

## FOOD CONSUMPTION OF THE URBAN POOR: INTERVENTION MODELS IN MEXICO CITY

*Clara Jusidman y José Manjarrez<sup>1</sup>*

Consultora en Desarrollo Social y Conasupo.

**SUMMARY** The economic recession which affected Mexico in mid 1981 affected the low-income urban population with different intensities in terms of income and consumption. At first, the most affected social groups were the poor families connected to the formal sector of the economy. This forced them to develop alternative strategies (in terms of income and consumption) to attenuate the effects of the recession. This lecture presents the work done by the National Institute of the Consumer (INCO) in Mexico to understand the effects of the recession on the income, food levels, structure and food behaviour of the urban poor in Mexico City. It also focuses on the types of interventions that were implemented to support positive changes and weaken undesirable results. The methodologies that were used to monitor food expenditure and to understand behaviour when in relation to food consumption, are explained. The results of the research undertaken in INCO are described briefly to explain the reasons behind the intervention measures which were implemented in terms of information, direction, and education for the consumer. The areas covered are prices, places of purchase, quality control of food, nutrition direction, domestic technologies and organization for collective purchasing.

### INTRODUCTION

The purpose of this presentation is to describe a concrete intervention experience in the field of nutritional education, orientation and information, which was carried out between 1984 and 1988, by the National Institute of the Consumer (INCO) in Mexico. This paper represents an interesting exercise in research in action, and demonstrates the wide range of action which this involves.

In 1976 the INCO was created. Its main purpose was the protection of the workers' salaries. Working together with the Consumer Council, its objective was to create a more harmonious

relationship between the individual consumer and the final point of sale of goods and services. Both institutions were created under the Federal Law of Protection to the Consumer.

This document focuses on the 1984 and 1988 period, when the official food Programme (Sistema Alimentario Mexicano—SAM) run by President López Portillo, was maintaining a low profile with the change of administration. Interestingly enough, the political presence which had been achieved by SAM during 1980-81, generated a contrary reaction during the administration of president Miguel De La Madrid. Even though De la Madrid put into action the National Food Programme (PRONAL) which was established for the 1983-86 period as a follow-up programme, it is important to accept that it was put into practice on a partial basis. This happened because the PRONAL was not assumed as part of the political priorities of his administration.

This programme assumed the establishment of an active coordination between different institutions of the federal government related to the food chain, for which a National Food Commission was established. In it, four subcommissions were instituted. One of them was the Nutrition and Consumption Sub-commission which was to be presided by the Secretary of Health.

Because of the traditional and well sustained interest held by the National Institutes of Health and by Professor Salvador Zubirán\* to carry out well constructed action against hunger and malnutrition, and with the motivation of Dr. Guillermo Soberón, Minister of Health and the support of Dr. Héctor Fernández Varela, who was the Protection and Assistance Subsecretary, the Sub-Commission for Consumption and Nutrition was the only one within PRONAL that operated on a systematic basis. Political support for this Subcommission

<sup>1</sup> Avenida Juárez 92, C.P. 064001, México.

\*Founder and Emeritus Director of the National Institute of Nutrition (México)

and the dedicated work of specialists constituted important support elements for the success of some of the interventions which will be described in this document.

Through this sub-commission, interesting advances in coordination and collaboration were achieved between the different institutions which carried out information or educational activities in the field of nutrition. The INCO was part of this Sub-commission; its work was guided by PRONAL, the National Health Programme, the sub-commission's agreements in which all other federal health institutions like the DIF, IMSS, ISSSTE and the Ministry of Health, participated.

In 1984 INCO undertook an institutional programme which defined food and nutrition as one of its five central topics for action in the field of research and consumer information. It also established in conjunction with PRONAL, the agreement that its target population was to be the one in the four lower deciles of the income distribution pyramid in Mexico.

#### INCO'S RESOURCES AND CAPACITIES

The nature of INCO's work generated more relevance in an urban population which operates within a context of markets, salaries, goods and services. This allowed INCO to focus its activities in the Mexico City area, without forgetting the rural consumer.

INCO's focus on food and nutrition is justified by the following:

Firstly, because of the economic situation which the country was going through, the majority of its population was in crisis and in a recession, with a clear decrease of its purchasing power and a lack of opportunities for adequate employment and salaries. High inflation was also prevalent and prices were out of control.

Secondly, it was necessary to recognise that food was the main expense for the majority of the population.

