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## The FAO food composition initiative

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Over the past few years, a number of events and influences have re-emphasized the importance of food composition work. The December 1992 International Conference on Nutrition (ICN) called for increased attention to improved nutrition and examined this topic in a broad way, considering improved food production, processing, marketing and, most importantly, access for all to adequate supplies of food that is safe and of good quality. The ICN emphasized improved policies and programmes for food, nutrition, health care and education. From the operational point of view, the ICN, through the World Declaration on Nutrition and the Plan of Action for Nutrition endorsed by the 159 participating nations, called for each country to prepare comprehensive national plans of action for nutrition, which are to include the strengthening of food composition work.

Furthermore, the need for food composition information has grown as a result of new legislation in the developed countries requiring that foods have accurate nutrition labelling as well as the recognition by the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) of the international standards of the FAO/WHO Codex Alimentarius Commission as the benchmark for foods in international trade. In addition, consumers in all countries want more detailed information about raw and processed purchased foods. Food composition information also continues to serve traditional uses in schools and institutional feeding programmes as well as in food technology and nutrition programmes.

At the international level, FAO has a long and successful history of producing and disseminating food composition tables and related information. FAO started its activities in this field in the late 1940s; its first food composition table was published in 1949. In the 1960s and 1970s, FAO prepared regional food composition tables for Asia, Africa, Latin America and the Near East. After this popular series of publications was completed in the late 1970s, FAO reduced its work in this area. In the 1980s, the United Nations University (UNU) responded to interest in further work on food composition by establishing the International Network of Food Data Systems (INFOODS).

### COLLABORATION

Because of the recent re-emphasis on food composition, FAO and UNU have agreed that joint work is needed to provide more accurate food composition data. Their collaborative efforts will involve additional analysis of foods in different parts of the world or more extensive sharing of existing, validated data.

Because of the nature and complexity of work in food composition, collaboration among different institutions and sectors is necessary. Government budgets have been diminishing, and most departments are no longer in a position to finance large amounts of detailed chemical analysis to build new nutrient composition databases. The demands for new analyses place especially heavy burdens on developing countries, where budget constraints are particularly acute. In FAO's view, strengthened collaborative work presents an opportunity to reduce the costs of providing food composition data which will serve the needs of all developing countries.

### COSTS AND BENEFITS

It is essential to examine the production of new food composition data from the perspective of value for money. When a food composition evaluation programme is envisaged, the specific use of any new data that will be generated, together with the costs of achieving the

required quality of data, should be clearly understood and evaluated. More detailed content description of a food does not always mean better work or output, and it must be certain that the costs will be balanced by the benefits and needs so that the scarce resources available are utilized effectively. Only the food composition information that is strictly needed to undertake the required activities should be obtained so as to keep costs to the minimum level.

This does not mean that the need for achieving greater precision in food composition data should be ignored, Food composition data need to be accurate enough to avoid mistakes in carrying out interventions and precise enough to ensure that the data do not adversely affect policy decisions.

Improvements in the precision of analytical methods over the last 20 years have been dramatic, often leading to questions about the accuracy and validity of previous analytical results. Given the importance now accorded to food composition data, reanalyses of foods are justified when new procedures and methods can be used to obtain more precise values. The choice of foods to be analysed and the sampling plan to be used should be judged carefully in relation to the manner in which the data will be used, based on current and desirable local dietary patterns.

## **FAO'S APPROACH**

The need for better access to reliable, representative data and the realization that international cooperation could facilitate their generation and ensure their compatibility were the key issues of an FAO/UNU meeting on food composition work held in Tunisia in March 1994. The participants, representing governments, academia, industry and nongovernmental organizations (NGOs), expressed a strong consensus on the need for a network of institutions involved in or collaborating on food composition work. They fully endorsed the possible collaboration between FAO and UNU in view of the need to stimulate the development of new programmes on food composition.

The general consensus reached at the meeting was that the current framework developed for cooperation at national, regional and international levels was adequate. In particular, the regional orientation of collaborative work was seen as an appropriate context for future activities. FAO will dedicate particular effort to activities promoting inter- and intraregional cooperation, including the establishment of food composition networks. Although FAO strongly believes in such cooperation, it must be based on effective national capacities in the long term. A primary objective of FAO efforts will be to strengthen national capacities by stimulating the establishment of national food composition programmes in different developing countries.

