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

Abdurrahman KARA[1], Songül AKIN[1], Mustafa TEKERLİ [2]
[1] Faculty of Agriculture, Dicle University, Turkey
[2] Faculty of Agriculture, Afyon Kocatepe University, Turkey
abdurrahman_kara@hotmail.com

Aim of the study: Turkey ranks eighth regarding sheep asset in the World with a number of sheep breeds with different physiological and morphological characteristics adapted to ecological conditions of the regions where they are raised. Low yielding indigenous sheep breeds constitute more than 90 per cent of the total sheep asset of Turkey. One of these sheep breeds is the Pırlak sheep which is raised in the area covering the whole inner part of Aegean region and the North part of the western Mediterranean region of Turkey. It is a multi-purpose, thin-tailed sheep breed and was included into the National Genetic Improvement Scheme in Afyonkarahisar province in the year 2006. The aim of this study was to evaluate the genetic improvement studies for Pırlak sheep 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 Pırlak sheep breeders in the scheme along with the breeders out of the scheme equally in number. Pırlak breeders in and out of the national scheme were compared regarding rates of twin (or more) births, lamb death rates, infertility and miscarriage rates, lamb live weights 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 employed in comparisons. Breeding problems, diseases and pests were scored using 1-5 scale.

Results: An increase in twin and triplet births by 3,6% and 0,7% were calculated since the beginning of the scheme. Significant lamb live weight increases were determined at birth and subsequent weighing dates. Miscarriage and infertility rates were 4,4% and 5,5% and infertility rate and lamb death rate were decreased by 3,5% and 3,8% respectively. The most important breeding problems were low product prices, wild animal attacks, high shepherd wages, lack of shepherd, diseases and parasites. On the other hand, brucellosis, enterotoxaemia, sheep pox, tapeworm, intestinal nematodes, wood tick, lamb septicaemia, sheep plague, foot and mouth disease and liver fluke were the most frequent complaints respectively. Considering the economic achievement, the breeders in the scheme, although not significant, obtained 14,6 TRY less gross profit per product unit than other breeders despite the advances recorded over the course of the scheme. The reason for this may be that the breeders in the scheme neglected the milk and dairy products and they mostly made do with lamb sales than other breeders. It was concluded that to be able to transform the good results from the scheme into revenue, and for the sustainability and higher achievements, sheep diseases, parasites and breeding problems should be tackled.

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