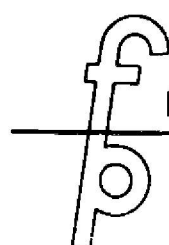


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**PROCEEDINGS**

# **WESTERN HEMISPHERE NUTRITION CONGRESS III**



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## INTEGRATED COMMUNITY PROGRAMS

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### Introduction

Defined by the World Health Organization, health is "a state of complete physical, mental and social well-being, and not only the absence of disease." If this concept is to be accepted, this means that a health activity should be framed jointly with programs of community development in order to be completely effective.

To-day, however, health programs developed by respective agencies are monosectorial and their actions are mainly directed to ensuring the absence of disease.

As components of the health service, activities in the field of nutrition have also directed their forces principally towards rehabilitation of the nutritional status of the individual. Or, at best, at a segment of a malnourished population. In general, actions have been eminently curative and/or palliative, but very rarely of a preventive and permanent nature.

For almost 30 years, applied nutrition was considered exclusively as a branch of medicine, and its objectives were limited to the preparation of diets for sick people or institutionalized normal human beings. The concept of "dietetics" and "dietitian" prevailed within the field of specialized nutrition. The physician confined his nutritional therapy to prescribing vitamins and minerals as remedies for certain illnesses.

A diet was classified "balanced" if it contained the vitamins and minerals considered essential at the time. Calories were mainly related to the capacity of a person to gain or lose weight and the quality of protein was of secondary interest.

It is true that since this time, several important improvements have taken place with excellent results; for instance, the enrichment of foodstuffs with vitamins and minerals. The exotic name "Kwashi-orkor" was mentioned only in medical literature, and at the same time there was mere speculation at its possible causes. The term "protein-calorie malnutrition" was then unknown.

Nevertheless, research in the past 20 years has demonstrated that the problem of malnutrition, in particular that of protein-calorie malnutrition, cannot be solved if only the monosectorial measures of the medical field are to be applied.

They must be amplified so as to include other sectors of development. Thus started the so-called "applied nutrition" programs, which from the very beginning were directed not to the solution of the nutritional problem of the individual or of an institution, but to the community as a whole.

Soon these activities extended to other sectors, specifically those of education and agriculture. The health personnel began to share the responsibility of finding solutions to the nutritional problems of the population, in co-operation with professionals of other disciplines, mainly with the educator and the agricultural extensionist. There are two factors largely responsible for this multisectorial amplification of the nutrition programs:

First, acceptance of the fact that malnutrition constitutes a problem of great magnitude. In the developing countries up to 70 or 80% of the infantile population suffer from various degrees of malnutrition. Therefore, whatever unilateral actions were planned to be taken, they could not, even in the best of cases, alleviate—except on a temporary and limited basis—the prevailing, serious situation.

In the second place, a great number of economic, social, and biological factors contribute to the development of malnutrition. The solution implies on the one hand, the development of multiple actions conceived within various groups, and on the other, the coordination of these multisectorial actions. Thus, an applied nutrition program compounds itself eventually with the problem of integrated development of the community.

In Figure 1 we try to sum up, objectively, the several stages of the applied nutrition programs. Each of the historical phases in the evolution of nutrition has been accompanied by a change in the academic preparation and in the in-service training of technicians and professionals who, directly or indirectly, are responsible for solving nutritional problems.

Our present major interest is in the training of technicians and professionals capable of promoting, planning, executing and evaluating nutrition programs implanted within the programs of an integrated community development. Also, of interest to us is the fact that their actions are well coordinated with those of other technicians and professionals in other disciplines that, directly or indirectly, may also result in improving the nutritional status. What we need is a united effort of all the qualified human resources available in these distinct disciplines. In other words,

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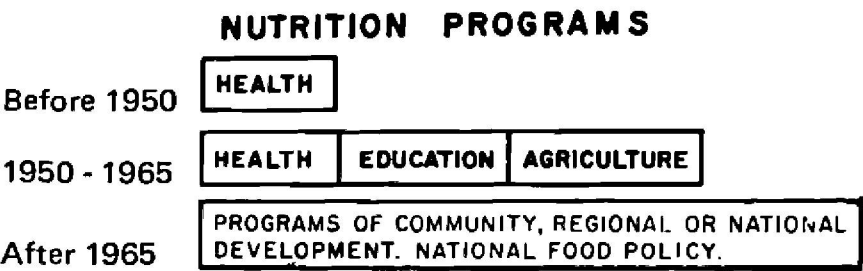


Fig 1.

integration to form part of a working team for development of the community with emphasis in eradicating malnutrition.