## **Linkages to food control programmes**

The renewal of FAO's food composition work will be linked to the Organization's ongoing activities aimed at strengthening food control systems, including the improvement of food analysis capabilities and laboratory facilities. In this area FAO has provided significant levels of technical assistance. For example, since 1986 the Organization has provided over US\$7 million in technical and financial assistance for improvement of the facilities and analytical capacity required for food control activities in 20 countries in Africa. Much of this capacity can be utilized for food composition work. In general, considerable benefit can be gained from linking support for food composition activities to overall efforts to strengthen the analytical component of national food control systems, particularly where human and material resources are limited. FAO will continue to look for ways to provide support that can be mutually beneficial for food composition and food control activities.

## **Information**

In the effort to improve food control systems, FAO has produced a range of technical manuals and documents covering most aspects of food control and laboratory analysis of foods. Similar manuals, covering, for example, sampling and sample handling, recommended analytical procedures and equipment and data quality assurance, are also envisaged to support food composition work.

## OBJECTIVES AND STRATEGY

FAO's basic objective is to generate, disseminate and promote the use of good food composition information by a wide range of researchers, policy-makers and practitioners in both the public and private sectors. To allow countries to achieve this objective, FAO will concentrate in the coming years on the following work:

- promotion and expansion of activities at national, regional and international centres to enhance national and regional capacity to generate, manage and disseminate food composition information in a timely manner;
- assistance in the formulation of standards for terminology for the identification of food and nutrients, sampling procedures for food, requirements for handling food samples, analytical methodology and criteria for assessment of data to make the network data more compatible across regions;
- promotion of the dissemination and appropriate use of food composition data;
- strengthening and capacity-building, through training, of institutions and individuals involved with all aspects of food composition work.

At the international level, increased coordination and standardization are absolutely necessary to harmonize the different systems dealing with food composition data and thus to improve access to the data. Compatibility of databases is also essential to reduce the expenditure associated with generating and maintaining composition data on a global basis and to assist the developing countries in lessening the costs of producing reliable food composition data. FAO/UNU work can provide the framework for the coordination of activities that is essential to ensure comparability of data for the many users in different countries and types of institutions.

FAO/UNU cooperation in this area is important because:

- FAO's mandate spans all sectors related to food at the international level, including those pertaining to food quality, food trade and food composition;
- FAO has a broad international mandate encompassing food-related development issues that require food composition data;
- FAO has an established system of communication with national governments to promote food composition activities and regional cooperation at government level;
- FAO has published food composition data for use in developing countries, and these publications had wide circulation for several decades;
- FAO is well placed to shape actions on interdisciplinary problems that require an open forum for solution.

The strategy that FAO envisages to initiate a network relies on a regional model for action, which allows local control of food composition activities and promotes direct working relationships among institutions in developing countries.

The regional model does not imply that FAO will allocate resources to maintain a central food composition database. A large global database of the complexity and quality demanded by users would require far more resources than national and regional compilations, but would provide little or no additional returns in terms of effectiveness.

The network is seen as a dynamic system of generating and handling food composition data. It will perform functions such as:

- generating and distributing revisions of data on food composition due to changes in product formulation, food processing techniques, food varieties, production systems, improvements in analytical techniques, etc.;
- formulating and updating standards and procedures for specifying the minimum quality criteria required for food composition data;
- maintaining a structure of committees of government and institutional representatives that will recommend standards, procedures and work priorities.

How will FAO stimulate and support the activities of institutions and national governments and perform its coordinating role? First, FAO will organize regional workshops to discuss food composition issues and will promote activities with selected institutions from different countries to start building regional networks of collaborating institutions. In 1995, workshops on technical issues related to food composition are scheduled in Eastern Europe, French-speaking Africa, Asia and Latin America. The workshops will help countries in these regions to identify their food composition information needs.

A workshop was organized in September 1994 in Accra, Ghana, to discuss the needs of English-speaking African countries and to develop and set up national food composition activities in the region. The main problems identified at the Accra meeting were associated with inadequate laboratory facilities, lack of trained personnel and lack of funds. Also, the insufficient technological capability for operation of food composition databases was emphasized. Another major concern voiced was the insufficient awareness of decision-makers regarding the importance of food composition data. In many instances, this is the main reason for the lack of policies and financial support.

