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SOUTH AMERICA NUTRITION POLICY AND PLANNING SEMINAR:

FINAL REPORT

June 3-13, 1975

CIAT Center

Palmira, Colombia

Catholic Relief Services-USCC
1011 First Avenue
New York, New York 10022

ACKNOWLEDGEMENTS:

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Our sincere appreciation for a provocative and productive seminar go to Dr. David P. Nelson and Mr. Paul Bueker, who were the principal architects of the seminar's content. We are also grateful for the important contribution of Dr. James Pines, and Dr. Frances C. Rothert's kind assistance.

Thanks must also be extended specially to Lynn Renner and Miguel Gomez of our CRS/Colombia staff, who handled the myriad administrative details necessary to prepare and implement the seminar. The diligent work of three secretaries, Marilyn J. Beni, Luz Stella Siabatto and Rosemary Kirby was also essential to the work of the seminar and the preparation of this report.

Our field study would not have been possible without the generous collaboration of Caritas Diocesana of Cali. And our seminar could not have run so smoothly without the attentive service offered by the CIAT staff.

We dedicate the seminar to the people of La Cumbre and the millions of others like them throughout South America with the sincere hope and prayer our labor may help to enrich their lives and create a just world.

Msgr. Roland Bordelon
Regional Director for South America

Daniel Santo Pietro
Development Assistant and Seminar Coordinator

SOUTH AMERICA NUTRITION POLICY AND PLANNING SEMINAR

Catholic Relief Services-USCC

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THE EGG-SELLING DILEMMA - AN EXPERIMENT

Many people uncritically propose actions to improve nutrition which are based on inadequate understanding or unqualified assumptions about the nutrition system or the actual socio-economic conditions of the persons who are exhorted to undertake the actions. These proposals take the form of cliches such as, "if campesinos would just eat their eggs and not sell them, there would be no nutrition problem", or, "nutrition education will change people's eating habits so that they use their food more effectively" or "increased productions will abolish malnutrition," etc. Aside from the logical inconsistencies and ethnocentric biases contained in these statements, the danger of their widespread use is that they deceive specialists and generalists alike into believing that malnutrition is a condition easily remedied by single projects. This "project mentality" engenders immense frustration since such projects alone cannot alter nutrition status. Thus, sponsors become disillusioned with "nutrition projects" and write off nutrition as an impossible or inappropriate goal for development.

To bring this situation home to the participants, on the last day, without prior notice, they were given the choice between two daily diets of equal monetary worth: two eggs or typical Colombia menu consisting of 2 "arepas" and coffee for breakfast, sancocho, pineapple and coffee for lunch and rice soup with bread and coffee for supper with coffee in mid-morning and mid-afternoon. Twenty six of the twenty-nine participants including staff chose to "sell" their eggs and "buy" the (approximately) calorically adequate diet.

At lunch, an exhortation was delivered to "eat one food from each food group daily." The difficulty of compliance was readily apparent. Finally, at dinner (which only half the group attended, the other half having sought relief at local eating establishments.), the group was informed that food production in the country had in fact increased last year in accordance with the production cliche, but that they had not received any of the increase. Why? Most participants found the experience worthwhile and the organizers expect them to be circumspect about cheap and easy solutions to nutrition problems in the future.

NUTRITION PLANNING SEMINAR AGENDA

June 2

Evening Group dynamics exercises to develop confidence and to form cohesive work groups Bueker, Nelson

June 3

8:30 - 9:45 Discussion, What is development? - and under-development? Groups

Brainstorming session, Identification of Development Goals Groups

Reports from groups

10:00 - 12:00 Nutrition in Development Bueker

2:00 - 5:30 Analysis of selected projects in which the seminar participants have had personal experience. The objective of this analysis is to examine the steps of the planning process and project implementation, using an adaptation, in Spanish, of the Logical Framework simultaneously identifying important nutrition-related elements of the project. Groups, Pines, Bueker, Nelson, Rothert

June 4

8:30 - 12:00 Basic Nutrition Concepts, Foods, Physiology, and Metabolism Nelson

2:00 - 5:30 Analysis of selected projects continued in groups Pines, Nelson, Bueker, Rothert

June 5

8:30 - 10:00 ----- Planning Process-- 1. Describe problem. 2. Describe causes 3. Summarize resources and limits Pines

10:15 - 12:00 Individual assignment, Identify factors which determine nutrition status

2:00 - 5:30 Analysis of selected projects continued in groups Pines, Nelson, Bueker, Rothert

June 6

8:30 - 11:00

Group work on Nutrition System

Groups

11:00 - 12:15

Use of system in problem description, projection of results, etc.

Pines

2:00 - 5:30

Analysis of selected projects continued in groups

Pines, Nelson,
Bueker, Rothert

June 7

8:30 - 12:15

Planning Process (cont.)-- 4. Priorities and goals 5. Identification of intervention points and alternative actions 6. Programming hypothesis 7. Mobilization and implementation 8. Evaluation

Pines

2:30 - 4:30

What parameters are important to describe nutritional status of a community and operation of the Nutritional System.

Groups

4:30 - 6:30

Identify principal sources of information required to measure above parameters; the critical limits for the parameters; information sample size.

Groups

June 8

Free (Some of this free time should be used to complete the assignment from the previous day.)

June 9

8:30 - 9:45

Presentation of results of assignment from June 7 - noting various categories of necessary information to be collected

Groups

10:00 - 11:30

Panel; Discussion of research in rural Colombia
Classification of Work by Source of Information (Special subgroup)

11:30 - 12:00

Formation of work groups for field work - begin field work preparation (identify materials needed)

2:00 - 5:30
and evening

Continue preparations for field work

SECTION I: INTRODUCTION AND LECTURES

Development and Nutrition

The seminar began on June 3, day one, with a discussion of the place of nutrition in development. Four groups, which had participated in the group dynamic exercise the night before, were asked to define development and establish necessary goals. This group session served as an introduction to a general group discussion led by Mr. Bueker on the importance of nutrition in development, both as a goal and quality of life indicator.

Lectures

During the rest of the week, several lectures were offered by Drs. Nelson and Pines to supplement the analytical work of the four groups on specific projects. These informational inputs laid the basis for all the group work that followed.

The conclusion of the initial session and the lectures given during the first week are summarized in this section.

RESUME OF GROUP DISCUSSIONS
WHAT IS DEVELOPMENT?
DEFINITION AND GOALS

June 3

Group I

Definition: A dynamic process of change within a conglomerate or margined group that begins with self-analysis and through its own effort, undertakes actions that will utilize its own resources, as well as those from the outside, to solve its own problems. These actions are in accord with the priorities that are determined, to obtain the well being of the community in economic, social, political, and cultural aspects.

- Goals:
- To create a critical consciousness within man, stimulating his own creative capabilities.
 - Equal opportunity.
 - Participation in the community's decisions.
 - To provoke an exchange of material and spiritual wealth.

Group II

Definition: A continuous process in which one participates in and about that which society offers, eventually enabling one to obtain his personal goal.

- Goals:
- To better the nutritional states of infants.
 - A liberal education
 - To place spiritual and moral values in all areas of the community reached by the project.
 - To participate in decisions and solutions.

Group III

Definition: A change, advance, or betterment, mental or material, that elevates man's morale to a state better than the one that existed before the change occurred.

- Goals:
- Organization within the community
 - Maximum use of resources
 - Continuous education

Group IV

Definition: A participation in the process of a rational, planned, and creative change that reaches an awareness and fulfillment within the person and his social context.

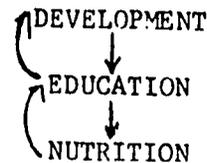
- Goals:
- Liberal education
 - Guaranteed sense of organized participation and decision making that aids in community growth.
 - To create a more unified and humane society.
 - Equal distribution of wealth

- To guarantee the basic needs of each individual
- To raise the per capita income.

NUTRITION IN DEVELOPMENT

Paul Bueker
June 3, 1975

Nutrition was related to development in two examples:



One part of development is the health of man; one part of this health is nutrition, and viceversa. The same relation can be made using education.

Nutrition in development implies several factors. Four subthemes were presented.

1. What is development? (Discussed by the groups)
2. What is nutrition?
3. What is nutrition in development, or the malnutrition found in underdevelopment?
4. The planning of nutrition in development or nutrition in the planning of development.

The traditional concept of nutrition was discussed. This has been the concern of certain professional groups: doctors, scientists, some academicians, and those who administer programs to distribute foodstuffs. Afterwards, it was concluded that nutrition is becoming the concern of other groups as well, in the last few years: economists, industrialists, agronomists, planners, etc.

With the assembly's participation, the relationship between nutrition and the goals of development, previously determined by the various work groups, was identified. This relationship was made in two general categories: malnutrition in the individual, and its consequences in society.

The following are the results of the discussion:

- A. Aspects of Malnutrition in the individual
 1. Energy
 2. Development of the body
 3. Mental capacity
 4. Emotions
 5. Infant mortality
 6. Morbidity

7. Socio-economic development
8. Deformities and incapacities

B. Consequences in the society

It was indicated that the following consequences depend on age, type of malnutrition, severity, duration, and the characteristics of each.

1. Productivity (ex. the influence on the per capita income)
2. Participation (the capacity to participate)
3. Public Health (contagious illnesses, public expenditures)
4. Inequality (prejudices that cause socio-economic problems)
5. Population (the influence of malnutrition)
6. Education (public expenditures are less effective)

Time ran out before discussing the fourth point, which was the nutritional planning in development that in reality is the theme of the seminar.

It was concluded that malnutrition in the individual produces social consequences.

The final note was that the participants should keep in mind the idea that first there must be a certain human base upon which one may build.

BASIC CONCEPTS OF NUTRITION:
FOOD, PHYSIOLOGY, AND METABOLISM

David Nelson
June 4, 1975

The speaker's purpose was to help the group understand certain concepts that would later facilitate the work that is to be done in the smaller groups.

The individual is an organic being. While some organisms are able to combine solar energy with simple molecules to manufacture the more complex molecules of their bodies, our bodies need chemical energy, and complex molecules that we are not able to synthesize: fats, proteins, and CHO (Carbon Hydrates.) The source of these is food.

The quantity of food that we need for our vital processes depend upon:

1. The size of the body. (This is directly related to energy consumption.)
2. Activity
3. Growth
4. Health (Important in regard to childhood illnesses.)
5. Environment (hot or cold climate, etc.)

The consequences of the lack of vital food elements may be:

1. Inactivity
2. Poor health
3. Retarded growth

All food has a certain concentration of complex molecules and energy. The quantity of these that is consumed depends upon their concentration and the quantity of the food eaten.

Concentration x Quantity (ought to satisfy) Body needs.

If the concentration of energy or a complex molecule is low in a given food, it will be impossible to consume a sufficient amount of that food to satisfy basic needs.

