;  $P = 0.01$ ) and FE (0F: 0.28; 5F: 0.28; 10F: 0.28; 15F: 0.29; 20F: 0.26; 25F: 0.25;  $P = 0.05$ ). Consequently, the increased levels of forage result in quadratic effect on final BW (0F: 44.5; 5F: 44.7; 10F: 46.1; 15F: 45.5; 20F: 43.9; 25F: 39.7 kg;  $P < 0.01$ ). In conclusion, the inclusion of 10–15% of forage improves the performance of feedlot lambs feed high-concentrate diets, but it was proved the real possibility of finishing lambs with diet without forage source.

**Key Words:** lambs production, fiber requirement, high-grain diet, feed efficiency

**PSXII-14 Fiber content in diets for feedlot lambs:**

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**PSXII-15 Fiber content in diets for feedlot lambs:**

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