

Author: Florence Adeosun

Co Author: Gideon Onuoha, Micheal Adebusoye, Ummulkhairi Sani (Department of Nutrition and Dietetics, Federal Polytechnic Bauchi, Nigeria)

Topic: The first 1000 days, infant feeding, and early childhood development

Title: Quality assessment of acha-based complementary foods improved with sesame, crayfish and date palm

Presentation Type: Oral

Introduction: Consumption of nutrients inadequate home-prepared complementary foods is a major cause of high incidence of child malnutrition, morbidity and mortality in many developing countries. Low-cost, indigenous, instant and adequate complementary foods are possible strategies to address malnutrition among under two children (U-2C).

Method: Acha-based complementary food was supplemented with sesame, crayfish and sweetened with date palm. Acha, a cereal, was malted by steeping to reduce the bulkiness of samples. Graded levels of five samples of acha-based complementary foods were formulated based on 15% protein. Proximate compositions, sensory attributes and microbial load of samples were determined using standard procedures. Data were presented in means and significant levels were accepted at 5% probability.

Results: Proximate and energy estimations of acha-based complementary food samples indicated that protein, moisture, fat, crude fibre, ash, carbohydrate, and caloric contents of samples ranged between 9.56-11.31%, 7.16-9.33%, 5.18-6.3%, 2.93-7.16%, 1.47-5.07%, 64.40-70.80% and 313.66-381.22Kcal respectively. Sensory evaluation showed that food samples were generally accepted with the range of 6-7 which represent like slightly and like moderately on the 9 point hedonic scale with no significant difference. All five samples of complementary food had acceptable level of microbial colonies for consumption.

Conclusion: this study was able to produce adequate complementary foods which were nutrient dense (protein, ash (mineral), crude fibre), had moderate caloric contents, generally acceptable from locally sourced food items. The low residual moisture contents of the samples enhanced reduced microbial load and prolonged storage life. The food samples could be used to prevent and manage malnutrition among U-2C.