Unfortunately, at the present time the majority of universities have not exposed their students to a series of experiences which are necessary for them to understand the importance of their work in helping their communities and their countries to achieve the desired development. As a matter of fact, with a few exceptions, students have not been exposed to the following experiences:

- a) Field work in close contact with the poor, rural areas, learning through this experience the problems faced by underprivileged populations.
- b) Opportunities to search for underlying reasons of underdevelopment and malnutrition, and an attempt to find practical solutions based on the availability of local and national resources.
- c) Closer relationships with students and professionals from other disciplines, acting jointly with one basic common goal: the fight against poor economic conditions and malnutrition.
- d) Opportunities to learn that the knowledge and technology which they have acquired is only but one link in the long chain towards achieving the development and well-being of our people.
- e) Opportunities for the student to study the philosophy of the development programs and to be motivated towards playing the role of a social leader and developer, thus acting in his professional life both as a catalyst and an agent for reform.

In order to prepare this technical and professional personnel, however, it is necessary to organize community development programs in well-defined areas. These demonstration and pilot programs would permit exposure of the students to the reality of rural living conditions (and participation in planned activities).

The organization of these programs will naturally depend upon local factors such as the production activities of the community, their cultural characteristics, the prevailing environmental conditions, social structure, sources of income, etc. The purpose of this paper is to present a model program of such a nature.

**Description of The Area Where  
The Model Program is Carried Out**

The area where the program in question is underway is sufficiently representative of the rural peasant communities that exist in Latin America. These are subsistent agricultural economies with scarce or nonexistent modern technology, and

categorized by G. M. Foster as within the "traditional cultures."

The area covered by this project is within the Department of Chimaltenango, in the central highlands of the Republic of Guatemala. In the 1964 population census, there were 163,484 inhabitants in an area of 1,979 square kilometers. This means a population density of 82.6 per square kilometer. The major concentration of the people (102,291) lives in the rural area of the Department and the rest (61,193) in 12 provincial towns. The predominant ethnic group is Indian (73.9%), and the rest is ladino (social race of Spanish and Indian extraction); 73.6% of the population over 7 years old are illiterate. The age distribution corresponds to a wide-base pyramid with a potential labor force of only 30.6%. The birth rate is high (31 per thousand).

Based on studies completed in 1969 plus information from clinical nutrition and health surveys of the last 4 years, it is concluded that in this area there exist:

- a) High rate of total deaths (a mean of 17 per thousand over the last 10 years).
  - b) High rate of infant mortality (98 per thousand living for 1968).
  - c) High rate of neonatal mortality and of deaths before children reach 1 year of age (28 and 70 per thousand born, respectively, for 1968).
  - d) A high mortality rate for children 1-to-4-year-olds (32.4 per thousand inhabitants of this age range, for 1968).
  - e) The principal causes for this high mortality are infectious diseases and protein-calorie malnutrition.
- The prevailing economic conditions are at a mere subsistence level which is due to insufficient production, and an economy sorely lacking in modern technological aids. Of the working population, 81.6% are occupied in agricultural activities, 7.7% in artisan-craft, and the rest are engaged in commerce as wage earners or in other services.

The agricultural census of 1950 gives the main agricultural products of the Department as: corn, wheat, beans and potatoes. The animal population is distributed in: cattle (18,037 head), pigs (10,748), sheep (19,123), and goats (4,212). Almost all families raise poultry, though in small numbers.

The dwellings lack many facilities, with overcrowded conditions and communal living. The sanitary conditions of the home environment are very poor.

**Description of Program**

The basis of the present model program is shown graphically in Figure 2. By means of an initial health program (No. 1 in the Figure), requested by the community itself and therefore considered as a badly-felt need, it is hoped both to improve the health status and to gain the confidence of the people.