Example: A person needs 40 grams of proteins in his diet. If he eats 400 grams of a cereal, with 10% of the needed protein, $0.10 \times 400 \text{ gr.} = 40 \text{ grams}$, he has satisfied his protein need.

In certain stages of life, nutritional requirements increase. The most important stages are those of infancy and childhood, when the growth rate is rapid, thus requiring relatively more energy and proteins.

A new born child has body requirements that are quite high. At the end of one year the protein requirement is halved. At the end of five years, the child needs only one third the protein concentration.

Breast milk is one of the most important foods already containing sufficient proteins and calories that meet the infant's needs. In the gestation stage and the nursing stage, the child's requirements are also increased.

There is a special relationship between nutrition and health; the nutritional requirements increase in direct proportion to the severity of illness. It is thus more difficult to satisfy the body's needs in this state, and a vicious circle is created. An illness such as diarrhea or gastric problems, that normally is not serious, may be so for a malnourished child because he has not had nutritional food to alleviate his poor state of health.

Half of the children in Latin America that die, die from either malnutrition or else from a disease where malnutrition was an added factor.

The Quality of Protein

Proteins are composed of amino acids the way words are composed of letters.

Among the amino acids, some are vital, or essential. In other words, the body itself cannot manufacture them. Without one of the vital amino acids, the utilization of the others is limited. The body needs a complete protein, therefore all of the vital amino acids are needed at certain levels. If the amino acids do not reach the required level, the result is a deficiency in protein. Moreover, the combination of these amino acids have to be simultaneous and balanced; if not, they are unable to create the complete protein.

The first priority among the body needs is energy. If a sufficient amount of calories is not consumed, a certain part of the protein will be converted into energy. In a population that lacks energy, proteins are an expensive source of energy and they no longer function as protein. If the energy need is fulfilled, then the proteins consumed are able to satisfy the body needs.

All foods contain usable and unusable portions. The usable portion is absorbed by the body for its functions; the unusable portion is eliminated.

The majority of the world's population has a diet of limited variety and few proteins.

Example: The daily diet of a peasant. He requires 2,000 calories and 45 grams.

He consumes:

Rice: 250-300 grs. daily x 4 calories/gr. = 1,200 calories in rice.
250-300 grs. x 0.08 proteins/gr. = 20-24 grs. proteins

Beans: 100 grs. x 4 calories/gr. = 400 calories
100 grs. x 0.20 proteins/gr. = 20 grs. of proteins

By simply eating rice and beans, the peasant has almost fulfilled his body requirements. Moreover, these foods also contain the other nutrients that are important. In this case, if we are able to fulfill the caloric requirements in a community, by use of a traditional diet, we have also managed to fulfill the rest of the nutritional needs of that community.

Other ingredients in the diet satisfy the needs of certain nutrients that may be deficient, such as vitamins. However, vitamins are not the major problem. The principal problem is that of adequate energy. (calories)

"Commercialgenic" Malnutrition

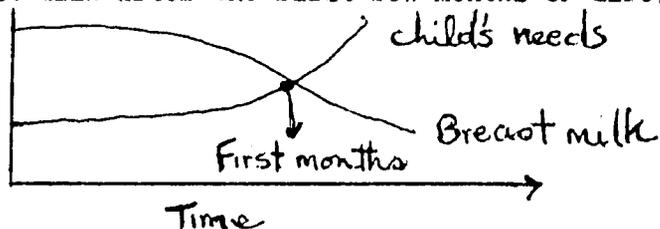
In general, a traditional diet will satisfy the community, providing, of course, that there are no cataclysms or disasters to increase the nutritional and caloric needs.

However, there also exist socially imposed situations that lessen the nutritional level of the people. These may be the results of imitation, or consumer advertising.

Example: Instead of drinking natural fruit juices, one may drink soft drinks. Another example is the misuse of formulas by the mothers of young infants.

Breast Milk

Breast milk is a vital nutrient for the infant. A problem that arises is that the breast milk generally does not meet the needs of the infant after six to eight months of nursing. The following graph shows the need to supplement the diet of breast milk after the first few months of life.



At eight months, the infant tends to contract illnesses; another reason for the need to supplement breast milk.

At this point, the group discussed the symptoms of community malnutrition and how to measure it.

Level of Food Consumption in a Community, a Family, and a Person

The relationship between the basic need for energy and the availability of energy is seen in three ways.

1. More needs than food to meet those needs.
2. Enough food to meet the needs.
3. More food than is needed to meet the needs.

It is necessary to establish which of these three cases exists in the community, the family, the individual. It may be seen in the community that

there is adequate food supply, but on a family level there is malnutrition due to the poor distribution of the supply. This implies certain interventions to resolve the situation. There also exists the possibility that a family may have enough to eat, but the food is doled out in such a way that the needs of the individual members are not met. This would require another class of interventions. Sometimes, an individual eats what appears to satisfy his needs and yet he is still undernourished; this would call for still another type of intervention. Therefore, the situation of nutrient deficiencies on the community, family, and individual levels each call for a different intervention.

BASIC ELEMENTS
OF
PLANNING

James Pines
June 5, 6, 7

Planning implies above all, the setting up of priorities. It is an effective process of resolving conflicts; it should be based upon familiarity with concrete information and political, cultural, religious, and economic values.

The agent for change may take part in this process, adjusting to the pertinent information and keeping in mind the following questions:

1. Who makes the decisions?
2. Who influences whom?
3. Who is willing to listen?
4. What is the best method to gain influence?
5. What is it we wish to achieve?

Planning Scheme

1. Description: Dynamics of the problems or conditions that desire improvement. (Analyzing what would happen if we did nothing.)
 - a. Whose problem is it?
 - b. Where are the problems? (city, rural areas, sectors, etc.)
 - c. Type of malnutrition (what nutrients are lacking)
 - d. Degree of malnutrition (signs)
 - e. How many are affected by the problem?
 - f. Duration of malnutrition (chronic, seasonal, acute)
 - g. For a good description, it is necessary to separate the data as much as possible, the better separated, the more useful. One should never plan using averages, because that hides the real facts.

2. Diagnosis

What are the important factors that determine the nutritional state? A valuable tool is the nutritional system. One cannot speak about a single factor that produces malnutrition, but rather a group of factors that are interrelated.

Ex. Nutrition	Illnesses
Nutrition	Income
Nutrition	Eating habits

The important thing to know is the quantitative relationship between

the variables and the nutrition factor. The identification of one factor does not solve a problem. It is necessary to identify all of them, and then form programs to alleviate them.

3. Resources and Limitations (Restrictions)

- a. Resources: finances, people, experience, current activities, etc.
- b. Limitations: physiological, political, cultural, skilled labor, bureaucrats.

4. Priorities and Provisional Goals

What should we do? - This is the critical question!

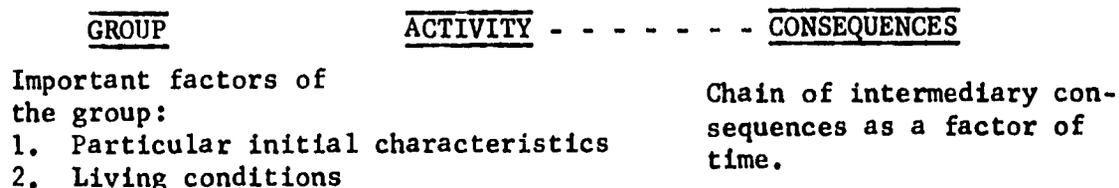
If everything is a priority, nothing is a priority. The determination of provisional, calculated goals, demands the contribution of the community to assure the fact that they will be realistic. It must be kept in mind as much as possible, who is participating (national or local governments, developing agencies, funding agencies, etc.), and the specific nutritional situation, which was analyzed in steps 1. Description, and 2. Diagnosis.

5. Identification of Critical Points and Related Alternatives

One returns to the question "how?" ~~First~~ the bottlenecks are analyzed, identifying all the critical points in the nutritional system. Later, all the alternatives that are related to these bottlenecks are identified. From these alternatives, the best are selected, and together, they make the building blocks for a solidly constructed plan of action.

6. Formation of a Plan of Action and Related Hypothesis

The strategy, or plan of action, is expressed in the form of a programmatic hypotheses. If we do something, there will result certain consequences of our actions. It includes the elements of the following diagram:



The important factors of the group influence the consequences that one may hope to find. It is necessary to distinguish between the group with which we are working and that which we are hoping to benefit.

Evaluation is the continuous process of verifying the hypothesis. A chain of evaluation ought to correspond to the intermediary consequences.

7. Mobilization and Implementation

8. Evaluation and Feedback

Continuous evaluation identifies problems in the implementation, relating them to the programmatic hypothesis, and helping in replanning. To wait until the end of the project is too late.

An Outline and Rules for Use of Routine Feedback

- a. Be aware of the time available and the capability of those collecting data.
- b. Look for simple means to measure the selected indicators.
- c. Determine the exact use of the data.
- d. Make sure the programmed activities and the evaluative activities coincide.
- e. Assure that the person, or persons, that does evaluation work maintains an objective point of view.

THIS IS NOT A MECHANICAL PROCESS. IT IS A WAY OF THINKING.

COMMENTARY ON THE NUTRITIONAL SYSTEM
AS A TOOL FOR ANALYSIS

James Pines

AVAILABILITY → DISTRIBUTION → CONSUMPTION → UTILIZATION → NUTRITIONAL
STATUS

1. Create a balance sheet. There is a relationship between the total food production and the overall needs of the country. If it is a favorable one, then it is possible, but not assured, that there will be a satisfactory nutritional status for everybody. The balance sheet can serve as a guide in improving the distribution of products and the level of production. If there exists a great excess of available foodstuff, it is probable that the problem, then, is not one of production, but rather in another part of the system.

It is important to consider the small farmer because he is operating in each part of the system. Much available data does not deal with this member of society. However, an increase in his income will represent an increase in the prices for the urban consumers.

2. Intermediaries. Control the distribution of production. It is important to verify if there is exploitation, or if the current system is adequate before exchanging it for another one, such as a consumer cooperative.

Failure to analyze the role of intermediaries may result in a change to something that will end in failure or in higher prices.

3. The cost of nutrients per units is a critical point. One must know the characteristics and conditions of the situation where the food is going to be the most efficiently utilized. One must also keep in mind the social consequences of food promotion. An example is the soybean which at one time was very inexpensive, but today is expensive. The feeding of animals within the system is important. Many times a product that is more nutritious is fed to the animals and not to the people, because the people do not or cannot buy it. Thus, in order to receive that food, it becomes expensive for the consumer.

4. Know what food will be decreased if one is increased. An example of

not thinking of this factor is the green revolution. The quantity of rice and corn that was cultivated increased, but the quantity of legumes was reduced.