Under these circumstances, questionnaires applied by the Institute showed that families were adopting defence strategies to confront the economic crisis, changing some food products for others, reducing the consumption of some goods, and increasing others, and also changing the pattern in the use of their incomes. Further questionnaires showed that people were also modifying their income strategies, rearranging or augmenting the work force in different work markets.

In this situation INCO thought out three questions to be resolved which were to guide its actions in the field of consumer direction, information and education.

- a) What changes were families making in terms of its food habits? Which were positive, which negative and which irrelevant in the final nutritional balance? Were they making logical changes in terms of cost per nutritional unit? What

elements were determining the direction of these changes?

- b) Which of the INCO programmes and products were still useful? How could we change the content to make them more relevant to the low-income urban consumer's needs? Which was the best way in which INCO could contribute to help families strengthen their strategies to confront the crisis and make the situation less painful?
- c) Which were the best instruments that could be used by INCO to reach its target population? Which mass media vehicles were more accessible and in which did they believe more? Which was the best way to use face to face direction?

With these directions INCO was guided to act at four levels: research, content definitions, instrument development, and impact evaluation.

The Institute had one Technical Head Office with capacity to develop socio-economic research and with a laboratory which allowed it to know the quality and contents of the products which are sold in the market. It had a technical team and equipment which allowed it to do food analysis.

In another area it had the capacity to produce T.V., radio and written material.

Finally a complete area was focused on promotion, relationship with the consumer, individual or group; plus it also handled the telephone service.

The institutional programme operated in order to integrate in a harmonious manner the work of the overall institution, so that everyone focused on the main topics and target population. The risk of dispersion in an institution that works with consumption needs is enormous and the temptation to imitate consumer organizations in developed nations is also large and attractive. For example comparing the need for car stereos with lightbulbs, which in the food context would be the equivalent of comparing the need to import tinned asparagus against supervising the quality of the tortillas, exemplifies this situation. In the work developed by our Institute, a series of tendencies were clearly detected:

- a) There has been an accelerated urbanisation process in the Mexican economy which has developed since the fifties.
- b) There has been a reduction in the number of people who produce their own food and an increase in the amount of people who obtain their food in the market place. This means there is a larger gap between the producer and the consumer of food, and a larger number of Mexicans who depend on that which others produce.
- c) As a consequence of these two points there has been an increase in the commercialisation of food products, profit being one of the main motivating factors.
- d) There is a larger proportion of the population which eats

outside of the home, in restaurants and other business.

- e) There is an increase in the use of industrialised products, substituting these for fresh products.
- f) There is a growing process of oligopoly in the distribution of food products, derived from the expansion of supermarket chains which were developed in the fifties. During the period that was analysed there was an important presence of the governmental systems of food distribution (DICONSA, IMPECSA, COABASTO, ISSSTE, IMSS, and other chain stores owned by the unions from the oil industry, the university, etc.)
- g) There has also been a change in the generation and establishment of the food culture, shifting from the private family sphere, to the public scenarios of restaurants, supermarkets, stores, etc. and to the food culture constructed by mass media campaigns.
- h) There is also a growing dependence of the poor low-salary population on public programmes of food distribution at subsidised prices or outright gifts, as in the case of milk and tortillas.
- i) The consumer is confused when confronted with the large variety of sizes, brands and prices of the same products. This is a result of their low consumption culture. The Mexican consumer still does not know how to read labels, compare prices and the weight of products, and demand guarantees when the situation necessitates it.
- j) There is an excessive flexibility, and corruption in quality, weight, and price control of the products that are sold in the market, and the advertising that is produced around them.
- k) There prevails a food publicity that induces consumption and expenditure; this is not the right way to feed oneself properly. Food products are presented in a individualised manner, not as part of a full meal or in combination with other food products.

In the long run, there is a slow change of values in food consumption, from a private family orientated sphere to a public arena manipulated by profit. More recently it has passed from being a matter of national interest, of self-sufficiency, sovereignty, food security and the preservation of the national food culture, to becoming a matter of international commerce where the transnational companies set the pace and rhythm on the basis of their interests.

We shall point out some situations that have been appearing at present in terms of the food scenario in Mexico.

- a) The already mentioned economic crisis which was limiting the purchasing power of the majority of the population.
- b) The strong inflation which modified nominal prices and the relationship between food products and prices.

