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The Potential of Neglected and Underutilised Species for Enhancing Food and Nutrition Security in Northern Ghana

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Abstract

Food and nutrition security remains an issue and while some crops supply a significant amount of calories worldwide, other neglected and underutilised species (NUS) are not considered for commercial agriculture despite that many have nutritional benefits. In Ghana, anemia, and vitamin A deficiency are prevalent among women and children.

The aim of the study is to assess the nutritional status of selected NUS and their availability, and accessibility, in relation to their potential to increase food and nutrition security in northern Ghana. The location in northern Ghana includes 27 women's groups around Tamale. Publicly available databases were utilised to assess the nutritional composition of selected NUS. Then two specific examples are contrasted – one which is introduced - orange-fleshed sweet potato (*Ipomoea batatas*) and – one that is indigenous – African Locust Bean (*Parkia biglobosa*). Transcripts from group activities such as a seasonal calendar and other focus group discussions as well as semi-structured interviews are coded for access, availability, volume, and utilisation among other themes. This analysis is complemented by IITA data of biofortified OFSP released in Ghana.

The analysis of the databases shows the high potential of selected NUS. For example, ALB contains a high amount of folate necessary for women during pregnancy. The semi-structured interviews revealed that the situation of the ALB trees is dire with diminishing availability due to agricultural mechanisation, firewood pressures, and other factors arising from access rights and land governance. Multiple approaches are needed to ensure the propagation of young trees. OFSP has been introduced and promoted due to its high Vitamin A content. Currently, it is distributed by international aid organisations and agricultural extension, but it is in need of a functioning supply chain and increased market demand.

The analysis revealed that data on NUS is scarce and the availability of NUS is a key factor for farmer's uptake and therefore using the potential that the species offers. *Parkia biglobosa* is not sufficiently available anymore and *Ipomoea batatas* L. is not sufficiently available yet. Furthermore, biofortification of OFSP can bring the vitamin A content to an unprecedented amount compared to already released varieties.

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