

# **Consumption and conservation of drylands' indigenous fruit trees for rural livelihood improvement in Mwingi district, Kenya**

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## **Abstract:**

At present, fruit consumption in Kenya is well below Food and Agriculture Organization (FAO) recommendations, and promotion of a diversity of indigenous fruit tree species could thereby bring significant enhancements in nutritional security, especially in rural areas. Despite the importance of IFTs in the livelihoods of rural communities and wide natural occurrence in dry areas of Kenya, their promotion has not been adequately fostered. Consequently, they remain underutilized. A survey was conducted in the Arid and Semi-arid Lands (ASALS) in Mwingi District. Two agro-ecological zones, Low Midlands five (LMS) and Inner Lowland Ranching six (IL6) were targeted, to investigate patterns of consumption and perspectives and practices of cultivation of IFTs by local communities. A structured interview schedule was used to interview systematically randomly selected 104 household members, with equal number of women, men, girls and boys. Appropriate statistical tools were used to analyse the data in order to ascertain the hypotheses of the study. Fifty-seven indigenous fruit species were documented as useful to local people. The results also revealed that average fruit consumption per person per day of these species was low at around 20 g. Children were the main consumers of indigenous fruits, although adults consumed particular species. The average consumption was slightly higher among male than female respondents, although the difference was not significant. Lack of awareness on the nutritional value of indigenous fruits by respondents is a factor limiting their consumption. Seasonality appears to be another important factor limiting consumption, with consumption varying by month in correspondence with the fruiting seasons of important species. Wild habitats are the main sources of these fruits, with planting in farmland currently rarely practiced, although some households are protecting existing indigenous fruit trees in their agricultural landscape. Lack of germplasm and markets are the two key constraints limiting their conservation through on-farm planting. The study recommends determination and making available nutritional information of these species. Policies should be adopted to encourage the decentralized supply of seeds, seedlings and vegetative propagules, as opposed to the trend in the past that has put more emphasis on the central supply systems such as national tree centres and government nurseries. There is need to explore ways and means through which consumption of these fruits could be increased across all age groups and gender, to change the notion that indigenous fruits are for children and women. One of the important method is campaigns targeting increased production and consumption of indigenous fruits for well-being. Development of 'portfolio', of species should be promoted in cultivation so as to spread and sustain fruit production hence health benefits throughout the year. There is need to reverse the situation where wild habitats are the main sources of these species as they are unsustainable, and this will require on-farm planting rather than leaving it to nature to provide these resources. The case for more attention at national and international levels to these valuable but neglected species is the overall recommendation of this study.