- c) The hidden inflationary process through changes in quality and quantity in industrialised food products in order to evade profit losses in a set-up of rigid price controls. The food industry began to sell lower quality and quantity products for the same price. Ingredients were substituted, sizes were diminished, as in the case of bread, and the quality norms were lowered in order to adjust them to the reality imposed by producers.
- d) There was also a growing presence of imported goods and publicity campaigns geared towards inducing a larger consumption of products from other countries.
- e) Temporary restrictions in the supply of certain basic goods in order to achieve higher prices, or mistakes in the policies of price guarantees as in the case of beans and red meat.

These were the long term trends and the concrete situations, within which INCO had to define its activities in the field of food products and nutrition, guaranteeing the highest level of protection for the poorest population.

These trends had positive and negative effects; some had come to stay and it seemed futile trying to fight against them. It was necessary to take them into consideration to send useful messages to the consumer so that they could combat the negative effects of these situations. We shall now proceed to analyse the activities within the global intervention which was generated by the Institute.

## RESEARCH

The type of research which was developed within the Institute took place in three fields: population questionnaires; questionnaires in the food establishments; and laboratory analysis.

The questionnaires on population groups were geared towards the understanding of food habits and culture in the different social strata of the population, focusing on the behaviour of the low-salary urban groups; their purchasing and consumption habits and their strategies to face up to the economic crisis.

The questionnaires on food establishments gathered systematised periodical information on food prices: fruits and vegetables, groceries; seasonal food like fish during Lent and the food used to celebrate the end of the year. In support of the economic stabilisation policy of 1987, the Institute developed the capacity to obtain comparative information on the prices of food most frequently consumed in restaurants, cafeterias, taco stands, etc.

The laboratory studies allowed the formulation of comparative analysis of the quality of the different brands or fresh food sold in large volumes; it also contributed the quality norms that were established by the Ministry of Industry and Commerce. It finally allowed the consumer to simplify domestic technologies for the production, and conservation of food at

home.

Bibliographic research was also undertaken, and a series of informational monographs were prepared on the principal foods that were produced in the country. Small cards were prepared for fast consultation.

Some of the main lines of research work developed by INCO are described as follows:

#### POPULATION QUESTIONNAIRES

*"Follow-up questionnaires on food expenditure in the low-income population"*.

The general objective of this project was to measure the impact of the economic crisis on the food consumption of the population with low economic resources, while at the same time identifying the strategies that families developed to confront such critical situations. The methodology consisted of doing a follow-up survey through periodical questionnaires to a group of low income families.

The target population were those families with incomes between 0.8 and 3.5 times the minimum wage in the metropolitan area of Mexico City.

The selection process was made in five stages and it was done in a random manner until the fourth stage. This was because it was desirable to have "type" families that contained pre-established indicators.

Families were classified through socioeconomic stratification depending on the occupational characteristics of the head of the family. The classification was divided into two categories: those in which the family's main wage earner worked in the formal market place and those whose main wage earner worked in the informal marketplace.

Formal work was presumed when the main wage earner was working in the marketplace at the moment when the questionnaire was applied. This is in a situation where the supply and demand of work are clearly differentiated and exercised by different individuals: the owners of the means of production on the one hand and the working class on the other. This implied the existence of a salary as the determining factor of the relationship.

Informal work was considered as the situation where the main wage earner in the family was in the market where the supply and demand of work come generally from the same person, or the demand for work was exercised by small units that produced or commercialised certain goods or services with very simple technology and low capital investments.

Each subsector was sub-divided into strata according to family salary. In the formal sector three levels were constructed:

- Low formal: with salaries between 0.8 and 1.5 times the minimum wage.

- Medium low formal: between 1.5 and 2.5 times the minimum wage.
- Medium formal: more than 2.5 and up to 3.5 times the minimum wage.

The informal sector was divided into two subdivisions:

- Low informal: with wages from 0.8 to 1.5 times the minimum wage.
- Medium informal: more than 1.5 and up to 3.5 times the minimum wage.

The questionnaire was applied in 258 homes.

The instruments utilized for the gathering of information were: a questionnaire of general information and socio-economic data and a booklet to register the purchase of food goods. In order to collect information, homes were visited three times every week. During this period every food purchase was registered in detail; during every visit all additional relevant information was noted.

On the first day, every householder was trained so that she could write down her daily food purchases in the booklet; on the third day she would be visited again in order to have her work supervised; if, for whatever reason, she had filled in the booklet incorrectly or she had not done her work, she would be helped by doing it in a joint manner with the visiting person.

