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“Filling gaps and removing traps
for sustainable resource management”

Determinants and Impact of Wild Fruit Collection on Food Security in Rural Zambia

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Abstract

Many sub-Saharan African countries are suffering from high rates of poverty, food insecurity and malnutrition. As one of these countries, Zambia shows a variety of wild fruit species that play an important role in food security. They are frequently used as supplements to staple food, particularly in times of poor harvest, are rich in vitamins and represent an easily accessible food source. The aim of this study was to 1) identify the determinants of wild fruit collection, and 2) examine the impact of wild fruit collection on food security.

For this purpose, a census of 215 households, focus group discussions and key informant interviews were conducted in Northern Zambia within the Food Security in Rural Zambia (FoSeZa) project. Both quantitative and qualitative analysis of data took place. Descriptive and regression analysis occurred by using Stata/IC 14.2.

The two most popular fruits were found to be *Uapaca kirkiana* and *Anisophyllea boehmii*. Fruits are mainly collected for own consumption, while sale of fruits is uncommon. Processing of fruits only takes place to a small extent. The quantity of wild fruits collected is positively and significantly affected by household size. Further factors such as size of land area, household's income and walking distance to gather wild fruits also influence the collected amount in dependency of the species.

As indicators for food security, the Food Consumption Score (FCS) and reduced Coping Strategy Index (rCSI) were calculated. Regression results reveal that the quantity of wild fruits collected has a positive and significant effect on food security based on the FCS, whereas the impact of collecting wild fruits on the rCSI is positive and insignificant.

Respondents highly evaluate wild fruits as nutrient source but high deforestation rates as well as increased population growth pose a threat to the availability of wild fruit plants. There is need to promote conservation management, cultivation practices and commercialization of wild fruits in order to ensure their long-term availability and maximize their impact on food security.

Keywords: Food security, malnutrition, sub-Sahara Africa, wild edible plants, wild fruits, Zambia