



Enhancing nutritious food availability through promotion of native edible tree/shrub species in sub-Saharan Africa

Amadou Malé Kouyaté¹, Achille Ephreim Assogbadjo², Amadé Ouédraogo³, Abasse Tougiani⁴, Anne Mette Lykke⁵, Patrick Van Damme^{6,7}

¹Institut d'Economie Rurale, BP. 16, Sikasso, Mali, ²Laboratoire de Biomathématiques et d'Estimations Forestières, Faculté des Sciences Agronomiques, Université d'Abomey-Calavi, 05 BP 1752, Cotonou, République du Bénin, ³Laboratoire de Biologie et Ecologie Végétales, UFR Sciences de la Vie et de la Terre, Université Ouaga I Pr Joseph KI-ZERBO, 03 B.P. 7021 Ouagadougou 03, Burkina Faso, ⁴Institut National de Recherche Agronomique du Niger (INRAN), BP 429, Niamey, Niger, ⁵Department of Bioscience, Aarhus University, Vejlsovej 25, 8600 Silkeborg, Denmark, ⁶Ghent University (UG), Coupure links 653, 9000 Gent, Belgium, ⁷Czech University of Life Sciences, Faculty of Tropical AgriSciences, Prague, Czech Republic

*Corresponding author: kouyate01@hotmail.com

Introduction

In West Africa, malnutrition affects more than 18 million children and is considered as a serious constraint to socio-economic development. Despite the region's high potential for food production, malnutrition could increase because of high population growth.

Overall Research Objectives

- ❖ To make a literature review and inventory local knowledge and practices on native edible tree/shrub species and products.
- ❖ To assess/characterize biochemical compounds and nutritional value of native edible tree/shrub products.
- ❖ To analyze and develop value chains and improve marketing and processing of selected edible tree/shrub products for longer shelf life and improved nutritional quality.
- ❖ To develop locally adapted domestication of high-potential native edible tree/shrub species.
- ❖ To strengthen institutional and innovation capacity of local communities.

Methods

The project is implemented in the Sahelian, Sudanian and Guinean agro-ecological zones of Benin, Burkina Faso, Mali and Niger. The work is organized in five work packages:

WP1. Literature review and traditional knowledge survey on native edible tree/shrub species

WP2. Assessment of biochemical compounds and nutritional value of selected native edible tree/shrub products

WP3. Analysis and development of value chains and improvement of marketing and processing of selected edible tree/shrub products

WP4. Development of locally adapted domestication of selected native edible tree/shrub species