The questionnaire was applied to the same families every six months during a three year period. The first two years 1985 and 1986 were irregular due to the problems inherent to a new project. The first set of families was interviewed in June and November 1985; in August 1986; and February and August 1987 and February 1988.

In August 1986, new concepts such as housing, transportation, clothing, health and others were added to the questionnaire; the purpose was to strengthen the instrument and generate relevant information to the projects that were being financed by the General Coordination of Supply in Mexico City (COABASTO).

The financial support from COABASTO allowed us to increase the size of the sample to about 100 households on average per socioeconomic strata.

Increasing the number of families in each strata allowed us to correct loss by desertion in the first sample. The situation was solved by selecting double the amount of the minimum number of families needed in the sample.

The results that were generated were diverse and interesting; here we will only mention some that correspond to the first sample which began in June 1985 and ended in February 1988.

In the midst of the crisis, the families reacted in a very dynamic way, so the effects were diverse depending on the level

of income, the sector of the economy and the type of activities that were carried out by the members of the family.

Even though all the families of the sample belonged to the low income sectors, the families most affected by the recession were those that earned between 2.5 and 3.5 times the minimum wage. Within these households, the most affected were those where the main wage earner worked in the formal sector of the economy.

In this way, the medium formal wage earner registered a fall in his real income of 25 percent from June 1985 to February 1988, while in the medium informal sector, the drop was only 3 percent; on the contrary, the truly low strata had an increase in their earnings: 12 percent for the low formal level and 19 percent for the low informal.

When we went into more detail in terms of the real wages earned by the main wage earner it was found that in four out of the five levels which were studied, the income dropped. The largest drops were in the medium levels; in the formal sphere it was 33 percent; and in the medium informal, 20 percent.

Families reacted to this drop by incorporating more members of the family into the work market. By 1988 four out of the five groups that were studied had more members working in the market; only the medium formal remained in the same condition as in 1985. One hypothesis in relation to this situation establishes that in this group, the medium formal, the families did not have the flexibility to incorporate more members into the workplace, given that they already had two or more active members.

The new members that entered the market did so in unstable activities, producing goods at home for sale, offering services, entering the informal commercial chain in the sale of clothing and cosmetics, or carrying out temporary work. In this regard, women became more important as income earners. In the five groups that were studied, the percentage of women working increased in 1988.

On the other hand, the food expenditure decreased substantially. This reduction was more accentuated in the formal sector which had drops between 23 and 28 percent. This drop also occurred in the percentage of income that was dedicated to food expenditure. While in June 1985 the lower formal group spent 68 percent of its wages on the purchase of food products, by 1988 it only spent 47 percent; the low informal group cut this expenditure from 60 to 44 percent in the same period. The hypothesis which seems to explain this situation is that, in an urban context, there are certain unchangeable needs like transportation and housing. On the contrary, food products have a large flexibility and can adjust to income decreases, together with clothing and shoes.

In terms of the re-structuring in food expenditure it was observed that during this period there was a definite tendency to substitute animal products for vegetable products; the

information reveals that four out of the five groups under study spent a smaller percentage of expenditure on animal products in February 1988 than in June 1985.

The substitution process was accompanied by the purchase of a smaller number of goods. In parallel, the quantity that was purchased of certain basic goods increased significantly.

- The average purchase of tortillas per family rose from 7 to 10 kilograms on average in June 1985 to 10 to 13 kilograms per family by February 1988.
- The quantity of beans purchased increased considerably reaching up to a 41 percent increase, within the medium formal group.
- White bread became the substitute of sweet rolls, increasing from 12 to 36 percent.
- Pasteurised milk also registered an important increase in three out of the five groups under study. This was an interesting fact which deserved special attention given that in analyses made in 1983 and 1984, milk appeared as one of those products that people declared they bought the least. In the following year people changed the place where they acquired this product. While in June 1985 the percentage of homes that had access to subsidised milk distributed by LICONSA fluctuated between 25 and 55 percent, by 1988 it rose to between 62 and 86 percent. In this case, the LICONSA-CONASUPO milk distribution programme, became an important factor in supporting low income families.

Once the changes in food expenditure had been quantified, the investigation focused its attention on the amount of protein and calories that were consumed in order to evaluate the effects of the economic crisis on the purchase on nutrients.

Coefficients used by the National Institute of Nutrition were used for each one of the food groups.

