

Effects of energy level and PMSG dose on blood progesterone, insulin and FSH concentration in Zel ewes prior to and after mating

ABSTRACT

About 184 Zel ewes, 3-5 years of age and a body weight of between 40 and 45 kg were used in the trial. Ewes were randomly allocated to 4 treatments groups based on BW and age (46 ewes/group). All of the ewes were fed in two nutritional groups including low (2 mcal kg⁻¹) and high (2.3 mcal kg⁻¹) metabolizable energy diet. Ewes received experimental diet until 28th day of experiment. The estrous cycles of ewes were synchronized using SIDR and 2 levels of PMSG (300 and 500 IU). Treatments include: 1-High energy and 300 IU PMSG (H300), 2-High energy and 500 IU PMSG (H500), 3-Low energy and 300 IU PMSG (L300) and 4-Low energy and 500 IU PMSG (L500). Jugular blood samples were collected from ewes using vacutainers at 10 h in first day of experiment, CIDR insert day, CIDR removal day before mating and 120 h after mating. Bloods samples centrifuged at 3000x g for 15 min then serum immediately separated and kept frozen at -20°C until analysis for insulin, FSH and progesterone. Repeated measurements used for data analysis. The result showed that there were no any significant difference between two groups weight before start the experiment ($p>0.05$). During the experiment high level of energy increased the body weight than low level group ($p<0.05$). Energy had no significant effect on blood FSH and progesterone concentration ($p>0.05$) but high level of energy decreased the insulin concentration significantly ($p<0.05$). In this study PMSG had no any significant effect on blood metabolites such as FSH, Insulin and progesterone.

Keyword: Progesterone; Ewe; Blood; Zel; PMSG; Centrifuged