5. Understand the relationship between the family income and the minimal cost of an adequate diet. With this one may recognize three groups:
1. Families where there is no possibility of having an adequate diet, thus an adequate nutritional state. 2. Families that already have adequate resources, but for other reasons, do not have adequate diets. Nutritional Education could be important for this group. 3. Families that have an adequate diet, but where there exists malnutrition for other reasons.
6. Understand the relationship between the cost of an adequate diet for a family and the size of the farm. This relationship is useful in all countries.
7. Know the ecological zones and their influence. In other words, this means do an ecological profile. There is an influence of climate, geography, etc, in one zone, and also a similarity among various regions in distinct parts of the world. The nutritional problems in ecologically comparable zones are also similar.
8. Infant mortality, it is a determining factor in the nutritional state of a given population. It conveys to a certain point, the malnutrition within the region. It is necessary to be careful with the data gathered on this subject, which is almost always taken from official sources, and thus does not count the great number of infant deaths in isolated rural areas.
9. Role of the Market. The major part of nutrients reach the consumer through the supply and effective demand of the market. Effective demand implies the consumer has the resources. The nutritional problem, to a certain degree, is one of the consequences of the imperfect system of the market. For example, the lack of income and the preference of the consumer influence the effective demand. Moreover, it produces a buying pattern that influences the quantity of nutrients that reach the public. Therefore, one problem that is presented, is how to improve the distribution of foodstuff outside the market system.

SECTION II: GROUP WORK

Project Analysis

In the afternoons of the first four days, the four groups analyzed one project per day. The four consultants for the seminar rotated among the groups acting primarily as resource persons. Projects representing a diverse range of activities were selected by the seminar organizers beforehand and each group of participants from country programs summarized them within the "logical framework" format.

The group analysis focused on logical linkages between project stages and the presence or absence of nutritional impact. Each group session attempted to replan the projects both to improve its linkages and to make achievement of nutritional objectives more explicit.

Examples of three logical frameworks, which were reworked, are included in the appendix.

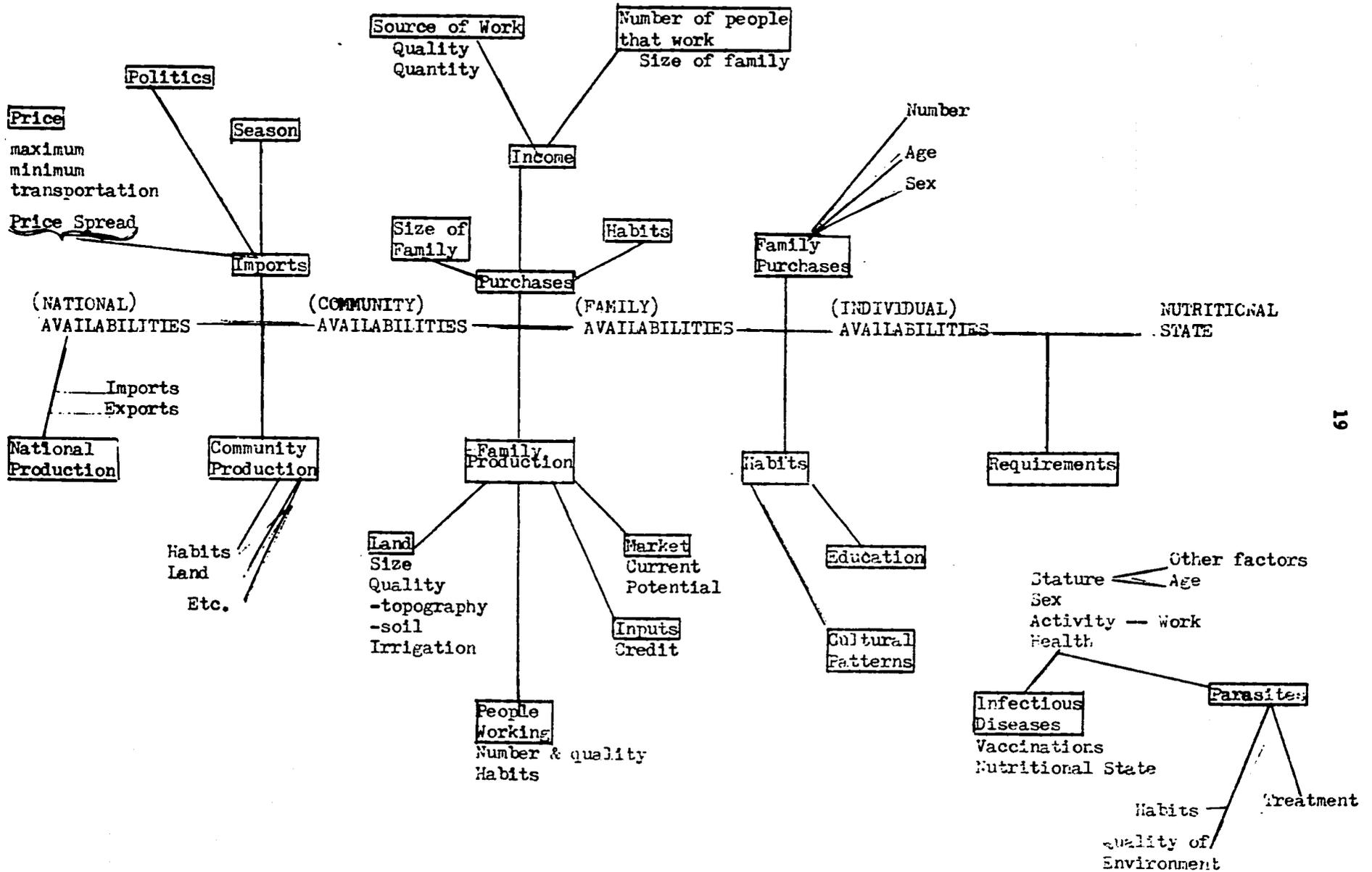
Nutrition System

In order to understand why a nation, community, or family is malnourished, it is useful to write down the processes which lead to the condition. In so doing one makes explicit his assumptions about why and how the processes affect nutrition, and, in effect, states a theory about the structure and function of a nutrition system. It was assumed that the participants intuitively understand most of these processes and that, through group work, the intuitive understandings could be made explicit in diagram form.

At the end of the third morning, each participant was asked to begin writing down the factors he felt were important in determining nutrition status and to complete the list by the next morning. In subsequent group work, the individual lists were combined and factors linked diagrammatically to form a representation of the nutrition system. The group lists and diagrams were later fused into a single representation which is presented in the diagram, Relationship of the Elements of the System.

Once the utility of a representation of the nutrition system for descriptive and predictive purposes had been discussed, the groups were asked on the afternoon of day five to adopt subsystem specialities: production, distribution, consumption and utilization-nutrition result. They were then assigned the task of identifying the parameters which describe the operation of the nutrition system in a community and the nutrition result, such as total food production, prevalence of malnutrition and what factors to measure in order to quantify the parameters, e.g., agricultural land X productivity, weight for age in preschool children.

RELATIONSHIP OF THE ELEMENTS OF THE SYSTEM



These factors are summarized in the chart, Parameters of the System.

When lists of these parameters and measures were ready two hours later, the groups were told to indicate where they would expect to find each piece of information, what materials they would need to get it (eg. scales, questionnaire), a proposed sample size, and how they would know if the measure were important (critical limits). The result of this group work, parameters, measures and sources, is attached in the appendix.

In order for the information to be collected efficiently, it was necessary to reorganize the measurements according to work groups, specialized by source of information (eg., family survey, agricultural extension agent, library). This task was performed by two participants during the morning of day six after each group presented its list. While the work group assignments were being prepared, the Colombian participants presented a panel discussion on working in rural colombian villages.

Field Study

The work group specialities were determined to be 1) family survey, 2) interviews with public officials, 3) secondary statistical sources in the community -called "special information" and 4) secondary sources outside the community - called "library". During the rest of day six, the work groups planned their respective tasks for the field study and developed the necessary instruments. The Family Nutrition Survey, which consumed the most time and persons, and a compilation of the answers received are also included in the appendix.

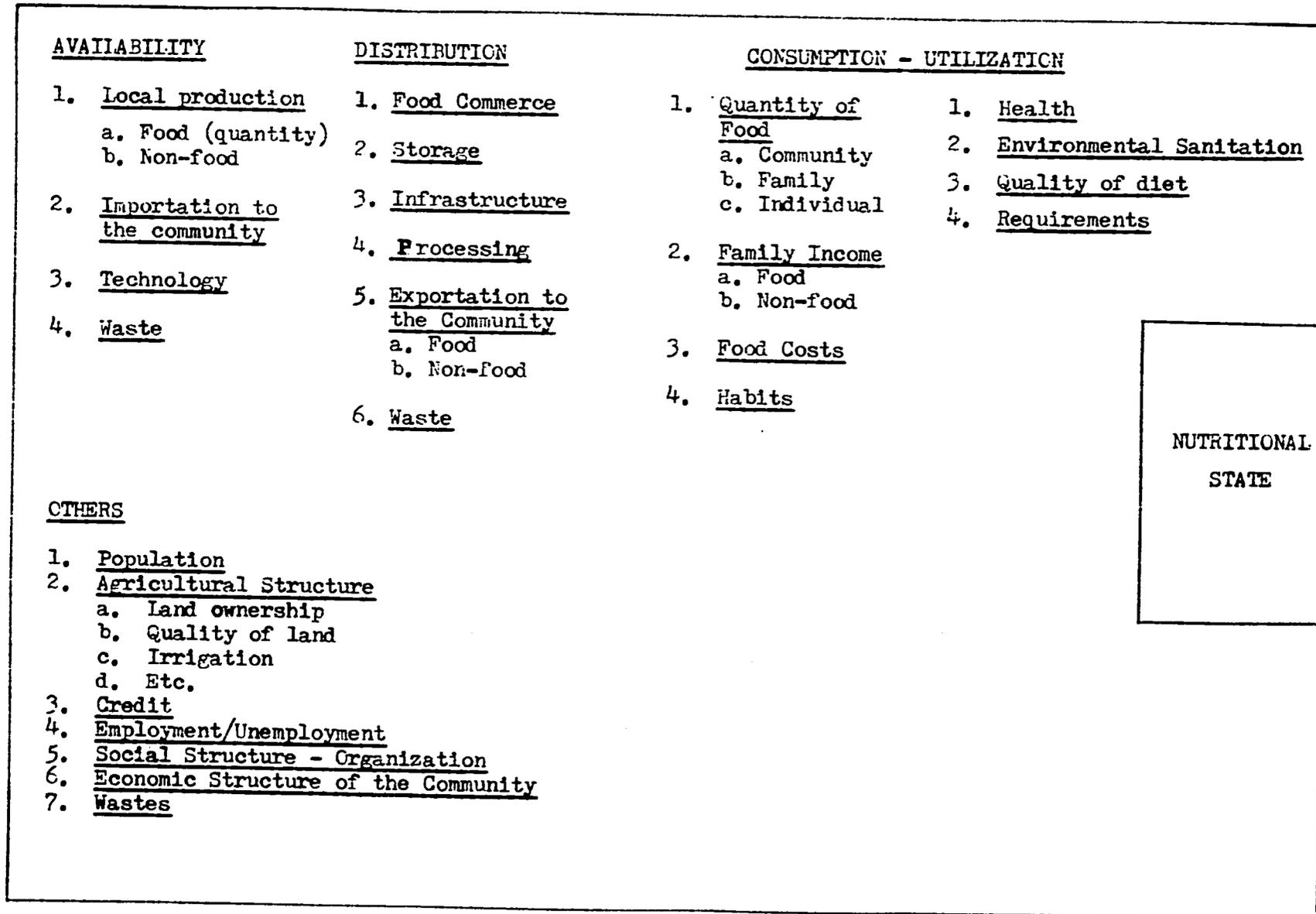
On day seven, the group collected the information required to evaluate the nutrition situation of La Cumbre, a coffee-growing township of 12,000 people located about 28 km northwest of Cali. Most of the group spent the day in La Cumbre, administering the survey questionnaire and interviewing key informants. The following day participants compiled their results and presented summaries of findings. In the late afternoon, they returned to their original groups to interpret findings according to subsystem specialities and to identify problems and their key determinants.

