

# Graduate course



## Food Composition and Biodiversity



**First West African Graduate Course  
12–27 February 2007  
Ibadan, Nigeria**

### Background



The availability of relevant, reliable and up-to-date data on the nutrient content of foods consumed by communities and populations have far-reaching policy- and decision-making implications for several arms of government, particularly agriculture and health. With the increasing awareness of the vital role of accurate and dependable food composition data for nutritional planning as well as in agricultural and health policy decision-making, developing countries have been encouraged to establish national food composition programmes. As a result, several country-specific and regional food composition databases have been prepared, providing valuable data on the nutrient composition of foods consumed by specific population groups.



International Network of Food Data Systems (INFOODS) was established in 1984 with the goal of stimulating and coordinating efforts to improve the quality and availability of food analysis data worldwide. INFOODS provides the administrative framework for the development of standards and guidelines for the collection, compilation and reporting of food composition data. The maintenance of these standards are ensured through the development and administration of regional training courses on the production and management of food composition data, as well as courses on analytical methods and sampling techniques. Since the inception of the training courses in 1992, with the first course held in Wageningen the Netherlands, courses have been held in Asia, South America, the Caribbean, central Europe and South Africa. This is the first of its type for West Africa, and the first food composition course with a biodiversity emphasis.

Food composition provides an important link for biodiversity and nutrition, where the focus of attention is on the nutrient and non-nutrient bioactive compounds provided by traditional food systems, wild gathered species and varieties, and under-utilized and under-exploited food resources. Food composition is therefore a useful vehicle to explore certain synergies and helps to develop the links between biodiversity and nutrition. Nutrition and biodiversity feature directly in the Millennium Development Goals (MDGs), in Goal 1, Target 2, “Halve the proportion of people who suffer from hunger” and Goal 7, “Ensure environmental sustainability” (UN 2005). A combined nutrition and biodiversity initiative provides the very foundation for achieving these MDGs.

### Organized by:

The International Plant Genetic Resources Institute

The Food and Agriculture Organization of the United Nations

and

AFROFOODS/INFOODS

In co-operation with

Department of Human Nutrition  
University of Ibadan, Ibadan,  
Nigeria

# Graduate course

## Objectives of the course

In spite of this increased attention on food-based approaches, the generation, systematic compilation and dissemination of new data and their availability in food composition databases have not kept pace with this shift in nutrition intervention strategy. For food-based strategies to succeed, knowledge of the foods that are part of the traditional food systems is imperative. The aim of this course is to strengthen food composition activities in African countries and West Africa in particular focusing on local food systems, and to improve the availability, quality and reliability of food composition data. The course will highlight and demonstrate the processes for generating data, and compiling food composition database as well as improving their accessibility for all categories of users.

## Who should attend?

Food Composition and Biodiversity 2007 is intended for lecturers/trainers in the field of food composition, and for those involved, or will be involved in Food Composition database programmes as analysts or compilers, or as food data generators. The course will also be valuable to those teaching nutrition and nutritional aspects of food chemistry, as well as users of food composition data.

## Course content

The course will comprise lectures, seminars, group work and practical sessions. The major components of the course include:

- Use of compositional databases at international, national, household and individual levels and for nutrition labeling
- Steps in establishing a food composition database
- National and international cooperation in food composition issues
- Selection of foods and nutrients for inclusion in a food composition database
- Sampling of foods for analysis, handling and preparation of samples
- Sampling with biodiversity considerations – cultivar specific diversity in food crops
- Methods of analysis: critical evaluation and choice of methods
- Statistical methods
- Assuring and documenting the quality of analytical data
- Nutrient bioavailability issues in food composition data
- Component identification and mode of expression of data
- Reviewing existing data
- Compilation of data
- Computerization of nutrient data and selection of appropriate software, and applications
- Data presentation and dissemination including copyright issues
- Food nomenclature and coding
- INFOODS tag names and data description
- Management of food composition database
- Strengths and limitations of food composition data
- Nutrient analysis – proximate, fatty acids, amino acids, minerals, vitamins, phytochemicals
- Carbohydrate classification, analysis and description, glycemic foods
- Nutrients in fortified foods and nutrition labelling
- Phytochemicals in food composition data
- Geo-considerations and their influence on composition

# Graduate course

## Course structure

The course will be structured around the "Guidelines for the production and use of food composition data" by Dr H. Greenfield and Professor D.A.T. Southgate. The course will cover the following broad areas: sampling procedures for species and varieties; ways in which compositional databases are used and how these determine the range of nutrients and bioactive non-nutrients for which values are required; foods for which values are needed; choice and validation of analytical methods to give nutritionally relevant values; stages in the production of a nutrient database. Participants will become familiar with computer software for constructing a computerized food composition database.

## Venue and duration of the course

Food Composition and Biodiversity 2007 will be held at the Department of Human Nutrition, University of Ibadan, Ibadan Nigeria from 12th to 27th of February 2007.

## Language

The course materials and medium of instruction will be English. All eligible participants are therefore expected to be adequately fluent in spoken and written English.

## Fees

The course fee is US\$2500. The fee covers the cost of travel for participants from West African countries, accommodation and meals from 11 to 28 February 2007 at the University of Ibadan Guest Houses, course materials, tuition fees and programmed excursions. The fee does not cover medical insurance.

For participants from outside West Africa, the course fee is US\$2000. This fee covers accommodation and meals, course materials, tuition fees and programmed excursions but does not cover medical insurance or cost of travel to Ibadan Nigeria. A number of fellowships will be available for participants from ECOWAS countries.

## How to apply

All applicants should fill in the attached application form and send it together with a curriculum vitae to the Course Coordinator. The closing date for applications is 31 October 2006. It is recommended that applicants apply as soon as possible.

## Course Coordinator

Professor Tola Atinmo  
Department of Human Nutrition  
University of Ibadan  
Ibadan, Oyo State  
Nigeria  
Phone: 234-802-324-5055  
234-2-750-2895  
e-mail: atinmo@skannet.com  
tola\_atinmo@yahoo.com

## Course Directors

Dr I. Francisca Smith,  
International Plant Genetic  
Resources Institute (IPGRI),  
Maccarese, Rome, Italy

Dr Barbara Burlingame, Food  
and Agriculture Organization of  
the United Nations (FAO), Rome  
Italy

Ms R Charrondiere, FAO, Rome  
Italy

## Course Advisory Board

Dr Pablo Eyzaguirre, Senior  
Scientist, IPGRI, Rome, Italy

Prof. H. Schonfeldt, Regional  
Coordinator AFROFOODS,  
University of Pretoria, South  
Africa

Dr Nevin Scrimshaw, President,  
International Nutrition  
Foundation and Senior Advisor  
UNU Food and Nutrition  
Programme

Ruth Charrondiere, FAO, Rome,  
Italy

Dr Cheikh N'diaye, Senior  
Nutrition Officer, FAO Regional  
Office for Africa

Dr Karl Harmsen, Director, UNU  
Institute for Natural Resources  
in Africa (UNU-INRA)

Prof. Tola Atinmo, Department  
of Human Nutrition, University of  
Ibadan, Ibadan, Nigeria