123. The effect of level of milk intake and protein content in the post-weaning diet on internal fat distribution of lambs

T. Manso, A. R. Mantecón, M. A. Chas, P. Lavín and T. Castro, Estación Agropecuaria Experimental, CSIC; Apartado 785, 24080, León, Spain

A total of 28 lambs of Churra breed were used according to a 2 x 2 factorial design defined by two levels of milk commercial substitute (HL: 1.5 and L: 0.9 MJ gross energy per kg) and two post-weaning concentrate supplements (LP, barley plus HP, barley plus 200 g/kg fish meal). Four lambs were slaughtered at 2 days old (L: 3.05 kg live weight on day 0) and four at 4 weeks old (L: 6.5 kg live weight on day 42). Concentrations were individually determined. Low hay concentration of concentrate and level of milk intake were independently offered ad libitum. Intake and LW were recorded daily and treatments were maintained three weeks after birth. At slaughter, different internal fat depots (TIF: peripheral-P, omental-OF) and concentrations of mesenteric-OF were measured and are presented as proportion of empty body weight. The intake of dry matter (DM) per day post-weaning was higher (P < 0.05) in HP (0.46 vs. 0.28). During milk-fed period LW gain (LWG, g/day) was higher (P < 0.001) for HP (0.46) than for LP (0.28). The concentration of LWG was similar (P < 0.05) for LP and HP. Protein intake and protein content in the diet during post-weaning period was measured and internal fat depots were considered.

124. The effect of the reproductive state and concentrate supplementation on ruminal outflow rates of digesta in ewes

J. F. Pérez, J. Gasó, C. Castrillo, C. Rubio and J. A. Guada, Departamento de Producción Animal y Ciencia de los Alimentos, Facultad de Veterinaria, Miguel Servet 177, Zaragoza 50013, Spain

The effect of level of concentrate on fractional outflow rates (FOR) of liquid and particulate phases through the reticulum-rumen was studied in 12 dry non-pregnant mature ewes, fed ad libitum on ammonia-treated barley straw (TS) and three levels (250, 500 and 850 (H) g/day) of a barley-based concentrate. In addition, seven late-pregnant (P) and five lactating (L) ewes, receiving TS ad libitum and 350 (H) g/day of concentrate were used to study the effect of the reproductive state. Liquid and particulate FOR (per h) of the reproductive state and concentrate on ruminal outflow rates of digesta were determined. The data were analyzed using ANOVA and post-hoc comparisons were made by Tukey’s test. The results showed that the level of concentrate had a significant effect on ruminal outflow rates of digesta, with higher rates observed in the concentrate-fed ewes compared to the ewes fed only TS. The effect of the reproductive state was also significant, with differences observed between the late-pregnant and lactating ewes. The interaction between level of concentrate and the reproductive state was also significant, indicating that the effects of the two factors were not additive. The results suggest that the level of concentrate and the reproductive state have a significant impact on ruminal outflow rates of digesta.