As noted earlier, FAO intends to produce material to assist in data generation and management. A set of guidelines for developing and managing a national food composition programme is being prepared and will illustrate all the necessary steps and components needed for the establishment and running of a food composition programme. Other guidelines on more specific topics, such as laboratory design, sampling and training, are also envisaged and will be developed according to needs identified during the regional workshops held this year.

The issue of standardization to facilitate the exchange of food composition data among countries, at the regional as well as global levels, will need to be addressed in collaboration with INFOODS and others that have developed systems that are operational. Increased cooperation will be required to select appropriate systems that allow maximum efficiency for data management at the lowest cost possible.

## **L'initiative de la FAO dans le domaine de la composition des aliments**

Dans le passé, la FAO produisait des tables de composition des aliments pour l'Asie, l'Afrique, l'Amérique latine et le Proche-Orient, qui étaient largement diffusées. Récemment, la Conférence internationale sur la nutrition, les exigences en matière d'indications nutritionnelles pour l'étiquetage et la plus grande uniformisation des règlements commerciaux ont rendu indispensable la production de données nouvelles, claires et exactes sur la composition des aliments. De plus en plus, les nutritionnistes, les diététiciens, les industries et les gouvernements ont besoin d'avoir un meilleur accès à des renseignements fiables et représentatifs sur la composition des aliments.

Malgré cela, les budgets réduits des gouvernements ne leur permettent pas de dépenser des sommes importantes pour procéder à des analyses chimiques détaillées afin de constituer des bases de données sur la composition des aliments en éléments nutritifs. Lors d'une réunion tenue en Tunisie en 1994, la FAO et l'Université des Nations Unies sont convenues que la coopération internationale pourrait faciliter l'analyse des aliments dans différentes régions. Une telle coopération pourrait encourager une vaste mise en commun

des données valables existantes et assurer leur compatibilité, ce qui allégerait les coûts particulièrement lourds pour les pays en développement.

La stratégie de la FAO envisage la création de réseaux fonctionnant selon un modèle régional. L'efficacité de ces réseaux dépendra du renforcement des capacités des programmes nationaux en matière de composition des aliments, des dispositifs de communication disponibles, et des procédures de contrôle de qualité. L'objectif de la FAO est d'obtenir, de diffuser et de promouvoir une information de bonne qualité sur la composition des aliments dans les secteurs public et privé. Pour donner de bons résultats, une stratégie visant à améliorer les bases de données sur la composition des aliments devra comprendre un ensemble de systèmes de collecte, de traitement et de diffusion des informations.

## **La iniciativa de la FAO en materia de composición de alimentos**

En pasado, la FAO produjo y difundió ampliamente cuadros de composición de alimentos para Asia, Africa, America Latina y el Cercano Oriente. Ultimamente, la Conferencia Internacional sobre Nutrición, los requisitos relativos al etiquetado nutricional y una reglamentación comercial más uniforme han hecho necesarios nuevos datos claros y precisos sobre composición de alimentos. Especialistas en nutrición y dietética, industrias y gobiernos necesitan cada vez más un acceso mejor a información fiable y representativa sobre composición de alimentos.

A pesar de estas necesidades, el reducido presupuesto de los gobiernos no permite efectuar grandes gastos en un análisis químico detallado con el fin de construir bases de datos sobre composición de nutrientes. En una reunión celebrada en Túnez en 1994, la FAO y la Universidad de las Naciones Unidas convinieron en que la cooperación internacional podría facilitar el análisis de los alimentos en diferentes regiones. Esta cooperación podría impulsar el intercambio generalizado de los datos válidos existentes y asegurar su compatibilidad, lo que reduciría la carga financiera, que es especialmente pesada para los países en desarrollo.

La estrategia de la FAO prevé la creación de redes basadas en un modelo regional de actuación. La eficacia de estas redes dependerá de que se fortalezcan la capacidad de los programas nacionales sobre composición de alimentos, las disposiciones relativas a una comunicación adecuada y los procedimientos de control de la calidad. El objetivo de la FAO es elaborar, difundir y promover información de buena calidad sobre composición de los alimentos en los sectores público y privado. Una estrategia acertada para mejorar las bases de datos sobre composición de alimentos requerirá una combinación de sistemas de acopio, tratamiento y divulgación de la información.

