Impact of the Artificial Rearing System on Awassi Lambs' Behaviour and Growth Performance – A New Approach of Sheep Husbandry in Subtropical Countries

Orsolya Steiber, Ákos Bodnár, Tibor Kispál

Szent István University, International Development and Tropical Department, Hungary

Abstract

Mutton and sheep milk have traditionally a very important role in the food supply of the Mediterranean and Middle-East countries. Awassi is a widespread fat-tailed sheep breed of these regions. A relatively new technology – intensive milk producing with artificial lamb rearing – has been introduced in Israel and imported to Hungary to increase the milk production of this breed. Twenty-one artificially housed Awassi lambs were selected for this trial. Growth rates (body weights, average daily gain – ADG) and behaviour of lambs were investigated. Animals were divided into three groups of 7 each. IW lambs (immediately weaned) were separated from dams immediately after lambing; 6H and 12H lambs were removed from dams 6 and 12 hours after parturition. Proportion of active (moving, playing, feeding) and inactive (lying, resting, standing) behavioural elements were compared in the first week after groupping. It was found that the duration and number of inactive elements at IW lambs showed a significantly higher increasing than the other two groups. IW lambs accepted earlier the stockperson and his/her assistance during feedings. Lambs in the IW group also accepted earlier the artificial teat of the feeding equipment and learned to use it for the 2nd day. The other two groups needed strong assistance until the 4th life day, and 2 lambs from 12H group did not accept the artificial feeding and passed away at the 5th life day. Regarding to the growth rates, IW lambs showed the highest ADG during the experiment and the differences were significant compared to group 12H ($p < 0.01$). The 6H lambs had higher body weights than 12H lamb from the 2nd week ($p < 0.01$) and it was the same with ADGs ($p < 0.01$). IW lambs showed significantly ($p < 0.05$) the highest average ADG (app. 230 g/4wk) and body weight (9.98 ± 2.57 kg) at the end of the experiment. Artificially reared lambs showed very good growth rates in this trial. This new technology should give an opportunity to develop the mutton and milk production level of the sheep husbandry in subtropical countries. This project was supported by the "Deák Ferenc Scholarship" of Hungarian Ministry of Education.

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Contact Address: Ákos Bodnár, Szent István University, International Development and Tropical Department, Páter K. U. 1., 2103 Gödöllo, Hungary, e-mail: bodnar.akos@mkk.szie.hu