

6. WILD FOOD PLANTS



Woman displaying wild and preserved food plants in central Tanzania.

Knowledge and consumption of wild food plants

Wild food plants grow in natural conditions and are harvested for their human food and nutrition values. They are relevant in household food security and nutrition in some rural areas, particularly in drylands. They represent relevant food sources during seasonal food shortage periods, and provide good nutritional supplies, notably micronutrients. In some cases, wild food plants may have some economic value in local markets. Wild food plants constitute a component of agrobiodiversity because of the scale of indigenous knowledge, management and uses involved.

Wild food plants are relevant in the food security and nutrition of rural people dwelling arid and semi-arid ecosystems. Dryland peoples know and consume a rich diversity of wild food plants. Field research in the drylands of central Tanzania showed that Gogo communities harvest and consume over 40 different wild food plants (table 12). Rural women are the principal actors around wild food plants because they hold substantial knowledge on their localisation, seasonal availability, properties, preservation practices, and culinary uses.

Wild food plants grow in a wide range of spaces. Some are only located in bushes or in specific natural habitats. Some typically grow close to the fields or in anthropogenic ecosystems, having somehow coevolved with human agricultural systems. In some cases they

are semi-domesticated plants because local people manage them in ways that ensure their conservation and regular availability, even occasionally cultivating them.

Wild food plants suffer large neglect, disregard, and erosion. Agricultural programmes envision their use as a "backward" food security practice, devoting very little attention, if any, to them. Biodiversity initiatives around wild food plants and rural nutrition are also scarce. There is poor scientific knowledge and awareness on the values of wild food plants, such as their nutritional qualities, ecological features, and local uses. This scarce attention and support washes away practical and inexpensive efforts to improve nutrition and income among the rural poor, especially those inhabiting arid and marginal areas.

In addition, the expansion of farming land and the intensification of unsustainable practices of natural resource management are further constraining the space available for some wild food plants, hence undermining their availability and use. Gender inequalities further exclude wild food plants, as rural women are the major actor in their harvesting and use, yet they have little decision-making and receive the least technical and training support. Rural people themselves are increasingly abandoning the use of wild food plants as result of the overall neglect, disregard, and erosion. However, wild food plants have significant values and potential for household food security and nutrition among the rural poor, especially those inhabiting harsh agroecological areas such as the vast dry savannas of Africa.

Table 12. Selected wild food plants among the Gogo people in Dodoma drylands (Tanzania)

Local name ⁽¹⁾	Seasonal availability ⁽²⁾	Part consumed	Preservation ⁽³⁾
Chidingulilu	Dry	Flowers	+
Chimhela	Rain	Roots	-
Chipali	Rain	Leaves	+
Chiwandagulu	Rain / Dry	Leaves	+
Dinhi	Rain	Leaves	-
Fulu	Rain	Fruits	-
Fwene	Rain	Leaves	+
Ikuwi / Upela ⁽⁴⁾	Rain / Dry	Leaves / Fruits	-
Ilende	Rain / Dry	Leaves	+
Kayeba ⁽⁵⁾	Rain / Dry	Leaves	+
Lwamuya	Rain	Leaves	-
Mahulihuli	Rain / Dry	Leaves	+
Manhala	Rain	Leaves / Fruits	-
Matanga	Rain	Leaves / Fruits	-
Mbuli	Rain	Leaves	-
Mhelemehe	Dry	Fruits	-
Mhilile	Rain	Leaves	+
Mkuyu	Rain / Dry	Fruits	-
Mnamha	Rain	Leaves	+
Mnghonjela	Rain	Leaves	+
Msisi	Dry	Fruits	-
Mujinanhandala	Rain	Roots	-
Mzimwe	Rain	Leaves	+
Ndalangwe	Rain	Fruits	-
Ndejeha	Dry	Leaves / Fruits	-
Ngazi	Rain	Leaves	+
Ng'hole	Rain / Dry	Fruits	-
Ng'homwa	Rain	Roots	-
Nghwata	Dry	Fruits	-
Ngologolo	Rain / Dry	Roots	-
Ngwelu	Rain / Dry	Fruits	-
Nhafuta	Rain	Fruits	-
Nhingha	Dry	Roots	-
Nhumba	Dry	Fruits	-
Nhundwe	Rain / Dry	Fruits	-
Nyakifwega	Rain	Leaves	+
Saka	Dry	Fruits	-
Sang'hala	Dry	Leaves / Flowers	-
Sunga	Rain	Leaves	-
Susunha	Rain / Dry	Fruits	-
Udawi	Rain / Dry	Fruits	-
Uwoga	Rain	Mushroom	-
Yagayaga	Rain	Leaves	-
Yambu	Rain	Leaves	-

