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Assessment of Farmer Preferences for Cattle Traits in Smallholder Cattle Production Systems of Kenya and Ethiopia

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Abstract

There is an urgent need to improve livestock productivity in sub—Saharan Africa in order to keep pace with expected increases in demand for meat and milk. Breed improvement provides key entry points for increasing productivity in cattle populations. However, there are tendencies for genetic improvement programs to focus on single, market driven traits such as milk or meat production in isolation of environmental constraints and broader livestock system functions which cattle perform in developing countries. This potentially leads to genotypes not well adapted to the environment and not capable of performing the multiple roles that cattle assume in smallholder systems. In developing countries, many important functions of livestock are embedded in traits that are not traded in the market. These include functions and products such as traction, manure, form of security (insurance), dowry payment and use in traditional ceremonies.

This study evaluates preferences of cattle keepers in pastoral, agro-pastoral and crop-livestock systems of selected sites in Kenya and Ethiopia for various cattle traits. Participatory Rural Appraisal (PRA) ranking techniques and conjoint analysis methodology are used. These systems are characterised by low input management and prevalence of various cattle diseases. Trypanosomosis is a serious disease constraint in Ghibe valley of Ethiopia and some of the pastoral areas in Kenya. The results indicate that farmer preferences for cattle traits are influenced by various factors including production system characteristics, infrastructural constraints, farmer characteristics and environmental conditions, especially in relation to disease prevalence and availability of cattle feeds. In the crop-livestock systems of Ghibe valley in Ethiopia, important cattle traits include trypanotolerance, reproductive potential and fitness to traction. Milk production is a less important trait. On the other hand, in the pastoral and agro-pastoral systems of Kenya, important traits include milk production, reproductive potential, drought tolerance and fertility in bulls. Consequently, implications for policy are drawn.

Keywords: Cattle production system, conjoint analysis, Ethiopia, Kenya, trait preferences

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