**Wild Edible Plant Use in Tshopo District, DR Congo**

Termote Céline1,2, Van Damme Patrick2

1 Nutrition and Marketing Diversity Programme, Bioversity International, Italy, www.bioversityinternational.org

2 Laboratory of Tropical and Subtropical Agriculture and Ethnobotany, Department of Plant Production, University of Ghent, http://www.tropicallab.ugent.be

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**Background and objectives**

Tshopo District has enormous agricultural potential, but food security remains precarious. Despite the enormous richness in biodiversity and cultures, wild edible plants (WEP) have been poorly studied in Tshopo District, c.q. DRC. The objective of this study, carried out by the University of Ghent in collaboration with the University of Kisangani (2006-2011), was to contribute to the valorization of WEP for better nutrition security, higher and more diversified farmers’ incomes and sustained cultural well-being.

**Ethnobotany**

An ethnobotanical inventory (2006-2008) within 3 ethnic groups (Turumbu, Mbole and Balì) in 3 different territories of the district (Isangà, Opala and Bafwáséndé) documented 166 WEP species and 2 varieties from which 198 plant parts are used for 228 different food uses. Preferences in taste and commercial, nutritional and cultural value of WEP were discussed during participatory ranking exercises. Ethnobotanical data on WEPs for the other 11 major ethnic groups in Tshopo District are being analyzed.

**Market survey**

WEP markets in Kisangani city were analyzed (2007-2008) in relation to number and characteristics of sellers, species and quantities offered, prices and periodicity. Only 15 WEPs were seen to be sold on Kisangani markets by a small number of ‘ad hoc’ traders, who easily switch to other products. Although a certain form of organization was found in the fumbwa (Gnetum africanum) trade with Kinshasa as main destination, other WEP markets in the region remain underdeveloped. Based on the nature of species sold as well as on the socio-economic characteristics of our interviewees, four types of traders were identified: subsistence traders (spices cluster), traders diversifying in number of WEP sold (fruits and spices cluster), traders diversifying in number of income activities (other vegetables cluster) and specialized traders (fumbwa cluster). This typology provides valuable insights for further market chain organization and development.

**Dietary assessment**

To assess the contribution of WEPs to dietary quality, the usual dietary intake of 363 urban and 129 rural women was assessed within the period of highest WEP availability (Aug.- Sept. 2009). Contrarily to what was expected, only 15 WEPs were found to occur in a marginal number of 24h recalls. The most noteworthy contribution came from the semi-wild safou fruit (Dacryodes edulis). Total energy intake of the women was rather low, with a high percentage energy coming from fats. Micronutrients of major concern were niacin, folate, vitamin B12, iron, zinc and calcium with more than 75% of women having intakes below the recommended dietary allowances.

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**Conclusion and recommendations**

Despite the precarious nutrition security, urban as well as rural inhabitants in this biodiverse region do not valorize their knowledge on WEPs to complement their diets. Promotion of WEPs alone will not solve all underlying causes of nutrition insecurity and poverty in the region, but WEPs could at least contribute more to diets and incomes then they currently do. A lot of WEPs with proven nutritional qualities, such as Gnetum africanum and Treculia africana, are present in the region. Lack of nutritional and health information on WEPs was frequently mentioned as a constraint for WEP consumption. Before relevant traditional knowledge is lost, further documenting of WEP knowledge and assessment of their dietary use is needed to capture the potential of biodiversity and ameliorate diet adequacy. Furthermore, it should be possible to identify, embrace and build upon local socio-cultural values to enhance WEP consumption and trade. Nutritional education messages should be based on scientific knowledge, while being able to stimulate local positive behaviors. The integration of WEPs into strategies for sustainable rural development in Tshopo District is recommended, e.g. through promotion of homesteads and integration of WEPs in these systems. Research into agrobiodiversity and agroforestry starting from local needs and indigenous knowledge, and backed up by sound scientific research is indispensable to create innovative, resilient agricultural models able to produce healthy foods in a sustainable way while at the same time conserving biodiversity for future generations.

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