

Formulation and Nutritional Quality Evaluation of Barnyard Millet Based Weaning Food

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Breast milk is the ideal food for infants during the first six months of life. After about 6 month of age the child needs supplementary feeding. Barnyard millet is chosen or used because of its affordability and produce good yields of grains under unfavorable conditions compared to other crops. Soy bean is a legume yet to be widely utilized as a plant protein. The purpose of the study was to produce a low cost weaning food that is nutritionally adequate and acceptable by the infants. Barnyard millet and defatted Soya flour were processed into flour supplemented with sugar, skim milk powder, cardamom, poppy seeds, tapioca starch and Vitamin and Mineral premix and blended into diet 1, 2, 3 and 4 used for preparing weaning food. The physical parameters, proximate, mineral, amino acid, fatty acid compositions, anti-nutritional factors and organoleptic evaluation along with a standard commercial infant formula were determined using standard procedures. Results shows that the formulated weaning diets D1, D2, D3 and D4 had water absorption capacity ranged between 0.11-0.30 percent, bulk density (0.49-0.54%), Carbohydrate (70.73% to 72.95%), protein content (17-18%) and fat content (3.52 to 3.05%). The formulated diets have more minerals such as iron, zinc, copper, potassium and amino acids than the commercial infant formula. Anti-nutritional values, revealed oxalate (0.37-0.94 mg/100gm) and phytate, Saponin, alkaloid, flavonoids, cyanogenic glycoside and trypsin inhibitor ranged between 0.55-0.92mg/100g, 56-69.56mg/100g, 201.78-263.96mg/100g, 170.20-241.49mg/100g, 20.39-29.52mg/100g and 5.21-7.49mg/100g respectively were according to standard recommended for the complementary food. The organoleptic evaluation of the formulated diets were similar than that of the standard. Based on the results of various parameters of diet mixes, it is recommended for use in households to prevent and restore normal health in children suffering from malnutrition and should be manufactured commercially by food industries.

Biography:

Dr. P. Nazni obtained Doctorate in Food Science and Nutrition and working as Professor and Head in the Department of Clinical Nutrition and Dietetics, Periyar University, Salem, Tamilnadu, India. She is having more than 18 years of teaching and research experience. She is a recipient of 12 awards sponsored by various national and international organizations. She has presented more than 210 research papers in various National and International Seminars/Conferences and has published 94 research papers in referred National and International journals. She has been a resource person and delivered invited talks in 122 seminars/ conference/ workshops both national and international. She has visited various countries like Canada, Australia, South Africa, Czech Republic, Thailand, UAE and Iran for her invited talks and paper presentations. She has organized around 43 National and International conferences in various capacities. She has completed Five Major research projects funded by UGC, DST, RSSDI and ICMR and 11 Minor research projects and currently working with four major projects with the worth of Rs.1.7 crores. She has written seven books published by various reputed publications. She has guided 66 M.Sc, 48 M.Phil and 11 Ph. D candidates with 8 Ph.D students under guidance. She has been Editorial board member in various reputed Food science and Nutrition journal's. She is a Managing Editor of an International Journal of Food and Nutritional Sciences, published by IIFANS and she is also having membership in various reputed Professional Bodies both national and international level.