The institution of an educational and technological advice program (No. 2 in the Figure)

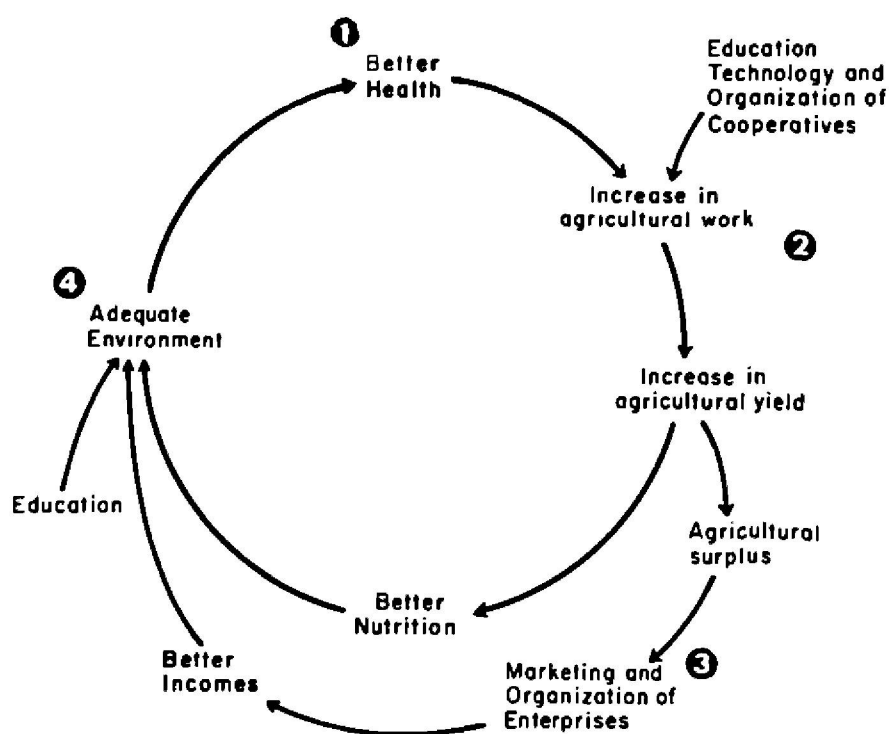


Fig 2.

will help improve agricultural technology and the structuring of the labor force based on cooperatives. Thus, it is hoped that the work done in agricultural and animal husbandry will increase sufficiently enough to augment the mean production by a greater yearly turn-over. This increase in production will in turn initiate better nourishment for the food producer and his family, and it is hoped that eventually there will be such a surplus. The latter would be processed at the domestic or small business level, depending on improvement in the market system (No. 3 in the Figure), through sales of the products to the community itself or on a national basis.

A program of this nature will automatically increase earnings. With better nutrition, higher earnings, and further education, the population will be able to satisfy newly-created demands and thus improve its micro and macro environment (No. 4 in the Figure). The community will then have achieved its main objective: the happiness and well-being of its people.

These four phases of the program are presented in the following graph (Figure 3) and are numbered according to the sequence in which they should be developed. They are included within a closed circle (considering that one is the generator of the other), in a continual form, until the program achieves momentum.

#### Stage 1: The Health Program

This phase of the program is already a reality and has been functioning for three years in Chimaltenango. By these means it is hoped: a) to satisfy the population's need of a health personnel service available permanently in the community, and who at any moment of the day or night can attend to their problems; and b) by means of effective sanitation, to improve the health status of the population.

Health programs of this kind already operate in all villages covered by the project. Assistance is being

