

Development and quality evaluation of low cost maize based supplementary food

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Five kinds of maize based supplementary foods were developed with incorporation of locally available nutritious greens, pulses and oilseeds. They were named as Zea-fort laddoo, Zea laddoo, Maize laddoo, Maize-fort laddoo and Forti-maize laddoo. Among all the products, Zea-fort laddoo had highest protein content of approx 15 per cent accompanied by Maize laddoo (12.37). Zea-fort laddoo was the most accepted supplementary food which was liked by approx 47 per cent of the panel members and none of them disliked it. The most accepted supplementary food namely "Zea-fort laddoo" worth around Rs.41.00 per kg and Rs. 4.10 per serving size of 100 grams, which could be produced and afforded even by poor rural families.

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INTRODUCTION

The diets of poor people in our rural areas and urban slums lack several nutrients. Lack of several nutrients in diet ultimately leads to malnutrition and the major victims of malnutrition are the preschool children, undoubtedly. It is a fact that there is quite a wide gap between the recommended dietary allowances (RDA) as set up by the Indian Council of Medical Research (1988), Hyderabad and the amount of energy actually supplied by the habitual diets of pre-schoolers.

How do we fill this gap? The answer, obviously, is to give a nutritious food supplement rich in energy and protein. Our effort is to add extra food to the home diet of a person so as to meet the RDIs for energy and protein. The following

given figure illustrates this.

Recommended dietary intakes of nutrients

Nutrients supplied by home diet	Nutrients supplied by food supplement
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This is the basic concept of food supplementation.

In India, supplementary feeding programme has been in operation for the past several years. Several nutritious recipes have been developed for supplementary feeding by the National Institute of Nutrition and Home Science Colleges in India, which are based on locally available foods like cereals and pulses. A supplement usually takes the form of ready-to-eat snack or dish and provides a substantial amount of energy and protein which is missing in the home diet.

A supplementary food based on a blend of roasted wheat flour (30 parts), green gram flour (20 parts), groundnut (8 parts) and sugar/jaggery (20 parts) has been developed by National Institute of Nutrition, Hyderabad. The food contains about 12.5 per cent proteins. A daily supplement of 80 g and the above food (providing 300 K cal and 10 g of proteins) has been found to bring about significant improvement in the growth rate of preschool children (Swaminathan, 1985).

Studies carried out by several workers have shown that a

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