Feed Back and Evaluation of Results

That night, Dr. Henry Wilson of Community Systems Foundation, who had been present for the presentation of findings and their interpretation by the groups, presented some feedback concerning data collection and analysis based on his seven years' experience in community nutrition and observations of the groups' activities. Important points which he made were:

- 1) The need to sequentially measure only key variables in establishing nutrition system performance. This can be done based on an explicit theory of the processes by which communities feed themselves, just as a physician sequentially measures only a few selected parameters of his patient's condition based on his understanding of how the body works to arrive at a diagnosis.
- 2) The concept of nutrient gaps. The differences between nutrient consumption and nutrient requirements at the individual, family and

PARAMETERS OF THE SYSTEM



community levels are defined as "nutrient gaps." The sequential estimation of these gaps permits the identification of levels at which inadequate food supply becomes a limiting factor on nutritional status. It also permits inferences about the kinds of interventions required to improve system performance.

- (3) Lists of possible interventions. Such a list complements the use of nutrient gaps and can be elaborated according to the important links of the feeding process: agriculture, storage, transport, processing, distribution, marketing, income, food habits, health.
- 4) The answer to "what should be done to improve nutrition" is often more a function of the respondents training than the condition of the system: agriculturalists want to raise production, nutrition educators want to do education, sanitary engineers want to build water systems.
- 5) Cause-effect or problem-solution approaches to nutrition are essentially static and often obscure an understanding of the dynamic feeding process.
- 6) That projects are nothing more than hypotheses about the system; if the system is perturbed in a certain way (e.g., diarrhea controlled in children 0-5 yrs.) then a predicted result will occur (malnutrition in children 0-5yrs. will decline). Our knowledge about the feeding process and thus our ability to predict nutrition outcomes, depends on careful measurement of process performance (nutrition status) before, during and after the project (evaluation).
- 7) The way to begin to institutionalize this approach to project planning is to have a good idea - first, of how the feeding process works and second, of how to make it more efficient.

On day nine, the groups completed their interpretations of findings and presented them. A list of problems and determinants identified is attached.

Design of Interventions

A general assignment was made to the groups to develop a program to attack the problems so as to permanently reduce malnutrition of children 0-6 yrs. in La Cumbre by 20% within two years. Subsequently, individual groups were asked to limit themselves to the urban center, the rural areas or a rural neighborhood, Parraga, where malnutrition was particularly severe.

All four groups decided that the problem most amenable to attack was that of gastrointestinal infection and parasitoses.

Programs of activities were planned and presented by each group to achieve the goal and two of these are included here. All four interventions were analyzed by the entire seminar for logical progression from resources to achievement of purposes.

The seminar was ended after participants completed an evaluation questionnaire which required rating of achievement of seminar objectives as well as a subjective evaluation and a statement of proposed behavioral change in participants work.

IDENTIFICATION OF PRIORITIES AND POINTS OF INTERVENTION

Nutritional Problem: Rate of malnutrition of 60% among children ages 0-5.

<u>PROBLEM</u>	<u>DETERMINANTS</u>	<u>POINTS OF INTERVENTION</u>
<u>GROUP I (NUTRITION STATUS AND UTILIZATION)</u>		
a. Parasites and gastroenteritis in 90% of the population.	<ul style="list-style-type: none">- No potable water- Water not boiled- Lack of hygiene- Inadequate means for elimination of wastes- Insufficient sanitary education	*
b. Inadequate diet (Together with II b.)	<ul style="list-style-type: none">- Exportation of the basic products: milk, eggs, beans *- Actual consumption of 1,900 calories and 31 grams of proteins. Ex: frijols, coffee, sugar, cornmeal patties, bananas, yuca, etc.- Regular diet costing Col\$ 300 per week, while the majority of families earn less than Col\$ 300 weekly.	
<u>GROUP II (CONSUMPTION)</u>		
a. Low food consumption (Together with IV a.)	<ul style="list-style-type: none">- Low incomes- Part time work and unemployment- Lack of job opportunities- Low salaries- Lack of reinforcement of labor laws	*

PROBLEM

DETERMINANTS

POINTS OF INTERVENTION

b. Inadequate diet

- High food exportation
- Lack of local production
- High food costs
- High transportation costs

- Lack of better understanding of nutrition
- Poor distribution
- Same classes of foods
- Poor preparation of foods
- Counterproducing traditions and customs

GROUP III (DISTRIBUTION)

Exportation of agricultural and fish products that are essential for good nutrition.

- Economic system of free market stimulates foreign market
- Monopoly of the intermediaries
- Inadequate physical infrastructure
- Lack of refrigeration in homes
- Lack of food processing

GROUP IV (AVAILABILITIES)

a. Insufficient incomes to cover a minimum diet

- Lack of organization of efficient bases
- Unemployment
- Poor utilization of agricultural resources
- Inadequate credit system
- Limited use of technology
- Lack of land (47 % of property owned by 1.8% of landowners)
- Low production of coffee

RESUME OF GROUP PROJECT

Situation: Population of 3,000 persons in the urban center of La Cumbre with an incidence of 90% with parasites, with an inadequate diet.

Hypothesis: The adequate processing of the water in this area concomitant with the treatment for parasites and the education in this region, could reduce the incidence of parasites and consequently decrease the rate of malnutrition in children ages 0 - 5 years.

LOGICAL FRAMEWORK

SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	IMPORTANT ASSUMPTIONS
<p><u>A.1. GOAL</u></p> <p>Decrease the rate of malnutrition in La Cumbre (low weight-age) in the children ages 0 - 5 by 20% within two years.</p>	<p><u>A.2. MEASURE OF GOAL ACHIEVEMENT</u></p> <ul style="list-style-type: none"> - % of malnourished children - In two years the rate ought to decrease from 60% to 40% 	<p><u>A.3. RELATED TO GOAL</u></p> <ul style="list-style-type: none"> 1. Vaccination of children 2. Stability of availability of food 3. Relationship between food prices and income
<p><u>B.1. PURPOSE</u></p> <ul style="list-style-type: none"> 1. Reduce the incidence of parasites 50% in the population of La Cumbre within two years. 2. Eliminate the incidence of parasites in 70% of the population within the age group 0 - 5 years. 3. Succeed in having 130 mothers accept the proposals for the achievement of the elimination of parasites and the improvement of the nutritional status of the children within the ages 0 - 5 yrs. 	<p><u>B.2. END OF PROJECT STATUS</u></p> <ul style="list-style-type: none"> 1. No. of persons in population without parasites 2. No. of children from 0 - 5 years without parasites 3. No. of mothers that adopt the established practices in the survey taken of 200 of them. 	<p><u>B.3. RELATED TO PURPOSE</u></p> <ul style="list-style-type: none"> 1. Continuous campaign 2. The supply of potable water must be permanent

<p><u>C.1. OUTPUTS</u></p> <ol style="list-style-type: none"> 1. Potable water in urban center 2. Campaign action of health team - treatment for elimination of parasites; medication to motivate the population. 3. Meetings for the conscientization of authority groups and leaders. 4. Periodic examinations of children from 0 - 5 years of age. 5. Courses in home economic and improvement 	<p><u>C.2. OUTPUT INDICATORS</u></p> <ol style="list-style-type: none"> 1. Purity of water 2. No. of persons participating in ten meetings. 3. Weekly radio program for one month 4. Ten groups of 20 mothers holding 240 meetings per year - X number of mothers attending the meetings 	<p><u>C.3. RELATED TO RESULTS</u></p> <ol style="list-style-type: none"> 1. Leader support (authorities, community, church) 2. Efficient water system 3. Hospital structure. 4. One's status is not interfered with by his location 5. Cooperation between Radio Sutatenza and the Institute for Social Promotion
<p><u>D.1. INPUTS/RESOURCES</u></p> <ol style="list-style-type: none"> 1. Health team: 1 doctor; 3 volunteer nurses; 1 hospital, health promoters 2. Institute for Social Promotion: 50 children, 13 -14 years old; 2 instructors 3. 4 teachers in local schools 4. Running water (plumbing, tanks) 5. Water conditioning technique 6. Materials 7. Community Authorities: - mayor, police inspector, school principal, city board - priest, ACPO leaders, radio schools 	<p><u>D.2. BUDGET/CALENDAR</u></p> <ol style="list-style-type: none"> 1. Home economist for two years on determined salary 2. Funds to buy medicines 3. X instruments 4. X transportation 5. X Propaganda materials 6. X cost of analyses 7. - grass roots: Campesino usurers, Communal Action, Coffee Growers Assoc. 8. Anti-parasitic medicines 9. Home economist 10. - Material for water purification - Microscope and lab equipment - Materials for propaganda and 	<p><u>D.3. RELATED TO INPUTS</u></p> <ol style="list-style-type: none"> 1. The budget may be reached 2. The human resources cooperate and are efficient 3. Access to laboratory facilities at Caritas 4. local radio stations, the mayor's office, schools 5. - Donations

II. RESUME OF GROUP PROJECT PLAN

HYPOTHESIS: To reduce, within two years, the incidence of parasites in the rural population of the municipality of La Cumbre, by 40%; decreasing the rate of malnutrition 20% in those persons who pertain to the age group 0 to 6 years.

The hypothesis is predicated on the following data:

Rural population with parasites (90% of total population)	9,296
Reduction in 40% of those infected	3,600
Rural population estimated to be children ranging from 0 - 6 years of age	2,020
Average of 60% malnourished	1,212
Reduction by 20% of malnourished children	242

If we eliminate the parasites in 3,600 persons, it is probable that we will affect, through the family channels, about seven hundred children. From this group, it should be possible that at least half of the children will be able to escape from their state of malnutrition as a result of the elimination of the parasites. In this way, we may reach our overall objective.

