

EFFECT OF HIGH LEVEL OF PROTEIN INTAKE ON THE REPRODUCTIVE PERFORMANCE OF AWASSI EWES.

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ABSTRACT

This study was conducted to evaluate the impact of the high level of protein intake on reproductive performance of Awassi ewes. Sixty eight Awassi ewes (mean initial live weight 51.49 ± 0.82 kg) aged 4-5 years were allocated according to their weight and body condition score into two groups (34 animals / group) and as follows:

1. Group (T₁): fed 135 g crude protein / day / animal.
2. Group (T₂): fed 220 g crude protein / day / animal.

The two groups were fed on experimental feeds 28 days prior to mating and 54 days after introduction of rams. These two groups were fed at the same levels of dry matter and ME intakes. Mature fertile Awassi rams (Three rams / group) were run within each group during mating period. The results of the experiment showed that the differences were not significant ($P > 0.05$) in ewes' weights and body condition scores (BCS) at mating between the two groups. The BCS and weights at mating for supplemented groups were 2.62 and 2.65 and 54.33kg, 54.85 kg for groups T₁ and T₂ respectively. However, there was a clear improvement in reproductive performance of ewes (T₂) that fed on a high level of protein (220 g / day / animal). This group achieved a significant ($P < 0.05$) improvement in the twinning percentage (35%) whereas the group T₁ that fed on the protein level (135 g crude protein / day / animal) had achieved a twinning percentage (15%). Also group (T₂) showed a significant improvement ($P < 0.05$) in the lambing percentage compared to the first group (T₁). The results of present experiment confirms the hypothesis which it is based upon this study that the amount of protein intake is a limiting factor for the twinning rate of Awassi ewe which have high live weights and body condition score during Mating. This study indicate that there is likely to improve the performance of ewes reproductive Awassi are similar to the European sheep breeds by providing the nutrients required to meet their needs during mating stage.

Key word: Awassi ewes, Protein intake, Body condition score, Reproductive performance.