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## Species Diversity and Post-Harvest Practices on the Forest Edge Homegardens in Southwestern Uganda

CORY WHITNEY, JENS GEBAUER

*Rhine-Waal University of Applied Sciences, Fac. of Life Sciences, Germany*

### Abstract

Post-harvest losses (PHL) destroy between 20 and 60% of the East-African food production, thus heavily contributing to the devastating nutritional situation. Homegarden species and their varieties are an important genetic pool for selecting species with high post-harvest performance. To screen for plant diversity and post-harvest handling, 34 forest edge homegardens in three villages of southwestern Uganda's Greater Bushenyi region were inventoried in 2014.

An initial assessment of garden diversity found that homegardens in Kinoko-A had a total of 54 plant species with 20 indigenous, Kinoko-B had 61 plants with 28 indigenous, and Remitagu 76 plants with 29 indigenous. Of the total 48 indigenous species found, 7, 10, and 10 plants were unique to Kinoko-A, Kinoko-B, and Remitagu, respectively. The most prominent species in Kinoko-A was amaranth (*Amaranthus dubius* Mart. ex. Thell), with an average of 493 individual plants per garden. Amaranth has a year-round harvest and is not stored. The most common plant in Kinoko-B was banana (*Musa accuminata* Colla (AAA Group)), with an average of 152 individuals per garden. Farmers had no post-harvest practices for bananas, which rot soon after maturity. In Remitagu the most common species was cassava (*Manihot esculenta* Crantz) with an average of 191 individuals per garden. Cassava is stored longer term and/or dried and made into a powder to mix in the common local dishes *Kalo* and *Posho*.

Gardeners indicated post-harvest practices for some plants in the homegardens (32, 37, and 44 of the plant species in the respective villages). The local Robusta variety of coffee (*Coffea canephora* P. var.) was cited for the most post-harvest practices; it is commonly dried in the sun before sale. Next most important were cassava and string bean (*Phaseolus vulgaris* L.) in Kinoko-A, chili (*Capsicum frutescens* L.) and cassava in Kinoko-B, and chili, and taro (*Colocasia esculenta* (L.) Schott) in Remitagu. Sun drying was the main practice employed by gardeners to preserve these plants, while some roots were also stored longer term.

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