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From Grazing to Stall-Feeding: Livestock Feeds Assessment in Nyandarua Highlands of Central Kenya

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Abstract

Livestock production plays a central role in household incomes and nutrition in many smallholder farming systems in Kenya. However, prevailing increases in human population coupled with increasing food demand are likely to impact on the crop allocation dynamics and management of farming lands. Mixed farming is common in the Central Kenyan highlands, with both crops and livestock supplying the agricultural produce for domestic consumption and sale. Dairy production at relatively low level is a typical land use; though lately, the trend goes away from grazing to stall-feeding cattle in order to improve productivity. The IFDC-led 2SCALE project (<http://ifdc.org/2scale/>) aims to encourage this process by applying agribusiness principles. To appraise the current status of dairy production at Oljoro Orok in Nyandarua County of Central Kenya, the Feed Assessment Tool (FEAST; <http://www.ilri.org/feast>), modified for the specific target, was administered amongst four farmer groups. Three of the groups were organized around marketing their produced milk to a commercial processor collectively, while the fourth had no organized milk delivery and was considered a control group. FEAST was separately applied to women (total N=50) and men (total N=60) in each of the four groups. Differences and similarities emerged between the genders and across the parameters assessed. Most households were perceived as small or medium-sized across the groups. Main planted forage species' contributions to support livestock were largely in the order of maize > Napier grass > oat, by both women and men. Seasonal feed availability trends were similar between the genders; however, use of conserved feeds was mainly stated by men. Clear deficiency of dry-season feeding resulted in seasonally even lower milk production (i.e., dry season 3-6 L cow⁻¹ d⁻¹, rainy season 7-10 L cow⁻¹ d⁻¹). The contribution of dairy to household incomes was substantial, yet, no difference was found between women (35-69%) and men (34-67%). Improving livestock productivity in the area will require strategies that support forage production and conservation to enhance year-round fodder availability. The pull provided by the secured market for milk by the processor engaged in the project will help facilitate such change in land use as long as milk prices benefit the smallholder farmers.

Keywords: Dairy, feed assessment, forages, gender, livelihood, seasonality, smallholder agriculture