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**Topic:** The impact of food systems on nutrition, diet and health

**Title:** Nutrient Composition and Sensory evaluation of Bambara ground nut

**Presentation Type:** Poster

Bambara groundnut is an indigenous African legume grown by subsistence and small scale farmers throughout Nigeria especially in the Northern States. This study determined the nutrient composition and sensory evaluation of the organoleptic properties of meals made from Bambara groundnut flour and wheat flour composite. Proximate and micronutrient analysis was conducted on the flour and meal samples. The result revealed that the fat content of the flour sample was higher in Bambara flour (5.37%) than wheat flour (1.95%) Crude protein showed significant difference ( $p < 0.05$ ) between the flour samples. Bambara nut flour and wheat flour revealed (2.5% and 10.8%) of crude protein. Significant difference ( $p < 0.05$ ) existed in carbohydrate content of wheat flour (72.8%) which is higher than that of Bambara nut flour (63.2%). The micronutrient content of the flour samples showed significant difference ( $p < 0.05$ ). Bambara nut was found to be higher than wheat in calcium, iron, vitamin B1, vitamin B2 and niacin content, while the phosphorous content was higher in wheat flour sample (11.6%). In the sensory evaluation, colour and flavor was found to have no significant difference ( $p = 0.05$ ). Significant difference ( $p < 0.05$ ) existed in texture and general acceptability. Proximate analysis was also conducted on the meal sample and significant difference ( $p < 0.05$ ) existed in moisture content of the meal sample. The Bambara ground nut was found to have a considerable reservoir of micronutrient. Consumption of foods made with Bambara nut is essential to lift border lines cases of protein-energy malnutrition.