WP5. Capacity building

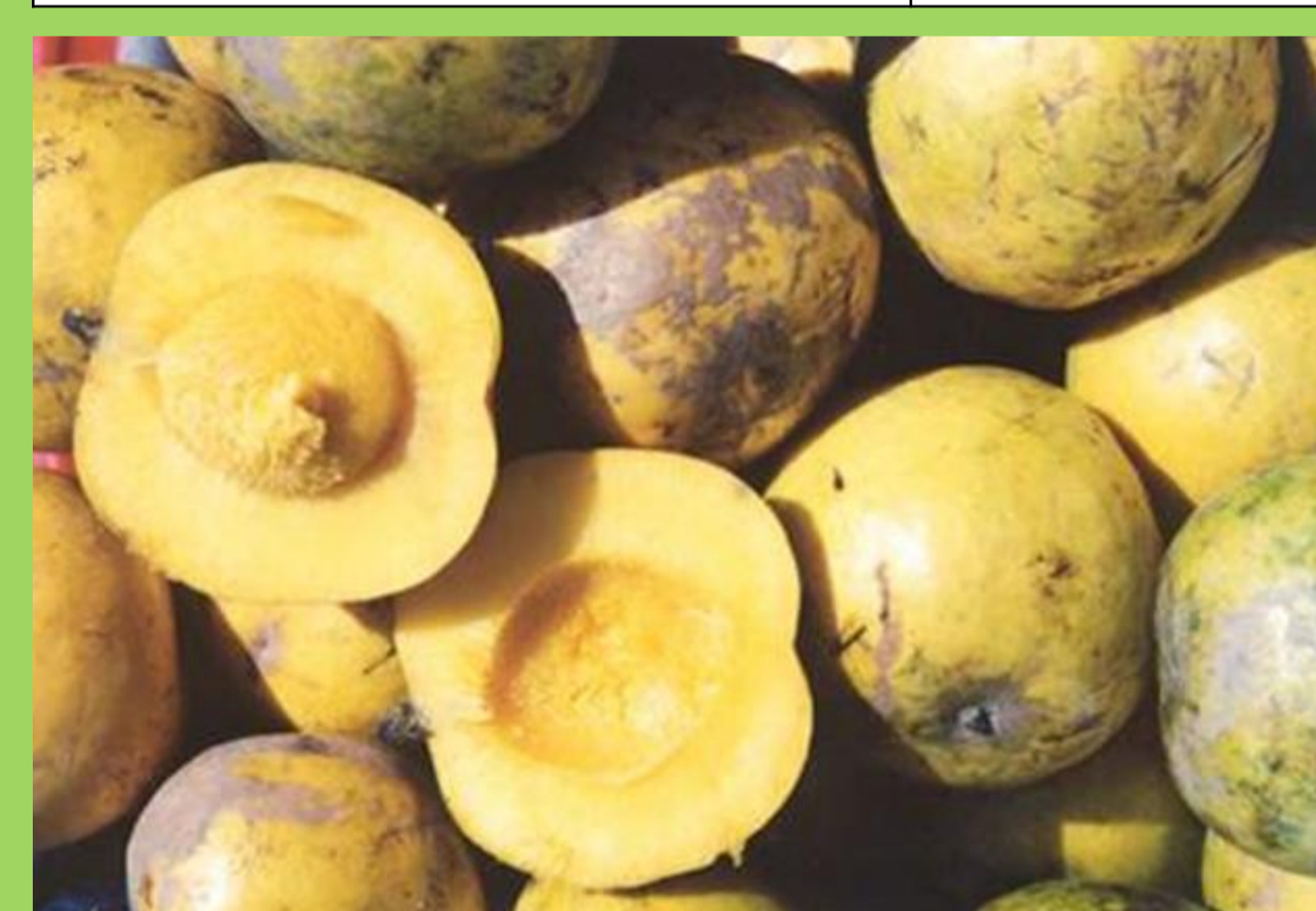
Preliminary results

Table 1. Five tree/shrub species with high potential to fight malnutrition by agro-ecological zone of four countries (x)

Native tree/shrub species	Sahelian zone		Sudanian zone				Guinean zone	
	Burkina Faso	Niger	Benin	Burkina Faso	Mali	Niger	Benin	Mali
<i>Adansonia digitata</i>	x	-	x	x	x	-	-	x
<i>Balanites aegyptiaca</i>	-	x	-	-	-	x	-	-
<i>Blighia sapida</i>	-	-	x	-	-	-	-	-
<i>Borassus aethiopum</i>	-	-	-	-	x	-	-	-
<i>Chrysophyllum albidum</i>	-	-	-	-	-	-	x	-
<i>Dialium guineense</i>	-	-	-	-	-	-	x	-
<i>Diospyros mespiliformis</i>	-	x	-	-	-	x	-	-
<i>Garcinia kola</i>	-	-	-	-	-	-	x	-
<i>Irvingia gabonensis</i>	-	-	-	-	-	-	x	-
<i>Lannea microcarpa</i>	x	-	-	-	-	x	-	-
<i>Maerua crassifolia</i>	-	x	-	-	-	-	-	-
<i>Parkia biglobosa</i>	-	-	x	x	x	-	-	x
<i>Saba senegalensis</i>	-	-	-	x	x	-	-	x
<i>Sclerocarya birrea</i>	-	x	-	-	-	x	-	-
<i>Tamarindus indica</i>	x	-	x	x	-	-	-	x
<i>Vitellaria paradoxa</i>	x	-	x	x	x	-	-	x
<i>Vitex doniana</i>	-	-	-	-	-	-	x	-
<i>Ziziphus mauritiana</i>	x	x	-	-	-	x	-	-

Table 2. Two out five tree/shrub species selected for further studies

Country	Sahelian zone	Sudanian zone	Guinean zone
Benin	-	<i>Adansonia digitata</i>	<i>Irvingia gabonensis</i>
Burkina Faso	<i>Ziziphus mauritiana</i>	<i>Saba senegalensis</i>	-
Mali	-	<i>Borassus aethiopum</i>	<i>Saba senegalensis</i>
Niger	<i>Balanites aegyptiaca</i>	<i>Ziziphus mauritiana</i>	-



Fruits of *Irvingia gabonensis*



Fruits of *Adansonia digitata*



Fruits of *Saba senegalensis*



Fruits of *Ziziphus mauritiana*



Fruits of *Borassus aethiopum*



Fruits of *Balanites aegyptiaca*

Conclusion

Many native edible trees and shrubs figure among the farmers' solutions to reduce malnutrition.

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