The results were surprising. It was discovered that the families were optimising their economic resources, and the drop in food expenditure did not reflect the same drop in the consumption of protein and calories.

While food expenditure dropped between 14 and 28 percent, the decrease in purchased protein only fell between 2 and 7 percent; and in the case of calories between 4 and 8 percent in four of the five groups that were studied; interestingly enough, in the medium informal group there was an increase of 2 percent. This is to say that when the investigation began the families acquired a gram of protein and their calories at a higher price. When they changed products they lowered the price paid for nutrients, reducing in this way, the effect of a wage decrease on the nutritional intake.

On the other hand, upon analysing the structure of the basic foods in terms of protein and calories, it was found that seven

products composed the basic diet. In 1985, tortilla, white bread, milk, beans, and eggs, represented between 43 and 65 percent of protein, and these five products, plus oil and sugar, contributed between 58 and 75 percent of all calories.

By February 1988 these products represented between 50 and 69 percent of all purchased protein, and between 66 and 80 percent of all calories, depending on the socioeconomic group under study.

*Guide for the nutrition of the Mexican family.*

The purpose of this second investigation was to determine, in a detailed manner the characteristics of a normal diet of a family which earned between one and two minimum wages; within this, the idea was to define which food products were part of the diet, how they were combined, what was their nutritional value, the cost, the ways they were prepared and the modifications generated by the drop in income.

Case studies were used as a method in this protocol, selecting 42 families in two poor urban areas in Mexico City situated in the boroughs of Gustavo A. Madero and Coyoacán Delegations. In order to identify this group, 320 families were interviewed as part of the selection process.

A questionnaire which contained qualitative and quantitative indicators was applied. This required seven daily visits to each one of the homes.

The results of food behaviour in Mexican families that earned between one and two minimum wages in Mexico City, were as follow:

- a) The diet was monotonous, the variety limited; the ingredients used did not extend the nutritional value.
- b) The families under study spent between 75 and 90 percent of their salaries on food products.
- c) The diet was basically composed of cereals, beans, eggs and vegetables. The cereals were consumed in the form of tortilla, rice, white bread and pasta in soup; the legumes used were beans, and starch was represented by potatoes. Chicken predominated in terms of meat consumption. The vegetables that were most frequently used were carrots, tomato, onion, these last two as condiments used in the preparation of dishes. In terms of fruit, the consumption of banana, lime, orange, and apple was predominant. A reasonable level of consumption of milk products was detected; also a low consumption level of industrialised goods.
- d) Changes were detected in the consumption of meat, milk products and fruit. The consumption of beef was substituted by chicken, and vegetables by beans. In some families the consumption of cheese, butter and cream was eliminated.

On the basis of the results in this study, the decision was

taken to develop a nutritional guide for low income urban families. This guide had to comply with the following characteristics: that it would provide people with a tool to guide them in the daily preparation of their food; that it contained the nutritional requirements of the whole family; that it was based on their habits and preferences and on their real purchasing power.

A basic food requirement established a daily average consumption level per person of 2,300 calories and 67.4 grams of protein, with 33% coming from animals. Food products of wide consumption were included in the diet, but some rearrangements in terms of cereals and legumes were made, along with the combinations which extend their nutritional value all the while respecting the traditions and habits discovered in the investigation.

The result of this effort was the Guide for the Nutrition of the Mexican Family, published by INCO and CONASUPO, which was sold at a low cost in all the distribution points of CONASUPO. The Guide was comprised by seven booklets, one of information and general nutritional recommendations, and six filled with daily menus for breakfast, lunch and dinner. Each booklet covered a full week. The menus were designed for a family of 6, given there are 5.5 in the average family.

The first booklet had information on savings and food product purchases, on good quality identification, on how to prepare food hygienically maintaining its nutritional value, on how to avoid waste and on food distribution within the family in order to guarantee a nutritional balance.

When constructing the menus, reference was always made to the available income.

The Guide was well accepted and it sold rapidly. However it was confronted by two main problems. The first had to do with the fact that the families that bought the guide were not necessarily from the low income strata to which it was directed. This had the result that the proposed menus were not to the liking of these families, for example the high consumption of beans. On the other hand, geographically speaking, the proposals limited themselves to the Mexico City area, and were not applicable in other regions of the country. Therefore, regional guides, such as for the case of Oaxaca, were developed.

