Tropentag, September 17-19, 2013, Stuttgart-Hohenheim

"Agricultural development within the rural-urban continuum"

Developing a Domestication Priority Setting Approach for Wild Vegetable to Improve Food Security in Makawanpur District, Central Nepal

Nirmala Joshi[1], Mohan Siwakoti[2], Katja Kehlenbeck[3]

[1] *Ministry of Forests and Soil Conservation, Department of Plant Resources, Nepal*
[2] *Tribhuvan University, Central Department of Botany, Nepal*
[3] *World Agroforestry Centre (ICRAF), Tree Diversity, Domestication and Delivery, Kenya*

Abstract

Makawanpur district in Central Nepal is considered one of the richest biodiversity hotspots of the country. Numerous wild edible plant species of that area are traditionally used as vegetables and contribute to nutrition and food security of the local communities. However, abundance of many of these wild vegetables is decreasing which calls for domestication and cultivation of priority species. So far, no activities for priority setting are performed in the research area.This study aimed at documenting wild vegetables and their use to develop a priority list for future domestication efforts. Wild vegetables were surveyed in three agro-climatic zones (altitude range 500–2200 m a.s.l.) of Makawanpur district in natural forest, homegardens, farmer's fields, fallow land and markets. Information about local names, plant parts used, seasonal availability, mode of consumption, primary consumers and preference ranking for consumption and sale was gathered during forest/field walks and by semi-structured interviews of key informants (including men, women and children) of three ethnic groups. Priority setting was based on nine variables related to priorities for taste and sale, species' occurrence in homegardens, wide use among ethnic groups, broad altitude range, harvest season, level of threat as perceived by respondents, children's preference for consumption and possibility for processing. A total of 89 vegetable species were identified, including 66 herbs, 9 climbers, and 14 shrubs and trees. Forests and fallows were most important for collecting wild vegetables and only seven species were found in homegardens. As many as 20–46 wild vegetable species were ready for harvest per month from March to September, but only 3–8 species in the months October to February. Wild vegetables were mainly used for home consumption, but 26 species were also sold in markets. The priority setting resulted in a list of 17 species with high ranks, with *Bauhinia variegata* L., *Dendrocalamus hamiltonii* Nees & Arn. ex Munro and *Bambusa tulda* Roxb. being the most important as they were highly preferred for taste (even by children) and sale, used by all three ethnic groups and being available in all surveyed altitudes. The developed priority setting approach was considered as suitable for this location and could be recommended for testing elsewhere.

Keywords: Agro-biodiversity, consumption, ethnobotany, homegardens, seasonal availability, traditional knowledge

Contact Address: Nirmala Joshi, Ministry of Forests and Soil Conservation, Department of Plant Resources, Thapathali, Kathmandu, Nepal, e-mail: nirmalaktm@gmail.com