A. WORK STAGES (RESULTS)

1. Initial Motivation (Months 1 - 5)
 - Meetings of 31 communities to study the water problem
 - Identify three leaders from each community (93)
 - Choose priority areas and divide municipality into four zones
 - Meetings with leaders from each zone to discuss action plans (8)
2. Training (Months 3 - 6)
 - Trained promoters (48)
 - Organization of health associations in 20 communities
 - Selection of health volunteers, and their six months training by SENA with practical training in health center (40)
3. Water Conditioning (Months 6 - 24)
 - Results of studies of the community
 - Technical advice for the communities
 - Choice by the community for the best alternative for water conditioning
 - . Construction of water system
 - . Construction of water tanks
 - . Community wells
 - . Water improvement
 - 20 projects carried out
4. Environmental Improvement (Months 5 - 24)
 - Courses given by volunteers
 - Construction of approximately one hundred and fifteen latrines for 35% of the population not having any
 - Promotion of the use of rubber-soled shoes for children
 - Create home industry of shoe making

5. Medical Treatment (Months 5 - 24)

- Arrange medical examinations in the organized communities through the health volunteers
- Analyses in the laboratories in La Cumbre and in Caritas/Cali
- Distribution of medications to treat parasitic infections.

B. RESOURCES

Caritas/Cali will be in charge of the coordination of the project.

1. Human Resources

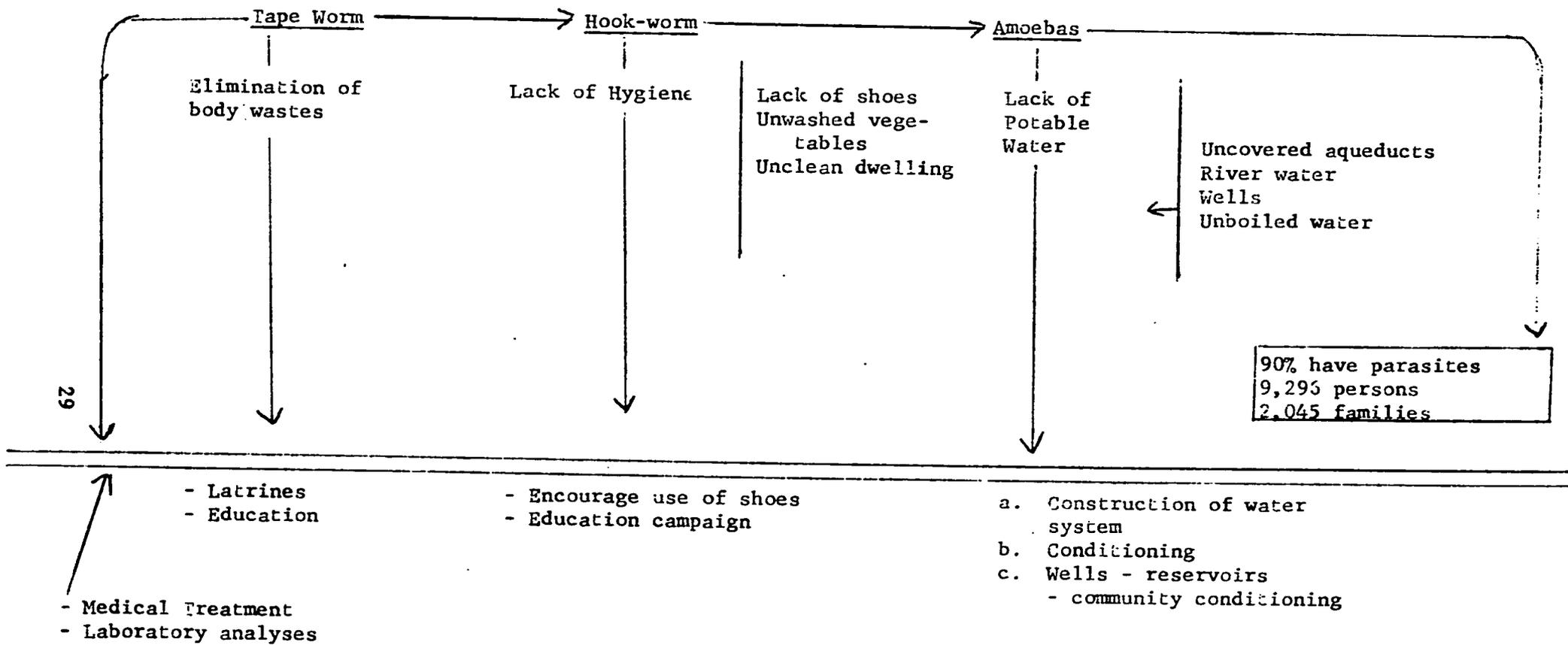
- 2 student doctors to supervise
- 3 nurses from the health center
- 1 topographer Coffee Growers Association
- 1 engineer
- 20 school teachers
- 3 health promoters in the health centers
- 2 social promoters employed by Caritas and stationed in the zone
- person from Caritas/Cali (1/3 time)
- 5 nuns

2. Materials

- Radio station (ACPO)
- Audio-visual material
- Laboratory from health center and from Caritas
- ~~Medicine~~ (donated and purchased)
- Vehicle

TOTAL COST OF PROJECT	US\$ 60,290
Local resources	25,290
Necessary outside resources	35,000

DIAGNOSIS OF THE PROBLEM OF PARASITES IN THE RURAL ZONE OF LA CUMBRE



SECTION III: EVALUATION

The primary objectives of the seminar can be distilled into three statements:

- 1) To develop in the participants an understanding of the importance of nutrition as a quality of life indicator and goal for development.
- 2) To relate the potential place of nutrition related project objectives to overall CRS and partner organization's programs.
- 3) To enable participants to plan systematically and implement nutrition interventions.

A primary means of evaluation during the seminar was the work of an evaluation committee composed of three participants. They were named, one from CRS, Caritas and other entities' participants, to offer as broad a spectrum of representation as possible. Their role was announced to the group and they were also asked to elicit comments from their colleagues. Summaries of the discussions held for thirty-to-forty five minutes each evening are included for reference in this section. The main contribution of this committee, however, was to provide immediate feedback in a structured format to the seminar organizers to enable them to resolve problems before they became serious. Unfortunately, time did not permit this committee to function in as structured a manner during the second week.

An interesting measure of the success of the group are the three examples of projects in logical framework form that were analyzed and replanned during the first four days. The original and replanned frameworks are included in the appendix. Some groups had a conceptual difficulty in trying to replan projects using specific nutritional goals. In general, however, they were able to distill the projects presented down to their basic elements and make more realistic goal and purpose statements. In nearly all cases, the groups were able to strengthen the linkages of the project, particularly between inputs, outputs and purpose by pointing out missing inputs or necessary outputs. The exercise proved immensely successful, especially in achieving Objective 2.

Also included in this section are subjective evaluations written by the primary course organizers, Dr. Nelson and Mr. Bueker, as well as one prepared by Dr. Rothert, who, as the CRS Nutritional Consultant for Central America, provided yet another viewpoint.

Finally, at the end of the seminar, the participants were asked to evaluate to what extent the seminar had achieved its objectives. Twenty-five responses were recorded. On a scale of 1 to 5, the participants rated the achievement of each objective, which ranked in order of success as 3-1-2. The difference in rating was minimal and one could assert the success rate was between 80-90% for each objective. A compilation of the replies are indicated in the following:

<u>Points</u>	No. of Respondents		
	<u>Objective 1</u>	<u>Objective 2</u>	<u>Objective 3</u>
5	12	10	12
4	10	13	11
3	3	1	2
2	0	1	0
TOTAL POINTS	109	107	110

In essence, the seminar can best be evaluated by the products of the participants' work. The field study organized and implemented in nearly its entirety by the participants offered a clear example of a low-cost practical manner in which nutrition interventions can be planned utilizing the concept of an inter-related nutrition system. It is hoped that an even more positive result from this aspect of the seminar will be attained if Caritas/Cali can acquire financing to implement the suggested interventions.

Although not included in this report, CRS intends to conduct a final survey among the participants six months after the completion of the seminar. This survey will seek to measure the effect of the seminar over time. It will help both to measure changes to which the seminar contributed as well as to plan future seminars.

EVALUATION COMMITTEE

June 3

The members of this committee are Hernán Montero, Vernon Ficklin, Héctor Cardona, along with the coordination of Daniel Santo Pietro, Lynn Renner and the collaboration of Luz Stella Siabatto and Marilyn Beni.

In general, everybody likes the way in which the seminar is being held, in that there is much participation from the members of the group. However, in one of the work groups, it seems that one or two people are dominating the discussions, thus hindering the others from participating as they might wish to do. In spite of this, much was learned and the overall experience was very interesting.

After more meetings, this problem will undoubtedly iron itself out, according to the opinion of the committee. One solution will be to change the leaders of one group to another in order to avoid the danger of falling into one method of working procedure, or one style that of the leader.

The basis for which this first point was made, was that the work of the groups had diverse results: but everyone in general thinks that it is was a valuable experience and they hope that in the following days it will be even better. The major problem was that, at times, there was too much analysis, resulting in things getting too complicated. This arose within one group in particular.

EVALUATION COMMITTEE

June 4

The committee made four main points,

1. The reaction to the morning's lecture was favorable. Everyone seemed pleased with the speaker as well as with the content of his presentation. He held the group's interest and expressed his theme well.
2. Some members of one group expressed a dissatisfaction with the style of one of the advisors. There was a reluctance to enter into discussion for fear of criticism, and thus there was limited participation and spontaneity.
3. It should be re-emphasized to all--both to the leaders and to the groups--that the logical framework ought to be used as an instrument for analysis, to see if the elements of a given project follow a logical sequence.
4. The problem is that the groups tend to worry more about filling in the logical framework as if it were the final goal, rather than using it as an instrument for critical analysis.

EVALUATION COMMITTEE

June 5

The committee made three main points,

1. In regards to the morning's lecture, the general reaction was positive. Although the speaker spoke of complicated ideas in some aspects, they were practical ideas as well as very interesting ones.

Some of the assembly felt that there could have been more concrete examples that might have served to clarify some of the more abstract thoughts.

Due to the weighty there, perhaps one day to present all of the information was made it seem too long. Two days for the lecture might have been a better idea.

2. One of the work groups has reached what seems to be a level of understanding, perhaps due to the two previous days of ironing out any difficulties. The rotation of the leaders was also appreciated by all.

In some cases in the work groups, there seemed to be a monopoly on the discussion, resulting in a very limited participation on the part of the others.

