(A Banda/CRS)

It's Not a Weed; It's Food

AFRICAN INDIGENOUS LEAFY VEGETABLES IN UBALE

CATHOLIC RELIEF SERVICES' (CRS) USAID/FFP UNITED IN BUILDING AND ADVANCING LIFE EXPECTATIONS (UBALE) IS A FIVE-YEAR PROJECT AIMING TO INCREASE THE FOOD SECURITY OF VULNERABLE HOUSEHOLDS, IMPROVE THE NUTRITION OF MOTHERS AND CHILDREN UNDER TWO, AND STRENGTHEN THE DISASTER RISK MANAGEMENT OF COMMUNITIES IN 248,200 HOUSEHOLDS IN THE SOUTHERN DISTRICTS OF MALAWI.

BACKGROUND

African indigenous leafy vegetables (AILVs) have been recognized for being more drought resistant and nutritious than introduced vegetables[1]. More importantly, they are preferred by local communities over introduced vegetables for their taste, availability and perceived health effects[2]. The 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, CRS' Southern African Regional Office (SARO) aims to assist UBALE 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), 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 UBALE staff carried out this assessment in the Chikwawa District through focus group discussions, key informant interviews, and market vendor interviews. Qualitative methods were followed by visits to fields and gardens to photograph the plants and purchase plant bundles from market vendors (Image 1). Scientific names were identified using local flora[5] and matched with documented nutrition profiles.

> "The wise woman cooks the dried ones; a small amount of dried leaves becomes a lot of food when cooked. [By drying vegetables,] the wise women keeps her family far from hunger."
>
> **Female elder 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 Useful Plants of Malawi; Zambian Plants: Their Vernacular Names and Uses; PROTA (www.prota4u.info); National Herbarium of Malawi

HOUSEHOLD PERCEPTIONS

UBALE participants reported that all household members regularly consume AILVs, including pregnant women and children under two years of age. The vegetables are consumed as a relish with the traditional maize porridge *nzima*, most frequently with cultivated AILVs. The majority of respondents reported consuming the vegetables due to their good taste, source of vitamins, and affordability. There was a reservation in overall enthusiasm for discussing AILVs, especially those that grew wild; anecdotal information suggested a strong stigma against traditional Malawian foods. Younger generations preferred cultivated indigenous vegetables, particularly pumpkin leaves, whereas older participants cited several wild indigenous vegetables and suggested that UBALE should promote "the old vegetables, too, not just the modern ones." Participants reported that the plants grew well with limited water and involved less labor compared to exotic vegetables. No participants reported collecting or selling wild AILV seed. The preservation of leafy vegetables was commonly reported for year-round access to AILVs.

Image 1: Fresh African indigenous leafy vegetables for sale at a rural market. (AM Towns/CRS)

COMMONLY CONSUMED PLANTS

A total of 16 distinct local plant names were cited by the participants in the assessment[6]. Frequently consumed cultivated vegetables include the leaves of pumpkin (*Cucurbita maxima* Duchesne), moringa (*Moringa oleifera* Lam.), and semi-cultivated amaranth (*Amaranthus* spp.). Two commonly cited wild vegetables are detailed below:

CORCHORUS OLITORIUS L.

- Known as "jute mallow" (English); *denje* (Chichewa)
- Wild herb not found at the market
- **Recipe:** *denje* + tomato + salt = boil for 5 minutes
- **Micronutrients:** extremely high beta-carotene; high to extremely high iron; high folic, riboflavin, and ascorbic acid; medium to high calcium; medium vitamin E, 4.5% protein[7]

IPOMOEA ERIOCARPA R. BR.

- Known as "wild sweet potato leaves" (English); *punde* (Chichewa)
- Wild climber sold for $US 0.04 a bundle
- **Recipe:** remove white sap from leaves, dry leaves in sun for 10-15 minutes, fry with tomato and onions for 5 minutes
- **Micronutrients*:** medium to high ascorbic acid; medium beta-carotene, vitamin E, folic acid, iron, calcium; 2.5% protein[7]

*Nutrition for *I. eriocarpa* is unknown; data based on closely related species *I. aquatica*

RECOMMENDATIONS

- Promote the consumption of indigenous leafy 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 Lin LJ, Hsiao YY, Kuo CG. 2009. Discovering indigenous treasures: Promising indigenous vegetables from around the world. AVRDC – The World Vegetable Center Publication No. 09-720. AVRDC – The World Vegetable Center, Shanhua, Taiwan. 317 p. http://203.64.245.61/e-book/ebook1.htm

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