*Other questionnaires.*

Other questionnaires that were developed by INCO focused on the concept of "Opportune Questionnaires on Consumption Problems". The purpose was to gather relevant information in emergency situations for example: lack of products, high price increases, official institutional interest to support certain products, or campaigns run by the Institute. In these situations, we need fast opportune information for effective decision making and action.

Examples of some of these studies were : "Beef scarcity in

Mexico City", "Food culture", "The purchase of tortillas" and "Milk consumption in Mexico City".

These opportune questionnaires are highly effective tools for generating pertinent measures for occasional problems that arise in the food market.

*Questionnaires in establishments.*

*Questionnaires on wholesale prices of selected food products.*

These types of questionnaires had three main purposes: to inform the consumer about the stores and commercial chains that offered products at a lower price. We also provided information about the establishments which sold at higher prices.

Another objective consisted of providing the consumer with the information on each product so they would know which price was the lowest and which the highest in the chains of supermarkets which are supposedly the most modern part of wholesale commercial chain. With this information the consumer could find out whether he was paying high or low prices.

The third objective was that the producers or commercial owners would become aware of the position their products held in the market, motivating them to search for more competitive positions.

The indicators that were under observation were the following:

- a) Fruit and vegetable prices. On a weekly basis we obtained the prices of 32 products. In Mexico City the information was obtained in 8 representative stores of the main supermarket chains, in 3 public stores and the Wholesale Food Market. We always tried to change locations in Mexico City in terms of gathering information prices.
- b) Grocery and cleaning goods prices. Once a week 60 articles were monitored in 11 establishments which were basically branches of supermarket chains.
- c) Prices of seasonal goods. During the forty days of Lent, each year, 30 different types of fish were monitored. Slowly other fish substitution products were incorporated with the hope of offering alternatives to the consumer when confronted with an increase in price of the traditional sea products during this season. A similar mechanism was activated during December for the products that were in high demand during the Christmas season such as shrimp, turkey, fresh rosemary, salted cod and dried fish.

The price information that was gathered was distributed to consumers through the "price telephone", the publication of "Who is Who in the price business", the newspapers of wider circulation, posters, fliers, and through radio and T.V. spots.

The information allowed us to formulate statistics on food availability, availability of food products, etc. This information

was very important for the price stabilisation programmes. Authorities knew what food products were available, which were non-existent, how long scarcity had lasted, and in which cases there were violations to prices and agreements.

Distribution of price information also included data about competition between establishments. This allowed us to make a more effective use of the public systems of stores as regulators of retail markets.

*Laboratory studies.*

These studies analysed the physical and chemical aspects of food products and focused on comparative analyses of quality, content and price. We also reviewed the honesty of labels in terms of the information that was included and what the food actually contained.

The purpose was to provide the urban consumer with information about the quality of the products so he could make a better selection from the available options.

One of these studies focused on the needs of low income consumers, and compared the quality and the characteristics of 10 different brands of edible "oils" that were sold loose in the local markets ("tianguis") of Mexico City.

The results revealed that 90 percent of the creams which were analysed were mixed with starch. The level of microorganisms was another of the problems that were detected. Even though the present norm allowed up to 50,000 colonies of bacteria in each gram, in one of the samples that were tested we found up to 200 million colonies. On top of that, organisms of faecal origin and coliform were found; fungi and yeasts were also found in this sample.

All this proved with clarity the undesirable handling process that took place during the production, distribution, and preservation of these products, which lacked adequate packing techniques and were thus sold in plastic bags; during the sale period they were not kept under refrigeration.

It was also discovered that on average 19 per cent of the samples contained less than the weight that was claimed on the label.

Another laboratory study analysed cold meats. The study focused on analysing nutritional value, sanitary quality, meat contents and immunological levels.

We looked into four different brands of each of the following products: ham, frankfurter sausages, bratwurst and brawn.

The physical-chemical study was made in order to find out the product's contribution in terms of protein, fats, carbohydrates and vitamins. We also determined whether other animal products, not mentioned on the labels, were included. For this purpose, the Gel Immunodiffusion technique, which allows the identification of all animal products present, was used. We also

investigated adulteration, or substances that are deliberately added to the food products in order to hide production defects, increase weight, volume, and colour with an immediate decrease in quality.

In these studies, it was found that the most frequent adulteration was by soya derivatives (texturised and isolated) and by wheat and potato starch. These elements are not harmful to health, but producers used them to increase weight in cold meats because of their great capacity to retain water.

