Report on LATINFOODS

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After initial discussions held early in 1983 at the Rockefeller Conference and Study Center in Bellagio, Italy, on the need for an international network of food data systems, at which the continuing development of INFOODS was recommended [1], efforts to promote the idea of upgrading the quality of food composition tables in the Latin American region were initiated.

As is well known, food and nutrition programmes and activities in health, education, agriculture, the food industry, and food marketing all require information on the nutrient content and non-nutritive compounds of natural and processed foods. Furthermore, the correct interpretation of nutritional goals and their implementation as food guides require the information which should be available in food composition tables. The need to have such data available acquires particular importance in Latin America and the Caribbean region since activities in the field have revealed the great limitations of present food composition data.

TABLE 1. Food composition tables in Latin America

	First publication
Central America	1960
Latin America	1961
Argentina	1935–1942
Bolivia	1966
Brazil	1950
Caribbean (English-speaking)	1974
Colombia	1944
Chile	1961
Dominican Republic	1964
Educador	1954
Mexico	1940
Peru	1960
Uruguay	1949
Venezuela	1950

The present state of food data in Latin America

Food composition tables in Latin America were compiled as early as 1935 in Argentina [2], 1940 in Mexico [3], and 1944 in Colombia [4], and in most other countries between 1950 and 1960, as shown in table 1, while the "Food Composition Table for Use in Latin America," the one most commonly used, appeared in 1961 [5]. The information presented in these tables was obtained from analytical values which had become available in previous years. The data include proximate analysis, calcium, phosphorus, iron, thiamine, riboflavin, niacin, ascorbic acid, and carotene. Since then, many changes have taken place in all links of the food chain, including agricultural production technology, food storage, processing, and marketing. Large numbers of locally produced or imported new food products are being marketed and purchased, and significant advances have been made in analytical techniques and instrumentation, many of which have been used or are being introduced in analytical laboratories throughout Latin America.

The present tables do not contain information on some food constituents important for health, such as dietary fibre, fatty acids, minor elements, and carbohydrates, which up to now are obtained by difference. As early as 1937 most countries of the region had developed an analytical capacity, introduced by scientists such as H. Schmidt-Hebbel in Chile [6], W. G. Jaffé in Venezuela [7], and R. S. Harris and H. Munro in Mexico, Cuba, and Central America [5], and this capacity has, indeed, expanded in almost all countries of the region. Little effort has been made, however, to select the data available and put it

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together in useful forms, or to expand information on the number of nutrients, as users of tables are beginning to require. The limitations described above clearly indicated the need to review the present state of knowledge of Latin American food composition tables.

LATINFOODS

The first action of a renewed interest in food composition tables, at local and regional levels, took place in November 1986, when the first conference on food composition was held at the Institute of Nutrition of Central America and Panama (INCAP) under the sponsorship of the International Development Research Centre, the United Nations University, and the US Agency for International Development. The main objectives of the meeting were to review the state of knowledge of food composition tables for individual countries and for the region, to propose action programmes aimed at increasing the usefulness of present tables and upgrading them in terms of both quantity and quality of analytical data, and to develop a network of people and institutions interested in food composition tables through the development of LATINFOODS.

The first objective was accomplished from the reports rendered by 12 different scientists, representing 19 countries. These reports included some historical information on the subject, the extent of compilation of the available data, institutions with the capacity to participate, and country needs on food composition information. These reports strongly indicated the very large availability of data which somehow should be obtained, selected, and incorporated into databases.

As an approach to the second objective, conclusions and recommendations were requested from three groups gathered at the meeting: users, producers, and compilers of food composition data.

The users' working group indicated that present tables were incomplete, as they lacked information on many indigenous foods as well as on new foods available from the food industry. They also recommended that data should be provided on the composition of foods donated by international programmes. The need for information on the chemical values of foods as actually consumed was emphasized, since most values are given for raw foods. With respect to particular nutrients, they gave some priority to values for iron and vitamin A, indicating that present data are inconsistent and incomplete. Other nutrient values about which concern was expressed included those for sodium and potassium as well as zinc, iodine, fatty acids, dietary fibre, and specific carbohydrates. Many participants expressed an interest in having values given for polyphenolic compounds, oxalates, and phytates.