1. Gogo language.

2. Availability in rain season is important as that is often a food shortage period among the poor.

3. Indicator of indigenous knowledge and techniques for food preservation of such plants.

4. "Ikuwi" and "upela" refer to baobab tree leaves and fruits, respectively. Leaves are mostly available in the rain season, whilst fruits in the dry season.

5. "Kayebe" is a semi-domesticated plant, as it is harvested wild and often cultivated.

Source: Field research in Dodoma region (Tanzania), in 2001, in collaboration with the organisation TAWLAE. Methodology included participatory surveys with Gogo farmers from the villages of Ihumwa, Iringa-Mvumi, Iyumbu, Makangwa, and Mvumi-Makulu, and a farmer workshop held in Iringa-Mvumi, with the participation of farmer men and women from different villages.

Value and potential of wild food plants

Wild food plants represent a versatile agrobiodiversity resource, providing different benefits and opportunities depending on the agroecological conditions, food security dynamics, nutritional needs, cultural dimensions, and other circumstances. The most relevant and distinctive values of wild food plants are as follows:

- Supplementary food source, adding nutritional quality and food variety to local diets.
- Excellent supply of micronutrients (vitamins and minerals).
- Critical food source during seasonal food shortage periods, which are recurrent among the rural poor dwelling in arid lands.
- Inexpensive and easy food source, often requiring low labour inputs.
- Vital ingredient in food habits and culinary practices in some areas of Sub-Saharan Africa, especially for the so-called relishes that accompany main meals.
- Emergency food source, for instance in cases of food shortage, enduring drought, crop failure, and civil conflict.
- Source of income, as some wild food plants may access specific market niches.

Wild plants play a critical food security role in arid and semi-arid environments. Since in these areas dry and rainy seasons are sharply separated, agriculture is restricted to specific periods in the year, thus leaving wide time lapses with limited options for food production. In such periods, food reserves reduce or may become exhausted, whilst the main crops cannot be harvested yet. Wild food plants then become a critical food security resource. Wild food plants represent untapped resources with potential to improve nutrition in arid and semi-arid lands. They play an analogous role to that of vegetable crops in humid and sub-humid areas.

Wild food plants have also a potential in the mitigation of AIDS impact, especially among the rural poor. In particular, they are relevant in three main concerns of AIDS affected households: (i) improving food access, (ii) improving nutrition and health quality, and (iii) alleviating labour constraints related to food production. Wild food plants represent inexpensive, locally available and versatile food sources capable of improving nutrition and health quality. Furthermore, they often represent food sources with low labour requirements, to the extreme that children, aged people and some sick people can participate in their harvesting, provided adequate indigenous knowledge on their localisation and identification has been adequately transmitted. Therefore wild food plants represent a relevant food security and nutrition option for households suffering labour shortages, such as typically those affected by HIV/AIDS. In fact, the recognised role of wild food plants in emergency situations is well extensible to the context of AIDS, which in fact constitutes an emergency scenario.

The wide indigenous knowledge on the preservation and processing of wild food plants further enhances their roles in household food security and nutrition. In this sense, preserved wild food plants can help AIDS affected households and other troubled families to cope with labour shortages, confront sudden food scarcity, or build food reserves for times of acute production constraints. Rural women hold specific indigenous knowledge on preservation and processing for many of their local wild food plants (table 12). These practices optimise the use of those plants for nutrition, long-term food security and marketing activities.

Wild food plants can represent an easy income source, especially if specific policies and programmes were deployed to expand market niches and support the integration of poor rural households in their sustainable harvesting, processing, and commercialisation.

