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Identification Systems and Selection Criteria of Pastoral Goat Keepers in Northern Kenya- Implications for a Breeding Programme

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Abstract

The objective of this study was to describe and assess the pastoral animal identification systems and selection criteria among pastoral goat keepers (Rendille and the Gabra) in Marsabit district of northern Kenya. Data on identification modes and selection criteria were collected from a total of 200 respondents (100 from each community) in a four-month field survey using semi-structured and structured questionnaires. Data were analysed through calculation of indices, which represented a weighted average of all rankings of a particular variable. Ranks were based on the first three choices of priority records and identification modes by the respondent. The index was derived as the sum of [3 for rank 1 + 2 for rank 2 + 1 for rank 3] for a particular variable divided by sum [3 for rank 1 + 2 for rank 2 + 1 for rank 3] for all variables in question. The most important records kept are dates of birth, castration records and entries into the flock from outside. Other records like dates of weaning, culling, performances, health and exits are also kept but ranked lower. Most of the animal identification is done through ear notching, branding and coat colour of the animals. Selection criteria with index ≥ 0.200 were considered important and included big body size (Rendille, 0.260; Gabra, 0.251) and milk yield (Rendille, 0.206) for the buck's dam. Big body size (Rendille, 0.264; Gabra, 0.245) and offspring quality (Rendille, 0.252; Gabra, 0.265) were considered important attributes for the buck's sire. Less attention was paid to individual phenotypes of the buck because selection is done at juvenile age. The results from this study imply that pedigree and performance recording has been practised through own intricate knowledge. This study showed that pastoralists have deliberate selection criteria. Productive and adaptive traits are important in the selection of breeding stock. This study provides a framework needed for the development of community-based genetic improvement programmes.

Keywords: Community-based genetic improvement programmes, goats, pastoral systems, selection criteria, tropics