The results of quality in the food products were transmitted and published through the Consumer Magazine and newspaper, and also through radio and T.V. programmes. Other studies made by the Institute which acquired recognition and a high reputation were those on children's foods, canned chile, alcoholic drinks, milk and tortillas

The presence of food technologists within INCO allowed us to develop a new line of work for the dissemination of domestic technologies for the preparation, preservation, and production of food products. In this direction we developed research in home-produced bean sprouts and vegetables; the production of cold meats, sauces and preserves; and the production of simple, economic recipes. Once these technologies were developed, a massive campaign was launched in order to help the consumer to reduce costs and waste.

#### NUTRITIONAL CAMPAIGN THROUGH THE MASS MEDIA

With the purpose of providing useful information to the general population about the basic concepts of nutrition, the Institute, with the support of specialists from the National Institute of Nutrition and the DIF, designed and developed a nutritional campaign using the mass media.

The campaign was on two levels: one focused on direction and the other on information.

a) The direction level hoped to counteract the information produced by the publicity campaigns of the food production industry, and tried, by using the technique of diversified reiteration, to teach the population three basic concepts:

- In the first place, that there are three food groups: fruit and vegetables; legumes meat and milk; and cereals and starchy roots. The population was informed as to what food products belonged to which groups.
- The second concept that was transmitted was that it was important to combine food from these three groups in every meal.
- And thirdly that each meal should be balanced, hygienically prepared while conserving its nutritional value.

These three points were transmitted through messages and information spots on radio and television, posters, fliers, magazine articles, the Consumer newspaper, that is to say, using all the possible means at the disposal of the Institute. The concept of the "wise" dish was created as a counterproposal to the junk food concept.

b) This information was taken from the results of the research mentioned in the above section; it was information that was geared towards educating the consumer to buy better products. The price listings, the results of quality studies, different recipes, and technological proposals for home production and conservation were always available. The overall campaign also contained temporary subdivisions geared to confronting specific problems, for example when there was a meat and bean scarcity, or when the price of fish went up because of the season, etc.

The main publicity campaign launched by INCO between 1984 and 1988 was focused on food and nutrition.

#### DIRECTIONAL SERVICES

Another way of sharing information which was produced by the Institute was by telephone.

By telephone people could obtain price information and nutritional direction. A nutritionist answered questions about the nutritional value of food products, the appropriate products for different ages, different ways of preparing specific foods, selection and purchase, etc.; another group specialised in answering questions on prices and places where food products could be purchased. This telephone service reached a point where it received thirty thousand phone calls a month in the Mexico City area.

In terms of other action, talks were given, purchase groups were organised, children's circles were also created. In each of these strategies, food and nutritional recommendations were included as one of the fundamental topics.

In the children's circles, plays with nutritional topics were staged. Puppets were also used to give nutritional education to children.

All the promotion instruments which were accessible to the Institute were put to work in nutritional education during those four years, conscious that the economic recession was preventing the adequate consumption of nutritional food products. The purpose of INCO was to lighten the load of the crisis upon the householders responsible for feeding Mexican families.

#### CONCLUSIONS

In a society where the vast majority of the population gets hold of its food from transactions in the market, institutions that are geared towards consumer's direction and information, like the National Institute for the Consumer, are of great value.

As long as food products increase in quantity, quality, price and presentation, the exercise of the consumer's autonomy can only be made effective if he has sufficient information to compare and choose, within the range of his real purchasing power.

This information can only be produced by organised groups of consumers and institutions like INCO. For some reason consumer organisations have not developed in Mexico with the strength that they have developed in other countries. This is why it is doubly important to preserve and strengthen public institutions like INCO.

The difference in the consumption patterns of the diverse socio-economic groups in the Mexican population forces us to realise that specific information and direction is pertinent to them. The specific means through which these diversified populations are to be reached is also relevant. The constant and

abundant flow of biased information, principally in the field of processed foods, forces Mexican society to incorporate programmes and direction and nutritional education action in a more systematic way. Television, businesses and restaurants are not the best places for education in the field of nutrition.

The population has shown great interest in food information and direction with scientific bases.

Correct eating is a matter that concerns many people in their daily lives, and the existence of distorted information increases the need of obtaining trustworthy information and of strengthening public institutions like INCO.

The difference in consumption patterns of the diverse socio-economic strata of the population forces us to identify the relevant information and direction in food products and nutrition. The means through which they were reached also need to reflect this difference.