

ABSTRACT

Assessing Sensory Characteristics and Consumer Preference of Legume-Cereal-Root Based Porridges in Nandi County

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Previously, porridge has been cereal based, consumed as a beverage or weaning food. Malnutrition among children has necessitated inclusion of legumes and roots in an effort to boost nutrient density. Therefore, the current study aimed at identifying the most acceptable porridge based on different food ingredient combination. Composite porridge formulations included legumes (soybean, groundnut, and lablab), cereals (finger millet, sorghum, maize, and wheat), pseudocereals (pumpkin seed, buckwheat, and amaranth seed), and roots (cassava and arrowroot). New composite porridge formulations were formulated using Nutrisurvey linear programming software. Different composite formulations formulated to target either school-going children or a family setup were subjected to sensory analysis and the consumer preference test. Eight new formulations were developed. Buckwheat, wheat, and arrowroot were eliminated, maize and lablab content (%) were reduced, and cassava and finger millet were increased in the new formulations. A total of 149 participants composed of men (30.9%) and women (69.1%) aged between 11 and >60 yrs were interviewed. Newly formulated porridges were more preferred to the previous porridge formulations on color (40–54.2%), smell (40–52.4%), taste (41.5–47.5%), texture (58.3%), viscosity (35.4–45.8%), and overall acceptability (35–54.2%). The most cited reason for liking or disliking a particular porridge was taste (38.9%) and texture (32.2%), respectively. However, all the sensory attributes positively correlated with overall acceptability. Increased finger millet and cassava proportions in the newly formulated composite porridge formulations highly influenced their high acceptability. Thus, consumer acceptability of new products is key for their adoption.

Keywords: Sensory characteristics, Consumer Preference, Legume-cereal-root based porridge.