

MANAGEMENT AND CONSERVATION OF PREFERRED AGROFORESTRY

SPECIES IN WAKISO DISTRICT, UGANDA

BY

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Abstract

Agroforestry systems offer great potential to sustainable food production, soil improvement and poverty reduction among small scale farmers in Uganda. However, their management is critically low due to lack of sufficient information among farmers. This study was therefore conducted to 1) Determine the relationship between socio-economic factors and on-farm tree species composition 2) Identify the preferred tree species and their benefits to local farmers and lastly 3) establish the different management practices used on farm by farmers in the study area. Open and close ended questionnaires and semi structured questionnaires were administered to a representative sample of 200 respondents chosen through multistage sampling to get primary data for this study. Multiple linear regression models were used to determine the influence of socio-economic variables on tree species composition. It was found out that fruit trees such as *Mangifera indica*, *Artocarpus heterophyllus*, and *Persea Americana* and non-fruit tree species like *Eucalyptus Spp*, *Markham lutea*, *Ficus natalensis* were most preferred for meeting farmer's needs in terms of food, fibre, medicine, environmental protection and soil fertility. *Mangifera indica*, *A. heterophyllus*, *P. Americana* were becoming abundant due to them being planted while other species were becoming scarce due to small land sizes, and over harvesting for charcoal, timber and firewood among others.

Farmers' practices different management practices on the species they owned and major practices were weeding (25%), protection (19.6%), pruning (17%), and fertilizer application (11%). Trees were planted in courtyards, field gardens and back yard. Females provided farm labor but were less involved in selling of the tree products. There was significance difference in tree preference by gender ($p < 0.05$). Fruit trees were highly preferred by females while timber and income generation trees were highly preferred by males. The increasing use of edible fruit trees such as *M. indica*, *A. heterophyllus*, and *P. Americana* in furniture industry is threat to food industry. Apart from sex, land size, land ownership, family size and distance to the farm, most factors were not significant. Basing on the results, agroforestry was practiced due to small land holdings. Its recommended to encourage farmers to determine the priority tree species, educate and sensitize them on the value of trees.