Recognition, promotion and sustainable use of wild food plants

The increased use of wild food plants represents a useful strategy for household food security and nutrition, especially as rural communities confront hunger, malnutrition, and labour shortages in arid and semi-arid lands. This strategy requires the agricultural development sector to recognise their value and potential, hence redefining agricultural extension support, agriculture research programmes, biodiversity conservation initiatives, and even food policies. Raising recognition and awareness at the rural grassroots level is equally required, as wild food plants have been losing value and use among rural people themselves. Thus promoting awareness and use around wild food plants at the community level is a critical task. Suggested initiatives may comprise conducting participatory surveys of wild food plant diversity (as illustrated in table 12), incorporating wild food plants in farmer field schools programmes, and integrating wild food plants in nutrition education.

A workshop organised in a village in Dodoma region (central Tanzania) in December 2001 illustrated the potential of training and participatory efforts to improve awareness and use of wild food and medicinal plants. Participant farmers, both women and men coming from different villages in the area, welcomed very much the initiative because it allowed them to increase awareness around local resources, discuss nutrition and healthcare issues, and exchange knowledge around wild food and medicinal plants (such as knowledge on edible plants, locations, preservation techniques, herbal treatments, and culinary uses).



Gogo people displaying wild food plants in a farmer workshop held in Iringa-Mvumi village (Dodoma, Tanzania).

The optimal use of wild food plants relies upon preservation and processing practices. Traditional preservation techniques of wild food plants are inexpensive, labour-sensitive, and effective means to enhance their roles in household food security and nutrition. Their improvement would further enhance the contribution of wild food plants to household nutrition and improve their marketing prospects.

The promotion of wild food plants needs due regard to gender issues, particularly since rural women are the main actor in the harvesting and use of wild food plants. Gender inequalities are often at the roots of the disregard and poor valuation of wild food plants. At the same time, recognising and promoting wild food plants would enhance women's role in household food security and nutrition, whilst advancing awareness on gender dimensions in natural resource management.

Although wild food plants are often destined for household consumption, some have commercial value or potential. They may thus represent an income source if market niches existed. Adequate policy and programme support strategies would be needed, including improved preservation, processing, and marketing skills.

The promotion of wild food plants also demands support for community natural resource management, so to ensure sustainable use and facilitate equitable access. A number of initiatives may be useful, such as arresting practices that reduce natural habitats where wild food plants grow, deploy sustainable harvesting schemes, and implement conservation strategies. In fact, the issue of wild food plants falls on the interface between the conservation and the use of biodiversity. In addition, some highly valuable wild food plants may be considered for cultivation, such as in home gardens (in fact, crops historically evolved from the domestication of certain wild plants that had specific values and uses).



Farmer with *emoros*, a wild food plant whose leaves are consumed in central Uganda.

Recommendations

Wild food plants are neglected and declining agricultural resources with potential relevance in the food security, nutrition and livelihood of communities inhabiting arid and semi-arid lands. For instance, they could help AIDS affected households to cope with labour constraints, malnutrition, and even income needs. Suggested action comprises as follows:

1. Promote wild food plants as valuable resources to improve household food security, nutrition and income, especially among the rural poor and AIDS-affected households dwelling drylands and other marginal areas.
2. Incorporate wild food plants in agricultural development programmes, placing special emphasis on their nutritional values.
3. Conduct initiatives to transmit and improve indigenous knowledge and practices for processing and preserving wild food plants.
4. Incorporate wild food plants in community nutrition and healthcare advising, including aspects like nutrition information, meal preparation skills and local knowledge exchange.
5. Conduct participatory surveys on wild food plants to raise local awareness on the extent and potential of these resources (see table 12 above as example of a survey).
6. Support or establish community management systems for the conservation and sustainable use of wild food plants.
7. Prioritise wild food plants in biodiversity conservation initiatives in arid ecosystems, integrating conservation biology issues with local nutrition and development concerns.
8. Explore strategies for the commercialisation of wild food plants among poor rural families: for example, creating market niches, promoting co-operatives, and improving preservation-processing techniques.
9. Conduct research on wild food plants, including nutrition analysis, ecological aspects, preservation and processing techniques, and domestication potential.