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## Smallholder Farms Characterisation and their Use of Productive Resources in the Mt. Elgon Region, Uganda

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### Abstract

Smallholder farming systems in Uganda are diverse and this diversity relates to the farm structures and production strategies employed by the smallholders. The behaviour of these smallholders regarding resource allocation has implications on their overall farm output and on their contribution to the local food system. They are faced with various challenges and therefore to increase farm production in small rural farming systems through targeting of interventions needs an understanding of the diversity in these farm systems. This study explores the relation between production diversity and the socio-economic characteristics (including resource endowment) of 108 farming systems in the Mt. Elgon region, Uganda by creating a farm typology. Using a multivariate analytic technique of principal components and cluster analysis based on the socio-economic characteristics of the farm, we identified three farm types strongly differing in terms of assets. Farm type 3 had high resource endowment in terms of productive assets such as land, livestock and labour resources compared to households that belonged to farm types 1 and 2. Generally, household production decisions were linked to larger farm sizes, access to a greater number of fields, availability of labour resources, ownership of livestock and off-farm income sources. Farm households that were less endowed on the other hand had low production diversity and were less involved in the sale of crop output. The farm types identified in the study area are a basis for identifying representative farms from which farm models can be constructed. Therefore, identifying homogeneous groups of farms may contribute to target policy recommendations through developing feasible farm strategies and estimation of production potential to realistic farms.

**Keywords:** Farm household, multivariate analysis, production diversity, typology