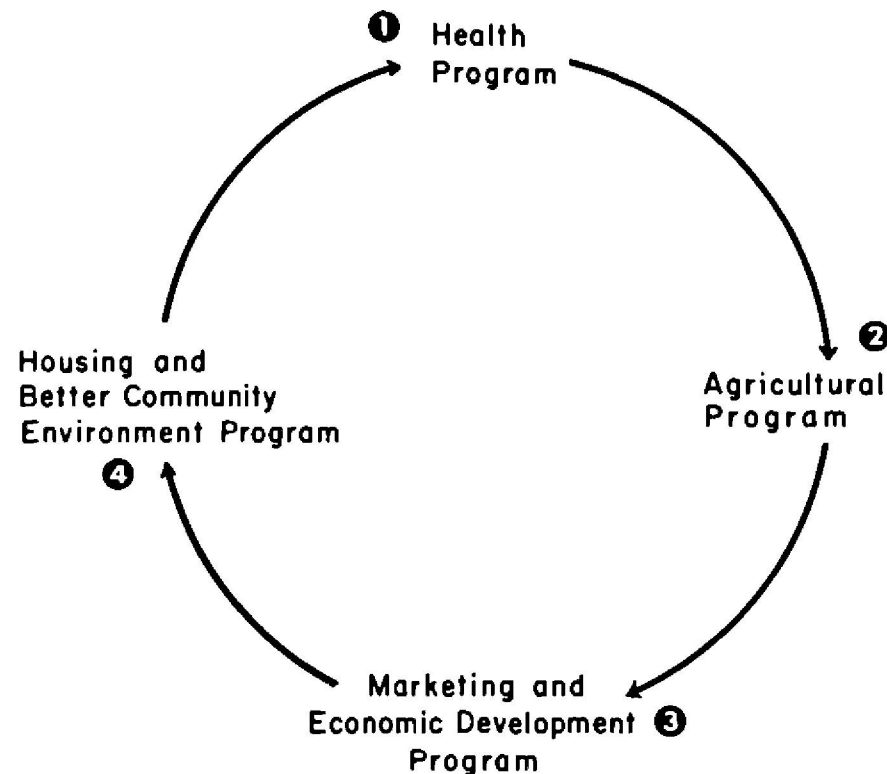


Fig 3.

provided in treating disease, in addition to preventative measures, and c) this program may serve to penetrate into these communities and to acquire the prestige, recognition and confidence that will permit it to develop further.

Participating in this stage of the program are (a) final-year students from the Schools of Medicine, Dentistry, Nutrition, and Nursing; (b) physicians attending postgraduate courses in Public Health with emphasis on nutrition and maternal and child care.

It is hoped that shortly it will be possible to incorporate into the program students from the School of Social Services, and to have "in service" professionals and employees attend extension courses organized by the Ministry of Public Health.

#### Stage 2: Agricultural Development Program

Through this program it is expected that animal and agricultural production of the region may be increased. An ample local research program with field operations is planned so as to obtain sound knowledge of the local resources and of more effective forms of introducing and applying modern technology to replace the primitive production operations of the region. Administrative and advisory services will also be offered to the communities through the agricultural extensionist so that they can put into practice improved methods of production.

Thus, in agriculture, the use of fertilizers, insecticides, hybrid seeds, etc. would be promoted, and in animal husbandry, better maintenance, nutrition, and animal breeding would be accomplished. Equally important, the development of agricultural enterprises on a cooperative basis would also be promoted.

The final aim of this second stage will be the supplementation of family income by the increment anticipated through the improved agricultural and animal production. Thus, it would be possible not only to meet and improve the primary nutritional needs of the population, but the introduction of surplus produce would mark the beginning of new



extra income and therefore provide a sound basis for the structuring of the third stage.

This second phase of the program would be directed at the following population groups:

a) The school-age group by collaboration with the educational sector in the planning and development of school farms and gardens, and by offering agricultural and animal husbandry courses to local school teachers.

b) The youth of the area, by collaborating with the Ministry of Agriculture in the organization of the 4-S Clubs, and

c) The adult population, by courses and demonstrations, also technical advice on the management of crops, animal care and the organization of cooperatives.

Final-year students at the Schools of Agronomy, Veterinary Medicine and Animal Husbandry, and the INCAP/University of San Carlos of Guatemala School of Nutrition will participate in this program. The latter are already acting as promoters and fomentors of agricultural and animal care activities which students of the other two schools are now developing. One veterinary student is already incorporated into this phase of the program.

### *Stage 3: Marketing and Industrialization Program*

The anticipated surplus products which will become available as a result of the second stage of the program, (already described), will be the basis for beginning the third phase. The following activities are contemplated:

a) Storage of agricultural products in order to facilitate conservation, with the construction of silos, storehouses, etc.

b) Development of industries to process and preserve the products.

c) Organization of commercial enterprises to take charge of the transportation, distribution and all marketing of resulting products.

d) Once industrial and commercial enterprises are established, it would be comparatively easy to organize other local companies to promote strengthening of the industrial and artisan-crafts of the region.

