Upgrading Nigeria’s Food Composition Database With Under-Utilized Nigerian Traditional Foods and Recipes

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Introduction

- Nigeria is a nation with ethnically and culturally diverse food consumption patterns in the different agro ecological zones.
- The diets of the people are based on the foods produced and/or marketed in the different zones.
- Urbanization has created changes in food consumption patterns with more processed foods being available in cities.
Map Showing Agro-ecological Zones

(Source: IITA GIS-Lab 2000)
There is an increasing interest in studying the relationship between diet and diseases in Nigeria especially those referred to as non communicable diseases.

The prevalence of these non communicable diseases are on the increase in Nigeria due to rapid urbanization, globalization and lifestyle (dietary) changes.

The NCDs contribute to the double burden of diseases making them a significant public health problem.
There is thus an increasing need for more complete, accurate, reliable data on the nutrient content and nutritional value of foods. This is to enable the recommendation of combinations of foods that will promote good health and reduce the risk of these non-communicable diseases.
To this end a nutrient composition of Nigerian Foods: Raw Processed and Prepared was compiled and published in 1995 (Oguntona and Akinyele) to serve as a means of identifying foods which will prevent these conditions and promote health.

The 1995 document did not capture all foods consumed in Nigeria especially those traditional foods which have properties for reducing non communicable diseases.

Many of these traditional foods are becoming extinct due to under utilization and preservation of the species.
NUTRIENT COMPOSITION OF COMMONLY EATEN FOODS IN NIGERIA – RAW, PROCESSED AND PREPARED

Edited by:

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Food Basket Foundation Publication Series
The Concept

- The concept of this project is to update the 1995 food composition table by
- Reviewing published analytical data on traditional under utilized foods since the 1995 compilation
- Review the data in accordance with internationally accepted standards for sampling, sample handling/preparation, analytical methodologies, and laboratory quality control
Concept contd

- Identifying, and analyzing other foods not identified in the review
- Standardizing the local recipes derived from them followed by analysis
- Creating a database with the updated compilation
- Prepare dietary guidelines based on the nutrient composition of the various recipes
Methodology

- To achieve these
- A NIGERIAFOODS DATABASE NETWORK has been formed with scientists from different institutions located in each agro-ecological zone to undertake the review according to agreed guidelines
- Samples of 15 different foods have been collected from 7 Nigeria cities yielding 141 foods
- When pooled based on variety the number of samples reduced to 61
Samples

- These samples are from
- Roots and tubers
- Cereals
- Legumes

Next phase is to sample
- Fruits
- vegetables
In each city where samples were obtained, major markets were listed followed by random selection of two markets from where the samples were purchased, given three digit codes and transported to the laboratory for analysis. This includes:
- Enugu Enugu State,
- Ibadan, Oyo state,
- Jos, Plateau State,
- Kaduna, Kaduna State,
- Lagos Lagos State,
- Maiduguri Borno State and
- Uyo Akwa Ibom State
Nutrients to be Analysed

- Proximate composition-dry matter, energy, protein, fat, fiber, ash
- Minerals-calcium, phosphorous, sodium, potassium, magnesium, zinc, iron
- Vitamins- A, E and C
- Methods of analysis are as described by AOAC
Recipes

- The Federal Department of Rural development collected through their extension workers recipes of different traditional foods from the six geopolitical zones of Nigeria.

- There was a workshop to assess and harmonize the recipes in terms of ingredients and quantities required to make a meal.

- Then classification into different sub categories.

- Publication of the recipes into book form in 2006.
Recipes

- Complementary foods 49
- Breakfast foods 18
- Main meals 69
- Snacks 60
- Foods for special cases 40
  (sick children, elderly and HIV/AIDs)
Analyses

- The recipes will be prepared in the laboratory and analyzed for same set of nutrients
- Included in the database
Challenges/Solutions

- Limited financial support to accomplish tasks
- Thus there is the need for collaborators with resources to accomplish the goal of this project
Acknowledgements

- FAO Regional Office for Africa, Accra
- Food Basket Foundation International