3. The committee has trouble obtaining reactions to the content of the seminar and the work done in smaller groups.

EVALUATION COMMITTEE

June 6

1. Work Groups (Morning session): The Nutrition System

The members of the seminar were assigned the task, the night before, of finding determining factors in the nutrition system. In spite of the instructor's directions, the idea was not fully understood by all the participants; this gave rise to difficulties in finding a concrete starting point for completing the assignment.

2. Dr. James Pines' Presentation: The Nutrition System

The lecture was objective, using to a great degree, the scheme drawn up by the work groups. This made it easier to understand the theme, and there was less group participation, but more presentation of clear examples.

3. Recommendation:

When the instructors of the seminar assign work, either in groups or individually, they should give ample time for its completion and explain the directions clearly so as to allow for a more effective result.

WORKSHOP EVALUATION

David Nelson and Paul Bueker
June 1975

The nutrition planning workshop held at CIAT, near Palmira, Colombia from 1-13 June 1975, was planned in the light of concerns and suggestions expressed by several CRS officials: the workshop should not be a short course in nutritional biochemistry or traditional home economics nutrition; it should be practical, emphasizing planning and implementation consistent with CRS programming limitations.

The objectives were the following: that participants understand the importance of nutrition as a quality-of-life indicator and goal; that they understand the potential of nutrition-related objectives within CRS/coun-terpart programs; that they plan and be able to implement nutrition inter-ventions to achieve nutritional improvement.

The planning of the seminar assumed that most people have an intuitive understanding of the important factors which influence nutrition and many of their interrelationships. It was also assumed that knowledge of a few basic, technical concepts would enable the participants to apply their intuitive understandings to practical situations and develop goal-oriented programs, which would actually solve nutrition problems. Combining these factors with a knowledge of the characteristics of the group, which was to attend the workshop, and with some specific ideas about the necessary elements of any real learning situation, the basic hypothesis of the workshop was formulated: if a properly motivated and organized group is provided with a few key nutrition and planning concepts and participates actively in work designed to utilize those concepts and complement its past work ex-periences, then the seminar objectives will be achieved.

The first week of activities included four half days of lectures on basic nutrition and planning concepts and four half days of analysis of past, present and planned projects, utilizing the Logical Framework. The con-cepts in lecture format were well received by the group and subsequently applied during the second week's activities, reinforcing their initial pre-sentation. The analysis sessions forced the sponsors to present their pro-jects in an abbreviated, logical discussion which permitted the working groups to question heirarchical linkages and critical assumptions. Many of the projects were replanned during these sessions, providing practice for all the group members in logically structuring project plans. (See Appendix for examples.) Further, the particular projects chosen for analysis were representative of the variety of the past work performed by the partici-pants and of the variety of possible projects which could have been planned for nutritional impact.

The project analyses highlighted a CRS programming deficiency: the lack of explicit operational goals. This was reflected by an absence of ob-jectives which would permit the establishment of problem priorities and

concentration of resources on activities deemed important by CRS or counterparts. It was also responsible for what the organizers call a "project mentality", which can be characterized as follows: the viewing of CRS/counterpart projects as temporally discrete, unrelated activities; appeal to recognized, major problems (eg. malnutrition) as justification for activities which have little or no relation to the solution of the problem (eg. agricultural credit); rationalization of projects as "responses to felt needs"; general dissatisfaction with projects because of lack of measurable results; presumption that lack of results is due to shortage of resources; planning of projects in response to available budget rather than needs; confusion of means ("nutrition education project") with ends (improved nutrition.)

With the assignment of a major group task, the analysis of a community's nutritional situation and the planning of interventions to alleviate it, it became apparent that the group was quite capable of decisive organization and planning, dedicated implementation and perceptive analysis and programming. The only ingredients provided by the workshop were apparently a minimum of basic, technical concepts, organization, and a unity of purpose. From this the organizers conclude that the group, and probably most of the country teams represented, are quite capable of acarrying out similar activities once they return home if, 1. they have mutually agreed upon program priorities and sufficient resources and 2. they are sufficiently insulated from clerical duties imposed by the administrative structure of food donation programs. It also suggests that their talents are likely underutilized under present circumstances.

The organizers believe that the workshop made a useful contribution in awakening the awareness of the participants to this situation, contributed to their understanding of nutrition as a development objective and measure, and improved their ability to diagnose, plan, implement and evaluate development projects. It should be emphasized however, that just as socio-economic development is a continuous process, so is intellectual development; ultimately, the present workshop can only be considered as one of many steps necessary to institutionalize planning for nutritional objectives in the CRS development strategy.

IMPRESSIONS ON THE EFFICACY OF THE NUTRITION
PLANNING SEMINAR AT CIAT

Frances C. Rothert, M.D.
June 1 to 13, 1975

Preparation

The decision to contract for the planning and management of the seminar by two exceedingly well-qualified persons was justified by the results. Their availability was good fortune, the combination of personality, academic preparation and experience not only in teaching but in the realities of institutional capacity in the countries and conditions of life among the poor of South America, as well as being accustomed to working together is rare. The perspicacity to recognize this and to act on it must be credited to the Regional Director.

That they were stationed in a country adjacent to the site selected for the conference was another good fortune.

A series of conversations with the Regional Director, taped for future reference, plus discussions with a few Program Directors and correspondence with the Regional Office in New York kept coordination close. The Program Directors were sent reading material in advance and kept informed of the progress in the planning of the seminar.

The site was ideal for a seminar. It was sufficiently isolated to keep the group together, both for work and for recreation. It was comfortable, the food was excellent and there were plenty of well arranged conference rooms. Its work as an Agricultural Experiment Station, which was described in a few brief sessions that had direct application to our work, was an added ingredient.

Participants.

These were selected with care, including most of the Program Directors in the Region and a selection of counterpart Agency representative as well as a few persons from related agencies. The number of participants was limited by the size of the grant and the great distances with resulting travel costs in South America.

The participants were well selected for their ability to contribute to and gain from the seminar. Whether an enlarged seminar to include more counterpart agency representatives would have cost more by forming a more unwieldy group than it would have gained in the diffusion of the skills obtained in the seminar is a matter for speculation.

The plan.

As the schedule for the course part of this evaluation document, it is only necessary for me to say that in my opinion it worked, and worked very well indeed.

The "group dynamics" exercise was planned to begin the formation of a group spirit in the four working groups into which the conference was divided, and did this. The exercise in defining "development" showed the orientation of individuals and groups and doubtless saved hours of later theorizing.

The presentations of Dr. Pines on the planning process and of Dr. Nelson, of how ingested nutrients become part of an animal body (and other basic elements of the nutrition of individuals) set the stage for the development by individuals and groups of the systems analysis approach to nutrition, with its various subsystems.

The use of the "logical framework" for the analysis of projects previously submitted served to clarify thinking about objectives and the means used to obtain them, and later exercises using concrete situations,

between "problems" and the chain of determining factors.

The exercise of taking a small, rural municipality to find out its state with regard to nutrition and the conditions contributing to it, was approached as a game, but when the seminar participants visited the site and become involved, through observation of the locale and visits with officials and families, they took the exercise very seriously. As a teaching device for planning surveys, making questionnaires, collecting and interpreting data it accomplished in a week more than many courses manage in a semester.

Recreation.

This was organized by the group itself, with the minimum of formal planning. It was general and relaxing and participated in various degrees, by all. I saw very little of clique formation, a constant danger in workshops. As many of the groups did not know each other before it served to form a spirit of camaraderie essential to the learning process in this type of workshop.

Reaction of participants.

As far as I could tell, it was uniformly favorable. One experienced Program Director with better-than-usual educational background said that it was the best workshop that he had ever attended, and this opinion seemed to be general.

The participation as group members, of Msgr. Bordelon and Mr. Santo Pietro, not only gave the groups the advantage of their contributions, but greatly helped the "esprit de corps." Without the superb logistics of the Colombia personnel including the preparation of the village studied, the seminar could not have been successful.

I strongly recommend that, if possible, the team of Nelson and Bueker

be part of the educational system of Catholic Relief Services.

I particularly recommend that they manage the coming Central American Workshop. They would include all of the agreed-upon subject matter and group work in a way that would be interesting and effective, and I am sure would be enthusiastically received by both Caritas and CRS personnel.

A P P E N D I C E S

- I. Three Examples of Logical Frameworks for Projects Analyzed in Group: Original Presentation and Group Presentation.
- II. Field Study Design by Source including Sub-Systems and Parameters.
- III. Family Nutrition Survey and Results Obtained.
- IV. List of Participants and Staff, names and addresses.

A. Original Presentation

I.

LOGICAL FRAMEWORK

SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	IMPORTANT ASSUMPTIONS
<p><u>A.1. GOAL</u></p> <p>Improve the nutritional level of the population of Chimbote.</p>	<p><u>A.2. MEASURE OF GOAL ACHIEVEMENT</u></p> <p>Consumption of food of a better quality (hygiene, state of conservation and nutritional elements.)</p>	<p><u>A.3. RELATED TO GOAL</u></p> <p>Presence of a plan for nutritional education in the area influenced by the project.</p> <p>Government support in associated structures.</p>
<p><u>B.1. PURPOSE</u></p> <p>To improve the daily diet of the people of the town of Santa and the Santa Valley, through the introduction of new food with higher nutritional value and easier access to the population; all this through the reinforcement of the existing cooperative.</p>	<p><u>B.2. END OF PROJECT STATUS</u></p> <ul style="list-style-type: none"> - Amplification of the bakery by 100% - Construction and operation of a common dining hall. - Resiting and expansion of the market cooperative, and thus better capability of investment and operation. - Increase the number of members and capital of the cooperative. 	<p><u>B.3. RELATED TO PURPOSE</u></p> <p>Proximity of a port and the existence of a fishing cooperative for human consumption.</p> <p>Governmental promotion on a national level for the consumption of fish.</p>

C.1. OUTPUTS

Doubling the production of bread.

Introduction of new types of fish for human consumption.

Accessability of foodstuff at the lowest prices for the population

C.2 OUTPUT INDICATORS

- Increase in production of bread from 7,000 to 14,000
- Volume of restaurant sales (different dishes offered)
- Volume of fish sales in local market and in cooperative
- Volume of same in the market cooperative
- Sales of foodstuff in the market cooperative at either official prices or else lower

C.3. RELATED TO RESULTS

Government subsidy in the price of flour for the manufacturing of the bread (french)

Implementation of the Integral Plan of the Santa Valley creating better incomes for the region's population.

D.1. INPUTS

Funds for the bakery
Funds for the Common dining hall
Funds for the market cooperative
Funds for the Operational (3 mos.)
ORGANIZATION OF COOPERATIVE

D.2. BUDGET/CALENDAR

See adjoining page

D.3. RELATED TO INPUTS

Well-organized cooperative with competent and prepared personnel.

