



Tropentag, September 10-12, 2025, hybrid conference

“Reconcile land system changes
with planetary health”

Effect of information on sensory and emotional profiling of processed leaf amaranth (*Amaranthus* spp.) products

RACHEL BYARUGABA¹, DAGMAR MITHÖFER², DOROTHY NAKIMBUGWE³, JOACHIM SCHOUTETEN⁴

¹*Humboldt-Universität zu Berlin, Thae-Institute - Div. Urban Plant Ecophysiology, Germany*

²*Humboldt-Universität zu Berlin, Thae-Institute of Agricultural and Horticultural Sci., Germany*

³*Makerere University, Dept. of Food Technology and Nutrition, Uganda*

⁴*Ghent University, Department of Agricultural Economics, Belgium*

Abstract

Substantial work has been done to leverage opportunities to enhance the supply of African indigenous vegetables (AIV) but less effort has been made to foster their demand. Consumers play a vital role in this effort as their food choices influence AIV consumption and production patterns. Emotional and sensory profiling are gaining interest as a way to better understand consumers' motivations for food choice. Although commercially available and popular food products have mainly been profiled, there is need to study food product categories such as functional or health-promoting foods that are expected to evoke fewer emotions. Besides this, little research on emotional and sensory profiling has been carried out within the African context. This study therefore sought to determine the factors influencing the consumer preferences of peanut sauces enriched with dried and fresh leaves from *Amaranthus* spp., a commonly consumed vegetable in East and Southern Africa, by examining the relationship between the products' emotional profiles and their sensory characteristics. The study is part of the project “Inclusive nutrition-sensitive value chains in Kenya and Uganda – Upgrading strategies for underutilised horticultural crops (InNuSens)” which is funded by the German Federal Ministry of Education and Research (BMBF) and the German Academic Exchange Service (DAAD). A total of 301 participants evaluated five peanut sauces using an EmoSensory® Wheel populated with 25 emotion terms and 15 sensory terms. About half the participants (155) evaluated the sauces under blind conditions while the rest (146) under informed conditions. Results showed that the overall liking of sauces enriched with the fermented and dried leaves was not different from that of sauces prepared with fresh leaves only under informed conditions ($p < 0.001$). The emotional profiles of the sauces differed significantly more under the blind conditions while their sensory profiles differed significantly more under the informed conditions.

Keywords: *Amaranthus* spp., consumer, EmoSensory® Wheel, emotion, sensory characterisation