

**(Translated) Title:** Enhancing Breakfast Nutrition with Sprouted Finger Millet-Maize Composite Flour

**Original Title:** Physicochemical and sensory characteristics of a breakfast cereal made from sprouted finger millet-maize composite flour

**Abstract (Translated):** This study examines the development of a nutritious breakfast cereal using sprouted finger millet and maize composite flour. The research evaluates the physicochemical properties, functional characteristics, and sensory acceptability of the cereal. Different proportions of sprouted finger millet were incorporated to assess their impact on the cereal's quality. The findings indicate that cereals with 40% and 50% sprouted finger millet flour received the highest sensory scores, making this formulation a promising option for nutritious breakfast foods.

**Key Takeaways:**

- **Nutritional Enhancement with Sprouted Finger Millet:** Incorporating sprouted finger millet into maize-based cereals boosts nutritional content, particularly increasing ash and fiber while reducing carbohydrates and moisture levels.
- **Optimal Formulation for Sensory Acceptability:** The most sensory-acceptable formulation contains 40% to 50% sprouted finger millet flour, balancing nutritional benefits with consumer preferences.
- **Improved Functional Properties:** Cereals with sprouted finger millet show enhanced functional properties, such as increased water and oil absorption capacity, making them versatile for various food applications.

**Gap Addressed:** This research addresses the need for nutrient-rich, affordable breakfast options in the food industry, promoting the use of underutilized crops like finger millet to enhance food security and nutrition.

**Sector/Industry Focus:** The findings are relevant to the food and beverage industry, particularly in the production of healthy, ready-to-eat breakfast cereals. It appeals to consumers looking for nutritious and functional breakfast options. It also benefits agricultural sectors promoting the cultivation of finger millet.

**Potential Uptake or Practical Application:** Food manufacturers can adopt the use of sprouted finger millet in cereals to create health-focused breakfast options that cater to consumers looking for nutritious and functional alternatives.

**Customer Point of View:**

a. **User:** Breakfast cereal manufacturers, health-conscious consumers, and nutrition-focused institutions.

b. **Need:** Innovative, nutritious, and sustainable cereal products

c. **Market Insight:** Growing consumer demand for functional foods and the use of underutilized crops as sustainable ingredients drives the need for new cereal formulations

**Key Recommendations:**

- **Development and Marketing of Composite Cereals:** Promote the development and marketing of sprouted finger millet-maize composite cereals to enhance nutritional content and diversify product offerings.
- **Integration into Diverse Food Products:** Encourage the integration of sprouted finger millet into various food products, broadening the range of nutritious options available to consumers.
- **Consumer Studies and Scalability Research:** Conduct further consumer studies and research on scalability to optimize formulations and expand the market reach of sprouted finger millet cereals.
- **Health-Focused Marketing Strategies:** Develop marketing strategies that emphasize the health benefits and sustainable aspects of sprouted finger millet cereals, appealing to health-conscious consumers.