A. Group Presentation
(after analysis)

LOGICAL FRAMEWORK

SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	IMPORTANT ASSUMPTIONS
A.1 GOAL	A.2. MEASURE OF GOAL ACHIEVEMENT	A.3. RELATED TO GOAL
<p>Guarantee the minimum level of feeding for the population of the Santa Valley.</p>	<p>Pre- and Post- project survey on food consumption.</p>	<p>Government support within the Regional Development Plan.</p>
B 1. PURPOSE	B.2. END OF PROJECT STATUS	B.3. RELATED TO PURPOSE
<p>Price reduction of basic foods for 8,000 people.</p>	<ol style="list-style-type: none"> 1. Increase the production of bakery staples from x to 2x. 2. Decrease the market price of supplies in the Santa Valley by an average of 10%. 	<p>Town support of the cooperative.</p>

C.1. OUTPUTS	C.2. OUTPUT INDICATORS	C.3. RELATED TO RESULTS
<ul style="list-style-type: none"> - Additional baker - Expansion of oven facilities - Cooperative market moved and expanded. 	<ul style="list-style-type: none"> - Employ baker until x date. - Increased capacity for x amount of bread until x date. - First class materials used. - Functioning of market in new site until x date. 	<ul style="list-style-type: none"> - Availability of first class material is subsidised. - Availability of food products for the market
D.1. INPUTS	D.2. BUDGET/CALENDAR	D.3. RELATED TO CALENDAR
<p><u>Outside sources:</u></p> <ul style="list-style-type: none"> - Funds to expand oven facilities - Funds to construct a new market <p><u>Cooperative:</u></p> <ul style="list-style-type: none"> - Operational funds - Purchase of land 	<p style="text-align: center;">\$ 55.000</p> <p style="text-align: center;">\$ x</p> <p style="text-align: center;">\$ x</p>	<p style="text-align: center;">Organization of cooperative is satisfactory</p>

B. Original Presentation

LOGICAL FRAMEWORK

SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	IMPORTANT ASSUMPTIONS
<p><u>A.1. GOAL</u></p> <p>Agricultural rehabilitation and improvement in the region of Lake Titicaca.</p>	<p><u>A.2. MEASURE OF GOAL ACHIEVEMENT</u></p>	<p><u>A.3. RELATED TO GOAL</u></p> <ol style="list-style-type: none"> 1. Gov't. policies with support of FAO for potato production. 2. Obtain greater liberty for fortification of rural syndicates. 3. Agricultural bank for agricultural advertising. 4. Support of agricultural policies, development of communities and agricultural bank.
<p><u>B.1. PURPOSE</u></p> <ol style="list-style-type: none"> 1. Promote a rehabilitation movement in an area occupied by 767 families. 2. Reactivate production & commerce. 3. Promote consolidation of organizations. 4. Encourage innovation of production techniques. 	<p><u>B.2. END OF PROJECT STATUS</u></p> <ol style="list-style-type: none"> 1. Increase productive capacity of the 767 families. 2. Functioning of 2 local markets for commerce. 3. Continuation of project with 2 centers in charge. 4. Introduction and implementation of tractor. 5. Teaching learned experiences to others. 6. Construction of <u>X</u> silos. 	<p><u>B.3. RELATED TO PURPOSE</u></p> <ol style="list-style-type: none"> 1. Land study by Ministry of Agriculture. 2. Policy to increase production in plateau region. 3. Changes among union leaders. 4. Political intervention. 5. Regional rivalry.

C.1. OUTPUTS

1. Organization of 767 families into Sindicatos and Centrales.
2. By 2nd year, project will assume administration, planning, and organization.
3. Increase the harvest of potatoes, barley, and quinoa.
4. Introduce mechanization.
5. Capacities.

C.2. OUTPUT INDICATORS

1. Functioning of seed, tool, and fertilizer banks.
2. Training of 170 leaders in production, commerce, and administration techniques.
3. Two years of radio programs in Aymara.
4. Two programming meetings and two for evaluation, participated in by the local leaders.
5. Purchase of tractor and training of its driver.
6. Permanent technical assistance.

C.3. RELATED TO RESULTS

1. Encourage the production of quinoa.

D.1. INPUTS

1. Rural organizations: 2 Centers.
2. Peñas radio, Educational programs.
3. CIPCA. Technical assistance.
4. Italian volunteers. Work with Parishes.
5. CARITAS. Promotion and coordination.
6. Local contribution: US\$ 67.692.00
Outside: 55.000.00
7. Seed banks, fertilizers, insecticides, tools, audiovisual material.

D.2. BUDGET/CALENDAR

1. Duration : 2 years.
2. Timing of activities: becoming familiar with communities, radio programs, technical assistance; organizing resources, programming, and evaluation.
3. 34 resúmenes of reaction of union leaders.
4. Organization of technical assistance.
5. Participation of counterpart agencies in programming.
6. Calculation of community contribution.
7. Cost.

D.3. RELATED TO INPUTS

1. Outside financing.
2. Coordination.

B. Group Presentation
(after analysis)

LOGICAL FRAMEWORK

SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	IMPORTANT ASSUMPTIONS
A.1 GOAL	A.2. MEASURE OF GOAL ACHIEVEMENT	A.3. RELATED TO GOAL
<p>Agricultural improvement in the Lake Titicaca region.</p>	<p>Increase in value of commercialized products of the region from x to y.</p>	<p>-Present government agricultural policies remain stable.</p> <p>-National Rural Development Plan implemented</p> <p>- Appropriate rainfall.</p>
B.1 PURPOSE	B.2. END OF PROJECT STATUS	B.3. RELATED TO PURPOSE
<ol style="list-style-type: none"> 1. Introduction of innovative methods through the recuperation of 767 families. 2. Encourage farming and commercialization of nutritive products that yield best economic return. 	<ol style="list-style-type: none"> 1. The production of potatoes, quinoa, and barley increased 70% among target group. 2. Two agricultural expositions implemented annually. 3. X silos built. 	<p>-Study made by Ministry of Agriculture correct.</p> <p>-Law requiring use of 10% of quinoa in bread is upheld.</p> <p>-Community participates in executing exposition.</p>

C.2 OUTPUTS	C.2 OUTPUT INDICATORS	C.3 RELATED TO RESULTS
<ul style="list-style-type: none"> -Organize 767 families into two syndicates -Introduce improved seeds and use of fertilizers for potato, barley, and quinoa production. - Train campesinos in agricultural methods. 	<ul style="list-style-type: none"> -Syndicate legalized and operating in two years -Quintals planted: potato - 1,500 quinoa - 373 barley - 280 -Permanent Advisory Committee formed among institutions -270 leaders trained 	<ul style="list-style-type: none"> -Teachers successful in their communities -Participating organizations -Coordination and progress of the organizations.
D.2 INPUTS	D.2 BUDGET/CALENDAR	D.3 RELATED TO CALENDAR
<ol style="list-style-type: none"> 1. CIPCA--1 agronomist, 1 engineer, 1 driver. 2. Italian volunteers - 3 persons: engineer and agronomist 3. CARITAS - 1 engineer, 1 agronomist 4. CARITAS - Tool and agricultural implements bank. 5. Technical assistance from Socio-economic Office of CARITAS (part time) 	<ol style="list-style-type: none"> 1. 3 man/year x 2 = 6 2. 3 man/year x 2 = 6 3. 2 man/year x 2 = 4 4. \$25,000 rotating fund 5. 1 man/year (same person) 	

C. Original Presentation

LOGICAL FRAMEWORK

SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	IMPORTANT ASSUMPTIONS
<p><u>A.1. GOAL</u></p> <p>Nutritional education in Ecuador through the motivation of people involved in food programs, with the goal of creating an organization that will facilitate the coordination of the developed activities by public and private sectors</p>	<p><u>A.2. MEASURE OF GOAL ACHIEVEMENT</u></p> <p>Goals must be measured in a specific way and not seen with general characteristics.</p> <p>The three objectives of the project do not have an interrelationship</p> <p>Lack of identification of key people involved in project</p>	<p><u>A.3. RELATED TO GOAL</u></p> <p>Obtain a massive nutritional education at the community level.</p> <p>Establish the institutional inter-relationship with hopes of unifying goals in joint action</p>
<p><u>B.2. PURPOSE</u></p> <p>a. Obtain government participation in financing and use of technicians for country's nutritional education.</p> <p>b. To improve the material destined for nutritional education throughout the country on both a basic and an intermediate level.</p>	<p><u>B.1. END OF PROJECT STATUS</u></p> <p>One should have reached an awareness of key elements in health and nutrition that the proposals demand. This was not so, however, because the courses had no impact on those who participated, due to the quality of the same.</p>	<p><u>B.3. RELATED TO PURPOSE</u></p> <p>Obtain credit and support of the national government to develop the nutrition programs.</p> <p>Quantity and quality of educative material to serve the purpose</p>

C.1 OUTPUTS

- a. Create Nutrition Committee on a provincial level.
- b. Identify the consumption habits in the different communities
- c. National organization of a Committee

C.2 OUTPUT INDICATORS

- Seminars on a national level - 134 participants
- Seminars on a local and provincial level, 60 participants
- Follow-up on the participants

C.3 RELATED TO RESULTS

Organization, operation, and coordination of a national committee

Tables, posters, comparative charts, etc, that establish the differences between the basic products of Title II and those of local production (advantages of the latter)

D.1 INPUTS

- a. Nutrition specialist
- b. Instructors on a technical level of motivation
- c. Groups organized by CARITAS
- d. Published educational materials
- e. Audio-visual unit

D.2 BUDGET/CALENDAR

Budget: presented and approved by USAID/Quito with total cost of US\$ 49,302.80
Implementation: 6 stages:
Prepare seminars, collect material
Seminar, total 18
Technical assistance on local level
Follow up through short questionnaires
Evaluation that measures the understanding and effectiveness of the courses.
Final report

D.3 RELATED TO INPUTS

Personnel technically prepared

Voluntary leadership in organizing work groups

Influence members of the committee

C. Group Presentation
(after analysis)

LOGICAL FRAMEWORK

SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	IMPORTANT ASSUMPTIONS
<p><u>A.1. GOAL</u></p> <p>Improvement of nutrition level of the population of Ecuador</p>	<p><u>A.2. MEASURE OF GOAL ACHIEVEMENT</u></p> <p>x children rehabilitated in x provinces in x months.</p>	<p><u>A.3. RELATED TO GOAL</u></p> <p>There exists other foods in addition to donated by PL 480</p> <p>Capacity of normal utilization.</p>
<p><u>B.1 PURPOSE</u></p> <p>Make food accessible to malnourished children.</p>	<p><u>B.2. END OF PROJECT STATUS</u></p> <p>X committees functioning X children identified X pounds of food distributed X classes of education for the mother</p>	<p><u>B.3. RELATED TO PURPOSE</u></p> <p>Facility of transportation</p>

<p>C.1. OUTPUTS</p> <p>Distribution committees Leadership training Obtaining collaboration of Health Services Count upon the nutrition committees</p>	<p>C.2. OUTPUT INDICATORS</p> <p>X persons trained Collaboration of health advisors X pounds consumed by the children that are the target group</p>	<p>C.3. RELATED TO RESULTS</p> <p>Effective training</p> <p>The Ministry of Health will continue to support the project.</p>
<p>D.1. INPUTS</p> <p>a. Nutrition specialist b. Instructors - technical level c. Groups organized by CARITAS d. Printed educational material e. Audio-visual unit</p>	<p>D.2. BUDGET/CALENDAR</p> <p>USAID/Quito US\$ 49,302.80</p> <p>Calendar of installment activities: - Six stages</p>	<p>D.3. RELATED TO CALENDAR</p> <p>Regular continuation of PL 480 program.</p>

II.

