

Abstract

Bamboo (*Dedrocalamus asper*) is a very fast growing, extensive, low-cost plant in the family of grasses with great potential in environmental conservation and poverty alleviation. It has over 1500 documented uses. However, with the present crisis of land in Kenya especially in high potential areas where bamboo is grown, there is a need to identify options of cultivating bamboo as an agroforestry crop. Therefore, the main objective of the study was to establish factors influencing uptake of bamboo for agroforestry in selected Sub Counties in Nyandarua County, Kenya. The specific objectives were; to investigate the agroforestry systems in the selected Sub Counties of Nyandarua County, to establish the factors influencing the adoption of bamboo for agroforestry in selected sub counties of Nyandarua County and to examine the problems faced by farmers cultivating bamboo in selected sub counties of Nyandarua. Closed and open-ended questionnaires were administered to 132 bamboo farmers as the targeted population. The data collected was analyzed using Statistical Package for Social Statistics (SPSS) version 23 for data analysis. Likert Chisquare tests were run to establish the relationship between the rate of bamboo adoption and problems encountered, the agroforestry system practiced and the social economic factors. From the results home gardening was the main type of agroforestry system practiced. It was revealed that, monthly household income ($\chi^2 = 29.87$ and $\chi^2 = 20.053$, $P = 0.014$ and 0.021), size of land ($\chi^2 = 1.433$, and $\chi^2 = 4.633$, P value = 0.031 and 0.009), income from crops intercropped with bamboo ($\chi^2 = 14.173$ and $\chi^2 = 25.243$; $P = 0.004$ and $p = 0.000$) influenced the rate of adoption of bamboo ($\chi^2 = 14.173$ and $\chi^2 = 25.243$; $P = 0.004$ and $p = 0.000$) for Ol'kalou and Ol'jororok Sub Counties, respectively). The study recommended more research on crops suitable for intercropping with bamboo as an agroforestry crops.