

ABSTRACT

An exploratory study was conducted to elicit farmers' knowledge on the use and management of selected indigenous fruit trees (IFTs) in the Lake Victoria Basin (LVB) districts of Bugesera, Kirehe and Nyamagabe in Rwanda and Buikwe, Busia, Kamuli, Masaka and Namutumba in Uganda. The study used a mixed method approach to assemble the required information that can be used for optimising sustainable use, management and on-farm cultivation of the IFTs. The study analysed preferences, availability and abundance of selected IFTs, ascertained the significance of the selected IFTs to the livelihoods of rural communities, assessed management practices and conservation methods adapted by farming communities, and examined perceived challenges and opportunities for ensuring sustainable use and management of IFTs in the area. Data were collected using household surveys involving 700 respondents (300 in Rwanda and 400 in Uganda), focus group discussion with farmers knowledgeable about IFTs, key informant interviews and case studies on selected IFTs. Survey data were analysed using SPSS. Chi square tests and logistic regressions were applied to ascertain the relationship between respondents' socio demographic characteristics and level of interest in IFTs as food and medicine. Qualitative data were subjected to content analysis based on emerging themes and patterns. A total of 23 IFT species belonging to 20 families were reported by the respondents in Rwanda and Uganda. Of the 13 IFT species reported by the respondents in each country, 3 IFT species were reported to be common in both Rwanda and Uganda. *Garcinia buchananii* Baker, *Myrianthus holstii* Engl. and *Ximenia caffra* Sond; were the most preferred IFTs in Rwanda and *Canarium schweinfurthii* Engl., *Tamarindus indica* L., *Garcinia buchananii*, *Saba comorensis* Boj., and *Vangueria apiculata* were the most preferred IFTs in Uganda. In each country, preferences for IFTs varied from district to districts and one community to another. Farmers' knowledge on the availability of *X. caffra* was significantly influenced by age ($P=0.036$, $R^2=0.162$), education ($P=0.016$, $R^2=0.162$) and occupation ($P=0.030$, $R^2=0.162$). Chi-square test revealed that education influenced the level of use of *V. apiculata* as a source of food ($\chi^2=15.017$, $P=0.020$) while sex and level of education influenced the level of use of *X. caffra* as a source of food ($\chi^2=6.473$, $P=0.039$ and $\chi^2=13.648$ and $P=0.009$ respectively. Marital status significantly influenced the preference of *C. schweinfurthii* and *V. apiculata* as a source of medicine ($\chi^2=24.572$, $P=0.017$ and $\chi^2=37.458$, $P=0.000$) respectively. The most commonly reported fruit tree management practices ranged from weeding, safeguarding seedlings/coppicing and pruning. Challenges for sustainable use and management of IFTs included inadequate knowledge, lack of planting materials and long maturity period of IFTs. Provision of free food and medicine, resistance to harsh environment, existence of cooperatives and other organizations involved in promoting the growing of trees were reported as opportunities for sustainable use and management of IFTs. Although farming communities revealed great knowledge on IFTs, there is no elaborated management plan to guide sustainable use and management of the IFTs. This may explain the decline in abundance of the IFTs in the sampled LVB districts and beyond. Incorporation of preferred IFTs in the various agroforestry practices, can thus, help to promote on-farm production of IFTs for improved community livelihoods.

Key words: Indigenous fruit trees, sustainability, on-farm management, Community knowledge