

Identification of Breeding Objectives for Begait Goat in Western Tigray, North Ethiopia

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Abstract : A sound breeding objective is the basis for genetic improvement in overall economic merit of farm animals. Begait goat is one of the identified breeds in Ethiopia, which is a multipurpose breed as it serves as source of cash income and source of food (meat and milk). Despite its importance, no formal breeding objectives exist for Begait goat. The objective of the present study was to identify breeding objectives for the breed through two approaches: using own-flock ranking experiment and developing deterministic bio-economic models as a preliminary step towards designing sustainable breeding programs for the breed. In the own-flock ranking experiment, a total of forty five households were visited at their homesteads and were asked to select, with reasons, the first best, second best, third best and the most inferior does from their own flock. Age, previous reproduction and production information of the identified animals were inquired; live body weight and some linear body measurements were taken. The bio-economic model included performance traits (weights, daily weight gain, kidding interval, litter size, milk yield, kid mortality, pregnancy and replacement rates) and economic (revenue and costs) parameters. It was observed that there was close agreement between the farmers' ranking and bio-economic model results. In general, the results of the present study indicated that Begait goat owners could improve performance of their goats and profitability of their farms by selecting for litter size, six month weight, pre-weaning kid survival rate and milk yield.

Keywords : bio-economic model, economic parameters, own-flock ranking, performance traits

Conference Title : ICABCP 2024 : International Conference on Animal Breeding and Cattle Production

Conference Location : Bali, Indonesia

Conference Dates : July 15-16, 2024