FIELD STUDY DESIGNby
SOURCE

<u>SUB-SYSTEM</u>	<u>PARAMETERS</u>	<u>WHAT TO MEASURE</u>	<u>COMPLETED YES/NO</u>	<u>OBSERVATIONS</u>
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LIBRARY RESEARCH

Availabilities	Local production (agriculture, livestock)	Production/Hectare of principal crops - Food - Agriculture - Livestock - Non-food		
Others	Population	Rural and urban - No. of families - No. of individuals - Economically active - Sex - Age - Rate of unemployment - Occupations		
Others	Quality of soil	Soils - Classes - Analyses		
Availabilities	Irrigation	Type of System - Sprinkling - Ditch - Canal - No irrigation Extension of system		
Availabilities	Use of land	Hectares dedicated to: - Livestock - Food crops - Non-food crops - Forests - No crops Crop rotation		
Availabilities	Wastes	Loss during harvest Plagues Natural disasters		
Distribution	Infrastructure (roads)	Classes Location Conditions		

<u>SUB-SYSTEM</u>	<u>PARAMETERS</u>	<u>WHAT TO MEASURE</u>	<u>COMPLETED YES/NO</u>	<u>OBSERVATIONS</u>
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Nutritional Status	Historical data concerning nutritional status		
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Utilization	Lodging	Lodging statistics for the area by types	
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D A N E

Others	Landownership	No. of property owners Types of work - Rent - Partnership - Property owner - Other No. of property holdings	
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Availabilities	Local production	See LIBRARY RESEARCH	
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Others	Population	See LIBRARY RESEARCH	
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Availabilities	Irrigation	See LIBRARY RESEARCH	
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Availabilities	Land use	See LIBRARY RESEARCH	
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Distribution	Transportation	Types - Number - Capacity - Costs	
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Distribution	Road network	See LIBRARY RESEARCH	
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I C B F

Utilization	Health (death)	Causes, Statistics	
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I C A

Availabilities	Production	Food (quantity)	
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Others	Technology	See AGRICULTURAL PRACTICE	
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Others	Technical service	See COFFEE GROWERS ASSOCIATION	
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Others	Landownership	See DANE	
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Others	Irrigation	See LIBRARY RESEARCH	
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Others	Credit	See LIBRARY RESEARCH	
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Others	Wastes	See LIBRARY RESEARCH	
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<u>SUB-SYSTEM</u>	<u>PARAMETERS</u>	<u>WHAT TO MEASURE</u>	<u>COMPLETED YES/NO</u>	<u>OBSERVATIONS</u>
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C I T Y H A L L

Availabilities	Imports	Quantity by food types		
	Population	Rural and urban, age and sex Pop. economically active Occupations: % agricultural production - Industry - Commerce - Services - Transportation - Education Unemployment Migration		
Others	Landownership	See DANE		
Distribution	Processing	Products: type, quantity, quality, prices		
	Merchandising	Purchases, products exchange		
Consumption	Availability of food	Market, others		
	Food produced in area	Idem.		
Utilization	Water conditions	Quality, availability		

A G R I C U L T U R A L P R A C T I C E

(Ministry)

Availabilities	Imports	Quantity by food type		
Availabilities	Technology	Degree of use of: - Fertilizers - Fungicides - Insecticides - Weed killers - Seeds: harvest, improvements - Tools - Farming machinery		
Others	Landownership	See DANE		
Availabilities	Irrigation	See LIBRARY RESEARCH		
	Land use	See LIBRARY RESEARCH		
	Wastes	Losses in: harvest, storage, plagues, natural disasters		

<u>SUB-SYSTEM</u>	<u>PARAMETERS</u>	<u>WHAT TO MEASURE</u>	<u>COMPLETED YES/NO</u>	<u>OBSERVATIONS</u>
Availabilities	Quality of soil	Soils: classes, analyses, useful for farming		
Distribution	Commerce	Intermediaries: - Products - Number - Type (wholesaler, trucker) - Product prices - No intermediaries (farmer himself) - Cooperative		
Distribution	Processing	Local factories - Non-food - Food: which ones, quality,		
Distribution	Exports	See COFFEE GROWERS ASSOCIATION		

C A J A A G R A R I A
(Agricultural Credit Institute)

Availabilities	Credit	Forms: Directed, Free		
Distribution	Merchandising	% sales on credit (Influencia)		

I N T E R V I E W S

Others	Technology	See AGRICULTURAL PRACTICE		
Others	Social structure	See AGRICULTURAL PRACTICE		
Distribution	Transportation	Number, type, capacity, costs		
	Food types	Variety		
	Slaughter house	Products, type, quality		
	Food export	Type of foods, quantity		
	Merchandising	Percent of credit sales		
Availabilities	Social structure	Governmental organization Campesino organization Producers organization Education system Family institution Recreation Religious organization Local leaders: priest, teachers, mayor, police chief		

SUB-SYSTEM	PARAMETERS	WHAT TO MEASURE	COMPLETED YES/NO	OBSERVATIONS
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SPECIALIZED INFORMATION

Others	Social structure	Government organization Campesino organization Producers organization Education system - Formal - Informal Family institution (structure, head, etc.) Recreation: Women's clubs, religious org.		
Distribution	Industries	Home manufacturing,		
Distribution/ Consumption	Food prices in the stores			

LOCAL HEALTH CENTER

Consumption	Food for the vulnerable age group	Length of time for nursing Feeding - Babies 0-1 - Children 1-4 Pregnant and nursing mother		
Nutritional Status		Signs of deficiency Weight/Size Diet No. of cases of malnutrition Mortality Weight at birth (national average weight)		
Utilization	Health: illnesses, deaths, contamination of food Elimination of wastes Water conditions Diet	Parasites, intestinal infections Causes Personal and household cleaning habits Insects and rodents Environmental conditions Availability, quality, supply Quality, quantity, frequency of meals, Eating habits Taboos, beliefs		

<u>SUB-SYSTEM</u>	<u>PARAMETERS</u>	<u>WHAT TO MEASURE</u>	<u>COMPLETED YES/NO</u>	<u>OBSERVATIONS</u>
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Utilization (cont.)		Distribution within the family Foods and imports for age groups Length of nursing time Food for weaned children (age)		
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S C H O O L S

Availabilities	Local production	Production of school gardens		
Others	Social structure	Student organizations Informal education		
Nutritional Status		Assistance Performance Absence (causes)		
Others	Social structure	Absence from school - Causes (work in the fields)		

S U R V E Y S

Availabilities	Credit Social structure	Sources, conditions, guarantees, forms Campesino organization, family institution		
Consumption	Family income Family consumption Variety Beliefs Family decisions Food wastes Food preparation	Income Food consumed the day before Classes of foods List habits and taboos Who decides Causes: where, who and how prepared		
Nutritional Status	Mortality Contamination Elimination of wastes Lodging conditions	Malnutrition cases Causes Person and house Food store Utensiles Preparation conditions Refrigeration Hygienic facilities Latrine Open air No. rooms No. persons/room Ventilation Kitchen No. persons/bed Money		

SUB-SYSTEM	PARAMETER	WHAT TO MEASURE	COMPLETED	
			YES/NO	OBSERVATIONS
Utilization	Water conditions	Availability		
		Supply		
		Means of transport		
		Relationship to ingested water		
	Diet	Quantity (variety)		
		Composition		
		Frequency of meals		
		Eating habits		
		Taboos/Beliefs		
	Requirements	Distribution among families		
		Food and importance		
	Habits	According to age groups		
		Nursing mother/age of infant		
		Formula feeding/age		
		Food for weaned child/age		
	Family production	Family gardens		
Nutritional Status		Weight/Age (preschool)		
		Size/Age (preschool)		
Utilization	Illnesses	History of parasites, infections, etc. in the family. (Typical illnesses)		
		- Diarrhea		

III.

SURVEY AND RESULTS

FAMILY NUTRITION

Municipality, LA CUMBRE
 Zone, Urban 18 Rural 29
 Date, June 10, 1975

I. FAMILY 47 families with 318 total persons interviewed 6.7 persons/family

A. MEMBERS	AGE	SEX	WEIGHT	OCCUPA- TION	INCOME	EDUCA- TION	SHOE USE
Father							
Mother							
Children							
"							
"							
"							
"							
Others							

A--Literate, degree 141 B--Illiterate 22

B. Lodging 32 6 8 1
 Own Rented Lent Other

1. Type of Construction;

Adobe 27
 Wood 4
 Brick 5
 Other 11

2. Roof;

Tile 33
 Straw, or thatched _____
 Other 14

3. Floor;

Dirt 9 38
 yes no

4. Ventilation (windows) 37 6 no reply 4
 yes no

III. FOOD CONSUMPTION

What did the family eat yesterday?

MEAL	FOOD	QUANTITY	METHOD OF PREPARATION
Morning Coffee (tea, etc.)			
Breakfast			
Mid-morning snack			
Lunch			
Afternoon snack			
Supper			
Others			

Observations:

TYPICAL MENU
Compilation of Results

BREAKFAST:

Coffee
Sugar or 'Panela'
'Arepa' or Banana

LUNCH:

'Sancocho'
'Yuca'
Banana
'Agua de Panela'
Fruit

SNACK:

Coffee
Sugar
'Arepa' or Banana

DINNER:

Soup
Rice or noodle
Potato
Vegetable
Meat

	Typical Menu	Minimum Daily Requirement
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Nutritional Value:

Calories	1900	2000
Protein (gr.)	31	38
% Animal Protein	20	20

*Minimum Cost (Col.\$)

Person/day	7.00	8.20
Family/day	47.00	55.00
Family/week	330.00	386.00

For those in rural areas, reduce by 40%. Average family size = 6.7 persons/
family.

IV. S.A. NUTRITION SEMINAR/SEMINARIO SOBRE NUTRICION
LIST OF PARTICIPANTS/LISTA DE PARTICIPANTES

<u>NAME/NOMBRE</u>	<u>ADDRESS/DIRECCION</u>
Participants/Participantes:	
1. Robert Parker	Catholic Relief Services/USCC Casilla 2561 La Paz, Bolivia
2. Arthur Stegmayer	Idem
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- | | |
|----------------------------------|--|
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