The data producers' working group reinforced the recommendations of the users' group and stressed the need for newer equipment, training, guidelines for sampling, increased communication and interchange of information, the establishment of collaborative studies, and guidelines for the selection of data already available.

The data compilers agreed on the need to develop guidelines for data selection and appropriate reporting and for strong collaboration with those producing and using food composition data.

The three groups agreed on the need to create LATINFOODS based on concrete activities, to be implemented as soon as possible so as not to lose the initial momentum. Short- and long-term goals should be established within the existing limitations in national laboratories. Likewise, the groups agreed on the urgent need to recover available data as a first step, and developed a set of criteria for data selection. It was also agreed that the concept should not be static, but should constitute a database to be shared by all, so as to develop tables specific for local needs. All groups also agreed on a very close collaboration between data users and data producers. Agreement was achieved as to the need of upgrading activities associated with food composition, such as identification and sampling methods and the use of modern analytical techniques, and of increased communication.

In order to create as functional a structure as possible, it was decided to form national groups with representation from various institutions and disciplines. It was agreed to locate the centre of the network at INCAP, with a committee made up of a co-ordinator, four subregional representatives—currently from Mexico, Venezuela, Brazil, and Chile—and the president of the Latin American Society of Nutrition.

The present objectives of LATINFOODS include the identification of sources of data on food composition, development of quality criteria for the selection of data, promotion of their generation, the acquisition and dissemination of new analytical data, facilitating access to and the production and interchange of data, and developing activities that will keep the concept alive [9].

Achievements

Although the economic problems involved in making LATINFOODS fully functional have not yet been solved, there have been a number of achievements since its establishment in 1986.

First, national groups have been established in the

following nine countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Nicaragua, and Venezuela. These groups hold regular meetings, and most of them, with even greater economic limitations than the central office of LATINFOODS, have some small programmes and have submitted general proposals to the co-ordinator on needs for initiating country activities.

With the help of the International Programme in the Chemical Sciences (IPCS), the Chemistry Centre of the University of Lund, Sweden, and Tecator Laboratories (Sweden), a short course on dietary-fibre analysis was held at INCAP in February 1988 and was attended by 16 participants from Mexico, Central America, Colombia, and Ecuador. From this analytical course arrangements have been made to undertake a collaborative study on dietary-fibre analysis, which has just been initiated with the support of IPCS and Tecator. Its success will contribute significantly to the future of LATINFOODS.

A small grant-in-aid provided to three national groups in Central America for producing new data on subjects selected by the national group but within the concepts of LATINFOODS was administered by the LATINFOODS headquarters. This arrangement was shown to be effective as a means of developing the objectives of LATINFOODS. A form was developed at INCAP for the compilation of data, with an instruction book for the collection and incorporation of data into a database. A relatively large number of foods—both raw and processed—have been analysed for dietary fibre, and maize and beans have also been analysed for their trace-element content.

A second LATINFOODS meeting was held in November 1988 in Chile, at which various speakers discussed the analytical methodology presently being used in Latin America. The meeting indicated that there already exists a competent capacity for the analysis of fatty acids, minerals, and dietary fibre but that there is less capacity for analysing vitamins, including carotene, and carbohydrates. Discussions were also held on strategies for conducting collaborative studies and on the development of a proposal to obtain the necessary funding for use throughout Latin America.

The concept of LATINFOODS was presented at the sixth Latin American Meetings in Food Science and Technology, held in Bogotá, Colombia, in October 1988 and at the seventh Latin American Nutrition Congress, held in Chile the same year. These presentations helped to spread the word on the importance and significance of LATINFOODS, and increased the number of institutions willing to make contributions to the concept.

Finally, a LATINFOODS newsletter is being prepared regularly, with news on LATINFOODS and other relevant information. And, to stimulate interest in LATINFOODS and to encourage publications on food composition, a section on food composition has been established in the journal *Archivos Latinoamericanos de Nutrición* with about ten contributions up to the present time. These have provided new information on the dietary-fibre content of cereal grains, food legumes, and vegetables, the fatty-acid content of various oils, and trace-mineral content in processed basic staple foods.

As indicated above, the main problem is to obtain economic support in order to continue with the interest and momentum achieved so far in the development of the LATINFOODS concept. A proposal to this end has already been prepared and submitted for review and possible approval.

In addition, plans are under way for the third meeting of LATINFOODS in 1990, but much will depend on success in obtaining economic support.

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