



It's Not a Weed; It's Food

AFRICAN INDIGENOUS LEAFY VEGETABLES IN MAWA

CATHOLIC RELIEF SERVICES' (CRS) MAWA PROJECT IS A FIVE-YEAR USAID/FTF PROJECT AIMING TO IMPROVE FOOD AND ECONOMIC SECURITY FOR 38,347 HOUSEHOLDS IN THE EASTERN PROVINCE OF ZAMBIA.

BACKGROUND

African indigenous leafy vegetables (AILVs) have been recognized for being more drought resistant and nutritious than introduced vegetables¹. More importantly, they are preferred by local communities over introduced vegetables for their taste, availability, and perceived health effects². Home cultivation of AILVs can be a low-input way to improve household food security, provide a source of additional income, and conserve botanical and nutritional diversity^{3,4}. By identifying and promoting local indigenous vegetables, the CRS Southern African Regional Office (SARO) plans to assist the Mawa project households in mobilizing their local resources to help combat the threat of El Niño and help to further food security efforts in the region. SARO plans to promote the consumption of nutrient-rich AILVs through Community-led Complementary Feeding and Learning Sessions (CCFLS). CCFLS is an approach that uses peer-to-peer support

to improve dietary diversity and consumption of locally available nutrient-rich foods to prevent undernutrition.

A combined team of CRS and Mawa staff carried out this assessment in Chipata and Lundazi through focus group discussions, key informant interviews, and market vendor interviews. The qualitative methods were followed by visits to fields and gardens to photograph the plants and purchase plant bundles from market vendors. Scientific names were identified using local flora⁵ and through a literature review, and were matched with documented nutritional properties of each species.

“Children love eating them; they don't know their value but they love the taste.”

Mother from focus group discussion

1 Shackleton, C. M., Pasquini, M. W., & Drescher, A. W. (Eds.). (2009). *African Indigenous Vegetables in Urban Agriculture*. Routledge.

2 Towns, A. M., Potter, D., & Idrissa, S. (2013). Cultivated, caught, and collected: Defining culturally appropriate foods in Tallé, Niger. *Development in Practice*, 23(2), 169-183.

3 Cousins, S. R., & Witkowski, E. T. F. (2015). Indigenous Plants: Key Role Players in Community Horticulture Initiatives. *Human Ecology Review*, 21(1), 59.

4 Freedman, R. L. (2015). Indigenous wild food plants in home gardens: Improving health and income-with the assistance of agricultural extension. *International Journal of Agricultural Extension*, 3(1), 63-71.

5 *Zambian Plants: Their Vernacular Names and Uses*, *Field Guide to Important Arable Weeds of Zambia*, *Flora of Zambia* (www.zambiaflora.com), and *PROTA* (www.prota4u.info)

HOUSEHOLD PERCEPTIONS

Mawa participants responded favorably to the leafy vegetables and reported that all household members, including pregnant women and children under two, consume them daily for a variety of motivations: taste, availability, affordability, and perceived health effects ([1] provides vitamins; [2] provides blood; [3] prevents disease; [4] gives energy; and [5] are nutritious).

The most frequently cited vegetables were the leaves of cultivated plants, wild herbs, and wild ground climbers, which were used as relishes alongside a traditional maize porridge. Wild vegetables were reported to typically grow only in the rainy season with low water requirements. Participants considered cultivated AILVs less work than exotic garden vegetables. Only the seeds of cultivated AILVs (pumpkin and cowpea) were collected, saved, and sold on the local markets; wild plants were naturally propagated. Although most AILVs are consumed fresh, a traditional storage ball known as *chikwati* in Chewa/Tumbuku (Image 1), enables the consumption of dried vegetables year-round.



Image 1: AILVs in traditional vegetable storage ball *chikwati* (AM Towns/CRS)

COMMONLY CONSUMED PLANTS

A total of 36 distinct local plant names were cited by the participants in the assessment⁶. Frequently consumed cultivated vegetables include the leaves of pumpkin (*Cucurbita maxima* Duchesne), sweet potato (*Ipomoea batatas* (L.) Lam.), and semi-cultivated amaranth (*Amaranthus* spp.). Two commonly cited wild vegetables are detailed below:

CERATOTHECA SESAMOIDES ENDL.

- Known as “false sesame” (English); *katate* (Ngoni)
- Wild herb sold for \$0.17 a bundle
- **Recipe:** *katate* + tomato + salt = boil for 5 minutes
- **Micronutrients:** 65 food energy (ME) cal, 5.25 g protein, 0.45 g fat, 0.63 mg calcium, 16.69 mg iron, 0.11 mg zinc, and 59.25 mg vitamin C per 100 grams of fresh leaves⁷

HIBISCUS ACETOSELLA WELW. EX HIERN

- Known as “cranberry hibiscus” (English); “*lumanda*” (Ngoni)
- Wild herb sold for \$US 0.08 to 0.40 depending on season
- **Recipe:** *lumanda* + ground nuts + tomato = boil for 5 minutes
- **Micronutrients:** 85 food energy (ME) cal, 13.82 g protein, 1.42 g fat, 0.55 mg calcium, 21.1 mg iron, 0.01 mg zinc, 28.93 mg vitamin C per 100 grams of boiled leaves⁷

RECOMMENDATIONS

- Promote the consumption of indigenous vegetables, especially wild species, to women and men through CCFLS and the generational transfer of indigenous knowledge.
- Acquire seeds of wild indigenous vegetables for distribution to households.
- Train project staff, lead farmers, and women on collecting and cultivating seeds of wild indigenous vegetables and transplanting plants in gardens and spaces close to homes.
- Develop CCFLS recipes that include wild species of indigenous leafy vegetables for infants older than six months, young children, and pregnant women.
- Encourage AILV preservation through drying and storage to ensure access to leafy vegetables year-round without nutrient loss or damage.
- Carry out additional studies to assess the bioavailability of nutrients, consumption patterns of AILVs, and the effects of sodium bicarbonate on nutrients.

⁶ See Final Report: CRS (2016). SARO AILV Assessment Report.

⁷ National Food and Nutrition Commission (2009). Zambia Food Composition Tables. Fourth Edition.