

Sensory evaluation of some selected products of quality protein maize

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The nutritional well being of all people in the society is very important for the development of the nation .Malnutrition is a widespread problem in developing countries with large population living below poverty line. Malnutrition is the insufficient, excessive or imbalanced consumption of nutrients. There are several million undernourished children in India who are in the pre-school age group. Majority of the nutrients are provided through staple cereals we consume such as rice, wheat and maize. However, the protein content of cereals, our major source of amino acids, is deficient in lysine and tryptophan. Quality Protein Maize (QPM) is enriched maize with high lysine and tryptophan which was deficient in normal maize. In the present study, the acceptability of QPM products was studied through sensory evaluation method for the four products namely, QPM shakarpara and QPM mathri and wheat shakarpara and wheat mathri. It was found that the acceptability of QPM shakarpara and QPM mathri were quite satisfactory as compared to the same products prepared with wheat.

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INTRODUCTION

The nutritional well being and health of all people are vital prerequisites for the development of the society. Malnutrition is a widespread problem, particularly in developing countries with low per capita income and with large population living below poverty line. Malnutrition is the insufficient, excessive or imbalanced consumption of nutrients. The most recent estimate, released in October 2010 by FAO, estimates that a total of 925 million people are undernourished in 2010 compared with 1.023 billion in 2009. One of the major reasons for this is the lack of sufficient quality protein in the diet of people, specially children and women of child bearing age. Majority of the nutrients are provided through staple cereals consumed such as rice and wheat. After wheat and rice, the most important cereal grain in the world is maize, providing nutrients for humans and animals and serving as a basic raw

material for the production of starch, oil and protein, alcoholic beverages, food sweeteners and more recently, fuel (Mane and Shadakshrsamy, 2001; Kataki and Babu, 2003).

However, the protein content of maize, major source for amino acids, is deficient in the amino acids lysine and tryptophan. When many decades ago a maize-variant was discovered with lower alpha zein levels, the protein content was balanced with non-zein proteins, raising the relative level of lysine. Using natural variation, breeders were able to combine low alpha zein levels with quantitative trait loci that restore kernel hardness and called these maize lines 'quality protein maize' (QPM). Quality protein maize is nutritionally enriched maize with high content of lysine and tryptophan and a better balanced amino acid composition. It has good agronomic performance and better tolerance to major insect pests and diseases. Indeed QPM has been a great success in countries where maize is the staple for human consumption.

In India, around 6.5 million tons (roughly 50 per cent of total consumption) goes for feed use, primarily for poultry feed. Another 1 million tons of corn is used by the starch industry.

Hence, the present study has been taken to see the acceptability of QPM so as to popularize this nutrient rich cereal for better health of people.

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