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After initial discussions held early in 1983 at the Rockefeller Conference and Study Center in Bellagio, Italy on the need of "An International Network of Food Data Systems", where the continuing development of INFOODS was recommended (1), efforts to promote the idea of upgrading the quality of Food Composition Tables of the countries of the Region were initiated in Latin America. As is well known, food and nutrition programs, activities in health, education, agriculture, 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 increasing importance in Latin America and Caribbean Region, since activities on the subject matter revealed the great limitations of present food composition data.

### Present State

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 most of the other between 1950 and 1960, as shown in Table 1 (5), while the Food Composition Table, for use in Latin America, the one most commonly used, appeared in 1961 (6). The information presented in the Tables was obtained from analytical values which had become available in previous years. The data include proximate analysis, calcium, phosphorus and iron, and thiamine, riboflavin, niacin, ascorbic acid and carotene contents. Since then, many changes have taken place in all links of the Food Chain, including agricultural production technology, food storage, processing and marketing. Furthermore, a large number of locally-produced or imported new food products are being marketed and purchased by people. Aside from it, 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. Present Tables do not contain information on food constituents important for health, such as dietary fiber, fatty acid content, minor elements, and carbohydrates which up to now, are obtained by difference. Most countries of the region had -as early as 1937- developed an analytical capacity, introduced by scientists such as H. Schmidt-Hebbel in Chile (7), W.G. Jaffé in Venezuela (8), R.S. Harris and H. Munsell in Mexico, Cuba and Central America (6), and this capacity has, indeed, expanded in almost all countries of the Region. Little efforts have been made, however, to select the data available and put it 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 America Food Composition Tables.

### INFOODS

The first action of a renewed interest in Food Composition Tables at local and regional level took place in November 1986 when the First Conference on Food Composition was held at INCAP under the sponsorship of the International Develop

ment Research Center (IDRC), the United Nations University (UNU) and the Agency for International Development (AID). The main objectives of the meeting were: 1) to review the state of knowledge of Food Composition Tables for the individual countries and for the Region, 2) to propose action programs aimed at increasing the usefulness of present Tables and upgrading them both in terms of quantity and quality of analytical data and 3) 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 the 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 data bases. To reach the second objective, conclusions and recommendations were requested from three groups integrated during the meetings: users of food composition data; compilers of food composition values, and data producers. The Working Group of users indicated that present Tables were incomplete since they did not contain information on many indigenous foods as well as on new foods from the food industry. They also recommend composition information of foods donated by international programs. Furthermore, the need to have chemical values of foods as consumed, was emphasized, since most values are given from raw foods. With respect to nutrients, iron and vitamin A values received some priority, indicating present values to be inconsistent and incomplete. Other nutrients include Na and K values, as well as Zn and iodine, fatty acids, dietary fiber and specific carbohydrates. Many participants expressed their interest in citing values for polyphenolic compounds, oxalates and phytates. The data producers Working Group reinforced the recommendations of the users group, and recommended the needs for newer equipment, training, of having guidelines for sampling, of increased communication and interchange of information, as well as the need to establish 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 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 limitation in national laboratories. Likewise, the group agreed on the urgent need to recover available data as a first step, and develop a set of criteria for data selection. It was also agreed that the concept should not be static but should constitute a data base 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 producers. Agreement was achieved as to the need of upgrading activities associated to food composition such as identification and sampling methods and in using modern analytical techniques and increased communication. With respect to structure for better functionality, it was decided to create national groups with representation of various institutions and disciplines. Likewise, it was agreed to locate the center of the network at INCAP with a committee made up: a Coordinator, four subregional representatives now from Mexico, Venezuela, Brazil and Chile, and the President of the Latin American Society of Nutrition. Present objectives of LATINFOODS include the identification of sources of data on food composition; development of quality criteria for selection of data; promotion of their generation; acquisition and dissemination of new analytical data; need for facilitating the access, production and interchange of data, and for developing activities which will keep the concept alive (9).

#### Achievements

Although the economic problems to make LATINFOODS functional have not been solved as yet, a number of achievements have been obtained since the establishment of LATINFOODS in 1986. First of all and as Table 2 illustrates, up to the

present time nine National groups have been established. These groups hold regular meetings and most of them with even greater economic limitations than the central office of LATINFOODS, have some small programs and have submitted to the Coordinator, general proposals on needs to initiate country activities. With the help of the International Program in the Chemical Science (IPICS), the Chemistry Center of the University of Lund, Sweden and TECATOR, a short course on dietary fiber analysis was conducted at INCAP in February 1988 and 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 fiber analysis, which has just been initiated with the support of IPICS and TECATOR. Its success will significantly contribute to the future development of LATINFOODS. A small grant-in-aid provided to three national groups in Central America was administered by the headquarters of LATINFOODS at INCAP, for producing new data on subjects selected by the national group, but within the concepts of LATINFOODS. The arrangement was shown to be effective as a means to develop the objectives of LATINFOODS. Likewise, a form was developed at INCAP for compilation of data and incorporation into a data base. Furthermore, a relatively large number of foods -raw and processed- have been analyzed for dietary fiber, and maize and beans also for their trace elements content. A second LATINFOODS Meeting was held in November 1988 in Chile, where various speakers discussed the analytical methodology presently being utilized in Latin America. The Meeting indicated a competent existing capacity in fatty acid analysis, mineral analysis and dietary fiber, but of lesser capacity for vitamins, including carotene and carbohydrate analysis. Discussions were also held on strategies to conduct 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 VI Latin American Meetings in Food Science and Technology in October 1988 held in Bogota, and at the VII Latin American Nutrition Congress in November of the same year which took place in Chile. These presentations disseminated the importance and significance of LATINFOODS, as well as increased the number of institutions willing to make contributions to the concept. Finally a Newsletter is being regularly prepared with news on LATINFOODS and other relevant information. To stimulate interest and authorship rights, a section on Food Composition was also established within the journal *Archivos Latinoamericanos de Nutrición*, with about 10 contributions up to the present time. These provide new information of dietary fiber content of cereal grains, food legumes, and vegetables, on fatty acid content of various oils and on trace mineral content in processed basic staple foods. As was indicated above, at the present moment 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 effect has already been prepared and submitted for review and possible approval. In addition, plans are already under way to hold the Third Meeting of LATINFOODS in early 1990, but much will depend on the success to obtain the needed economic support.

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Table 1. Food Composition Tables in Latin America

Country	Date 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
Ecuador	1954
Mexico	1940
Peru	1960
Uruguay	1949
Venezuela	1950

Table 2. Countries in Latin America Which Have a Country-LATINFOODS Group

Argentina	Chile	Brazil
Bolivia	Ecuador	Colombia
Venezuela	Costa Rica	Nicaragua