

Diversity of non-timber forest products used in the food security of Sahelian households in south-central Maradi in Niger

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Keywords: Diversity, NTFPs, Agro-climatic zones, Ecological units, Maradi, Niger.

Submitted 08/06/2026, Published online on 30th September 2026 in the [Journal of Animal and Plant Sciences \(J. Anim. Plant Sci.\) ISSN 2071 – 7024](#)

1 ABSTRACT

Food insecurity remains a persistent challenge in Niger, particularly in the Sahelian regions. Non-timber forest products (NTFPs) offer a potentially significant buffer, yet underexplored, source of food. This study, conducted in the North- and South-Sahelian zones of south-central Maradi region, aims to characterize the diversity of NTFPs by ecological zones and identify the land-use zones richest in edible species, with the goal of assessing their contribution to household food security. An ethnobotanical survey was carried out in 18 villages bordering different land-use areas. Data were collected from 379 households on socio-demographic characteristics, NTFP species identification, harvesting locations and methods, access, and specific uses. A total of 42 woody species from 20 families were identified, with Fabaceae being the most frequently harvested (30.95%), particularly in the South-Sahelian zone. Capparaceae (11.90%) and Combretaceae (7.10%) families followed, with *Maerua crassifolia* and *Guiera senegalensis* as dominant species, respectively. Fields were the primary source of NTFPs (61.48%), with fruits more commonly harvested in the south (84.57%) and leaves in the north (54.7%). Human consumption was the primary use, reported by 87.85% of northern and 81.09% of southern respondents. Gathering was the main collection method, with access largely unrestricted in both zones. This study provides critical insights into the spatial distribution and food security potential of NTFPs in Niger's Sahelian zones.