

# Evaluation of negative energy balance and some metabolic disorders on peri-partum period in Arabian ewes, Khuzestan

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## Abstract

According to the tradition of raising sheep and goats and economic dependence of rural households to produce meat and wool, therefore, one of the most important challenges in this livestock is establishing energy balance and nutritional needs. In the present study to determine the prevalence of negative energy balance and to investigate some metabolic disorders around lambing conducted. For this purpose 148 blood samples from pregnant (104) and non-pregnant (44) ewes collected and the age and the BCS also recorded. Serum concentrations of BHB, calcium, glucose, urea, total protein and total antioxidant capacity (TAC) was measured by routine laboratory methods. The results showed significant differences between pregnant and non-pregnant sheep from point of BHB, calcium, glucose, urea concentrations and also between singleton and twin pregnant sheep from point of age, BHB, calcium, glucose, urea and TAC concentrations. Interaction of correlation between age and BCS with serum BHB concentration evaluated, there was no statistically significant correlation but statistically significant positive correlation between the concentration of BHB and urea and a significant negative correlation between BHB and glucose was observed. It was also found that 16.35, 46.15 and 97.11 percent of pregnant ewes in the current study suffering from hypoglycemia, hypocalcemia and subclinical pregnancy toxemia (hyperketonaemia), respectively. Accordingly, peri-partum metabolic disorders in Arabic sheep was worse than imagined. It can be concluded, the overwhelming population of Khuzestan province's livestock are sheep; as a result, attention to the nutritional and management issues, especially in a terminal month of pregnancy and the first few weeks of lambing emerge more than ever.

**Key words:** Arabian Sheep, Pregnancy toxemia, Hypocalcaemia, Hypoglycaemia, Khuzestan

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