

Evaluation of the Genetic Improvement Studies in Low Input Production Systems: Karya Sheep

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Aim of the study: Karya is one of the sheep breeds of Turkey which is raised in Aydın, İzmir, Manisa, Uşak and Denizli provinces in Aegean region of Turkey. It is a multi-purpose, high milk yielding, high fertility, thin-tailed sheep breed and was included into the National Genetic Improvement Scheme in Aydın and Denizli provinces in the year 2006. The aim of this study was to evaluate the genetic improvement studies for Karya sheep in Denizli Province within the context of national genetic improvement scheme for small ruminants in low input production systems.

Material and Methods: Study data was obtained with questionnaires completed through face-to-face interviews with all Karya sheep breeders in the scheme along with the breeders out of the scheme equally in number. Karya breeders in and out of the national scheme were compared regarding rates of twin (or more) births, rates of lamb deaths after birth, infertility and miscarriage rates, lamb live weight at birth and subsequent weighing dates, important breeding problems, diseases and internal-external parasites along with gross profit calculated for every breeder interviewed. Descriptive statistical methods were employed in analysis of the data as student t-tests for independent and paired samples were used in comparisons. Breeding problems, diseases and parasites were scored using 1-5 scale.

Results: Significant lamb live weight increases were determined at birth and subsequent weighing dates. Lamb death rates declined by 3,3% during the study. Twin and triplet birth rates increased by 9,8% and 3,2% respectively. However, flock birth rate declined by 4,9% and miscarriage rates were calculated to be 8%. Nevertheless, infertility rates declined by 3,4%. There was no significant difference between the two breeders' groups in terms of breeding problems, diseases and internal-external parasites. Low product prices, lack of dairy, insufficient veterinary services and diseases were the highest priority problems, while wood tick, brucellosis, lamb septicaemia, foot and mouth disease, enterotoxaemia, sheep plague and mastitis were the most important diseases and parasites. As an economic achievement, the breeders in the scheme, obtained 53,2 TRY more gross profit per product unit. It was also calculated that support payments paid in 2014 were 29,8 TRY per production unit. That is, the gross profit surplus (53,2 TRY) achieved as the result of cumulative advancements is about 1,8-fold of the support payments paid in 2014. It was concluded that sheep diseases, pests and breeding problems should be tackled for the sustainability and higher achievements.

Keywords: Genetic improvement, Karya sheep, small holder low input systems, gross profit, production unit, Denizli, Turkey.