

Effect of Many Levels of Undegradable Protein on Performance, Blood Parameters, Colostrum Composition and Lamb Birth Weight in Pregnant Ewes

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Abstract : The objective of this study was to investigate the effect of different protein sources with different degradability ratios during late gestation of ewes on colostrum composition, and its IgG concentration, body weight change of dams, and birth weight of their lambs. Objectives: 35 multiparous native crossbred ewes (BW= 59±2.5kg) were randomly allocated to five dietary treatments (7 ewes / treatment) for 2 months prior to lambing. Methods: Experimental diets were isonitrogenous (12.27% CP) and isocaloric (2.22 Mcal ME/kg DM). In diet I (the control), solvent extract soybeans (SESM 33% RUP of CP), II feed grade urea (FGU 31% RUP), III slow release urea (SRU 31% RUP). As sources of undegradable protein, extruded expeller SBM-EESM 40 (37% RUP) and extruded expeller SBM-EESM 60 (41% RUP) were used in groups IV and V, respectively. Results showed no significant effect on feed intake, crude protein (CP), or metabolizable energy (ME), and body condition score (BCS). Ewes fed the 37% RUP diet gained more ($p<0.05$) weight compared with ewes fed the 31% RUP diet (5.62 vs. 2.5kg). Ewes in EESM 60 had the highest levels of fat, protein, total solid, solid not fat, and immunoglobulin and the lowest in urea N content ($P< 0.05$) in colostrum during the first 24hrs after lambing. Conclusions: Protein source and RUP levels in ewes' diets had no significant effect ($P< 0.05$) on lambs' birth weight and ewes blood biochemical parameters. Increasing the RUP content of diet during late gestation resulted in an increase in colostrum constituents and its IgG level but had no effect on ewes' performance and their lambs' outcome.

Keywords : colostrum, ewes, lambs output, pregnancy, undegradable protein

Conference Title : ICVP 2025 : International Conference on Veterinary Pharmacy

Conference Location : New York, United States

Conference Dates : October 07-08, 2025