

Tackling Malnutrition in Sub-Saharan Africa: Unlocking the Potential of Underutilized Plant Foods

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Description

Malnutrition, particularly among children, remains a persistent challenge in Sub-Saharan Africa (SSA). The Traditional Complementary Foods (TCFs) consumed in the region—primarily starchy staples like maize, sorghum and cassava—fail to provide adequate nutrition, leaving many children vulnerable to nutrient deficiencies, growth stunting and impaired cognitive development. The reviewed article offers a hopeful narrative by exploring the enrichment of TCFs with underutilized plant foods to enhance their nutritional value. This commentary reflects on the findings and broader implications, emphasizing their relevance in alleviating malnutrition sustainably.

The Promise of Underutilized Plant Foods

In SSA, homemade TCFs dominate due to limited access to commercial or fortified options, yet these foods are nutritionally inadequate. The reliance on staples like maize and sorghum provides energy but lacks key proteins and micronutrients essential for growth and development. The review highlights the transformative potential of underutilized plant foods—nutrient-dense crops rich in protein, vitamins and minerals—which have remained overlooked despite their abundance in the region.

Amaranth, moringa, baobab, pigeon pea and other underutilized crops are not only nutritional powerhouses but also culturally familiar and environmentally sustainable. Their enrichment into traditional staples—such as maize fortified with moringa or cassava combined with pigeon pea—has demonstrated marked improvements in protein and micronutrient content. These findings underscore an important opportunity: leveraging local, affordable and readily available resources to address widespread malnutrition.

Processing as a Catalyst for Nutritional Gains

Another key aspect of the study is the role of simple processing techniques—fermentation, germination and roasting—in enhancing the bioavailability of nutrients in TCFs. For instance, these methods can reduce antinutritional factors like phytic acid and tannic acid, which hinder the absorption of iron, calcium and zinc. By pairing underutilized crops with such processing techniques, it becomes possible to amplify both the nutrient

density and digestibility of complementary foods. This approach ensures not only better nutrition but also greater acceptance and feasibility within communities.

Processing methods are particularly valuable in rural SSA contexts, where technological resources and infrastructure may be limited. The combination of nutrient-rich ingredients and traditional preparation methods offers a culturally sensitive, accessible solution to a pressing problem.

Bridging the Nutrition Gap for Children

Child malnutrition in SSA stems from multiple factors, including poverty, limited dietary diversity and poor maternal nutrition during pregnancy. The enrichment of TCFs with underutilized plant foods presents a pathway to mitigate these challenges. Protein, iron, calcium and other micronutrients provided by these enriched foods can help combat undernutrition and hidden hunger—conditions that often manifest as stunted growth, weakened immunity and impaired cognitive function in children.

Moreover, the inclusion of nutrient-dense complementary foods in early childhood diets has long-term benefits, laying a foundation for improved health and productivity in adulthood. These interventions align with the United Nations' Sustainable Development Goals, particularly those focused on ending hunger, achieving food security and promoting sustainable agriculture.

Beyond their nutritional advantages, underutilized plant foods hold immense potential for promoting food security and sustainability in SSA. These crops are often resilient to harsh environmental conditions, requiring fewer inputs than conventional staples. Their cultivation can support smallholder farmers, diversify agricultural systems and reduce dependency on imported fortified foods. Furthermore, integrating these crops into TCFs fosters a connection to traditional food systems, preserving cultural heritage while addressing modern nutritional needs.

Despite their promise, several barriers must be addressed to unlock the full potential of underutilized plant foods in combating malnutrition. First, there is a need for increased awareness and education among communities about the

benefits of these crops and their incorporation into diets. Agricultural researchers and policymakers must prioritize the development, cultivation and commercialization of underutilized crops, ensuring their availability and affordability at scale.

Second, the nutritional benefits of enriched TCFs must be communicated effectively to policymakers, donors and stakeholders. Building evidence through field trials and community-based interventions will be crucial in demonstrating their impact on child health outcomes. Incentives for small-scale farmers to cultivate these crops can also drive adoption and production.

Finally, the promotion of these foods must be accompanied by tailored policy frameworks that integrate them into national nutrition and agricultural strategies. Collaboration between

governments, non-governmental organizations and the private sector will play a pivotal role in scaling these efforts sustainably.

Conclusion

The enrichment of traditional complementary foods with underutilized plant foods offers a promising solution to child malnutrition in sub-Saharan Africa. By leveraging locally available, nutrient-dense crops and simple processing methods, this approach addresses the dual challenges of undernutrition and hidden hunger while preserving cultural and agricultural heritage. However, realizing this potential requires concerted efforts in research, education, policy development and community engagement.