Effect of the dietary level of protein on feed intake and performance of Assaf heavy fattening lambs

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Thirty Assaf lambs, divided into three groups, equilibrated for live body weight (29.8±1.88 kg), were used to study the effect of different dietary levels of protein on feed intake, animal performance and carcass characteristics. Three total mixed rations including barley straw, barley, corn, soybean meal, urea, molasses, soy oil, bicarbonate, vitamin-mineral premix, with a 15:85 forage:concentrate ratio, were formulated in order to supply 135 (LP group), 155 (MP group) and 175 (HP group) g of crude protein/kg dry matter. Animals were housed individually and had free access to fresh water. Feed was offered ad libitum and daily intake was recorded. Lambs were weighed once a week and they were slaughtered at the end of the experimental period (63 days). Carcasses were weighed before and after chilling for 24 hours at 4 °C and the following parameters were recorded or calculated: hot and cold carcass weight (HCW, CCW), chilling losses, carcass commercial yield and proportions of carcass joints. Data were subjected to analysis of variance, considering the protein content in the diet as fixed effect. Linear and quadratic trends were evaluated using orthogonal polynomial contrasts. Dry mater intake (DMI) was not affected (P>0.05) by dietary protein level, although DMI was numerically greater in HP than in LP group (1,256, 1,401 and 1,464 g DM/day for LP, MP and HP groups, respectively). Average daily gain (221, 268 and 297 g/day for LP, MP and HP, respectively) and feed to gain conversion rate (5.82, 5.32 and 4.97 g DMI/g ADG for LP, MP and HP, respectively) increased (P<0.01) and decreased (P<0.01), respectively, with increasing level of dietary protein. There was a linear effect (P<0.05) of dietary protein level on CCW, with the highest (26.1 kg) and lowest (22.8 kg) values for HP and LP groups, respectively. Neither chilling losses (2.0±0.29%) nor commercial yield (50.8±0.83%) or proportion of different carcass joints were affected (P>0.05) by dietary treatment. Results suggest that increasing dietary protein content from 13.5 to 17.5% enhances performance throughout the fattening period.

Breeding practices applied in Skopelos goat farms under the collective organization scheme

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Within the PERFORM (ARIMNET funded) project, breeding and management practices of local sheep and goat breeds are examined in connection with their farming systems. The specific case of the Skopelos goat breed was studied, as a local breed valued by the breeders for its excellent characteristics and high milk production. The work aimed to provide an insight on the current breeding practices of goat farmers under the milk recording scheme. For this purpose, data collected in the frame of the scheme from 2008 until 2016 were analysed. The number of farms participating in the scheme varied through the years, mainly due to organizational gaps. Currently, 43 Skopelos goat farms are included in the milk recording scheme. For the period analysed, on average females are kept until the age of 6 to 7 years, while males are used for 2 years maximum. The 92% of the bucks used originate from the same farm and very little exchange between farms is practiced. However, differences on breeding practices between the farms are observed, due to the size of the farm and the location. Besides the data available through the milk recording scheme, additional information was collected with interviews to the farmers. A questionnaire aiming to a first appraisal of the existing collective organization was also used. The questionnaire addressed to the Regional Centre of Genetic Resources, the Skopelos Breeders’ Association and goat farmers and included parameters related with the level of development of the collective organization, i.e. recorded traits, bucks’ exchange practices, setting of breeding goals, other activities of the Association, etc. This assessment provided the basis for the debate with the Breeders Association aiming to identify the means to enhance the efficiency of the breeding program (i.e. revising the goals, implementing new tools and alternative selection schemes).