Plans call for the collaboration of students of the schools already mentioned, also those attending other educational institutions, particularly those from the engineering, chemical science and economic fields.

The final goal of the third stage of the program is the increased purchasing power of the family, who could then satisfy urgent needs that unfortunately they are unable to meet to-day, unless by means of state or private donations.

### *Stage 4: Improvement of the Environmental Program*

A healthy, better-fed man, capable of work, is a valuable element who is ready to participate in the fourth stage of the program, the improvement of his macro and micro environment in every way: physically, socially and culturally.

At this stage, it is planned to initiate all action directed towards the improvement of family and

individual living conditions. These include better clothing, housing, education, recreational activities; and improvements in the general conditions of the community by the establishment of sewerage systems, water supply, construction of buildings, roads, etc.

Plans for this last phase of the program call for the participation of students from other schools of the University of San Carlos in addition to those already mentioned.

### **General Objectives of the Program**

The following objectives are planned:

*A. To provide practical experience to the university student through direct participation in programs based on the national ecology*

The main educational institutions are located in the capital city of Guatemala. It is a well-known fact that Guatemala has a very different ecology from conditions actually existing in the rural areas. So, it is advisable that during his academic training, the future university graduate be exposed to a rural environment. Living this direct experience, he will acquire the necessary knowledge, but more importantly, also develop favorable attitudes toward programs directed to improve these rural conditions.

*B. To offer community services*

While fundamentally academic in nature, the program nevertheless permits improvement in living conditions of the rural communities. This objective will be fulfilled: (a) in a direct way, through services offered by students working in the region, and (b) indirectly, through the development of favorable attitudes by students themselves towards rural activities as part of their future commitment.

*C. To develop field and operational research for improvement of specific activities contemplated in each stage of the program*

In general, programs in the rural area are not sufficiently reinforced by adequate research. Anthropological differences make it imperative to investigate the local situation thoroughly before starting any serious program. Many projects have failed because they have not taken into account the cultural aspects of traditional societies. We believe that, with the leading capacity of institutions participating in the program, and with the help of trainable personnel, basic norms may be soundly established and ultimately extended to include other areas. Moreover, these research activities will provide students with excellent experience in the use of scientific methods, and will also strengthen their interest in research.

*D. To study ways of coordinating the different development programs*

Through this objective it will be possible to analyze and search for a solution permitting effective coordination of the different activities while avoiding illogical competition and duplication of efforts among the various institutions working in rural areas.

Administratively, the four parts of the program may function independently as separate programs.

This cannot apply, however, in their action upon the community; they must be well coordinated in such a way that they can be envisioned as a single working unit with a well-defined philosophy, specific goals and long-term objectives.

All students collaborating in the different phases of the program must act in a coordinated manner. Furthermore, they must all be provided with the opportunity to share experiences together in order to develop that "esprit de corps" which will motivate them for this type of community work and also make them realize the importance of the role they play in developing their country.

### Conclusions

It is an established fact that the world is becoming progressively more and more complex. Many factors are responsible for this. Among the main reasons the following have undoubtedly played an important part: increasing population; social movements demanding equality among individuals; impact of technological advances of pure and applied sciences; and the cultural hiatus between social and technological development which has forced the

search for new values, particularly by the young people.

All these circumstances demand that we should seriously consider whether the traditional objectives and goals in our culture meet our present social needs, or if it is necessary instead, to revise and broaden them, introducing innovations to solve problems created by contemporary society.

The need for change and its implications is a reality faced by all the universities of the world regardless of their degree of development, traditions, stability and consistency of principles.

Our universities, always in the forefront with new developments, should inspire individuals and communities to reach the physical, cultural, social and economic standards that all humans are entitled to. But in order to accomplish this goal, it is vital that new approaches in university academic techniques be introduced. Students must be exposed to integrated community programs such as the model program presented here, and which has already been put into partial practice in the highlands of Guatemala.

We have great hope that through this new and ambitious program, the high ideals of the younger generation to serve efficiently their community and thus their country, will be completely fulfilled.